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EL SEGUNDO POWER REDEVELOPMENT PROJECT

Commission Decision to the Amendment



CALIFORNIA
ENERGY COMMISSION
Arnold Schwarzenegger, Governor

JUNE 2010
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DOCKET NUMBER OO-AFC-14C

**CALIFORNIA
ENERGY COMMISSION**

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**STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION**

In the Matter of:)	Docket No. 00-AFC-14C
Petition to Amend the Commission)	
Decision Approving the El Segundo)	
Power Redevelopment Project)	
)	
El Segundo Energy Center, LLC)	Order No. 10-0630-2
)	
)	ORDER APPROVING a Petition to Amend
)	the El Segundo Power Redevelopment Project

El Segundo Energy Center, LLC (ESEC), the owner/operator of the El Segundo Power Redevelopment Project (ESPRP), has requested to modify the Commission Decision approving construction and operation of the ESPRP to allow the elimination of once-through cooling and to allow the use of dry cooling. ESEC requests authorization to replace the originally approved turbines with rapid response combined cycle technology as well as other improvements. This configuration would eliminate the wastewater stream by use of zero liquid discharge technology. The modifications would result in a reduction of the megawatt output from 630 MW to 560 MW.

STAFF RECOMMENDATION

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, section 1769(a) of the California Code of Regulations. Staff recommends approval of ESEC's petition to modify the ESPRP and amend the related Conditions of Certification.

ENERGY COMMISSION FINDINGS

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Energy Commission public review process has been certified as a CEQA-equivalent, and therefore satisfies CEQA requirements. The Energy Commission finds that:

- The petition meets all the filing criteria of section 1769(a) concerning post-certification project modifications.

- The modification will not change the findings in the Energy Commission's Final Decision pursuant to section 1755.
- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards, subject to the provisions of Public Resources Code section 25525.
- The change will be beneficial to the public because the new facility would make the project considerably more efficient and more flexible from an operational standpoint. The new low-emission, dry-cooled combustion turbine equipment significantly reduces air pollutants from the combustion process, and will decrease environmental impacts. The rapid start capability also complements wind and solar renewable generation by providing reliable localized generation that can quickly respond should wind or solar resources not be available during peak electrical demand periods.
- The change is based on a re-assessment of the power market since the original project was built. Demand for electric generation services, including ancillary services, has increased substantially since the original project was approved. Conversion to rapid response combined-cycle operations will allow ESEC to better respond to the market demand for various generating services in coming years.

CONCLUSION AND ORDER

The Energy Commission hereby adopts the staff's recommendation and ESEC's Petition to Amend. The Commission's Final Decision is hereby amended to allow construction and operation of the ESPRP. Commission staff will henceforth provide adequate monitoring of all conditions and measures set forth in the final decision required to mitigate potential impacts and to assure that the facility has been constructed and is operated in compliance with the conditions of certification as set forth in the Commission's Final Decision.

IT IS SO ORDERED.

Date: June 30, 2010

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION



KAREN DOUGLAS
Chairman

**EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C)
COMMISSION DECISION to the AMENDMENT**

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I. INTRODUCTION

SUMMARY OF THE DECISION

This Energy Commission Decision to the amendment contains the Commission's determinations regarding the Petition for Amendment of the February 2, 2005, Final Commission Decision (2005 Decision), approving the El Segundo Power Redevelopment Project (ESPRP) 630-megawatt (MW) combined-cycle facility in El Segundo, California and includes the findings and conclusions required by law.¹ The amendment, filed by El Segundo Energy Center, LLC (ESEC) on June 15, 2007, seeks to convert the ESPRP to a 560-megawatt (MW) Rapid Response Combined-Cycle facility using dry-cooling and zero liquid discharge technology. We **approve** the amendment subject to the Conditions of Certification set forth in the remainder of this Decision.

This Decision is based exclusively on the evidentiary record established for this proceeding.² We have independently evaluated this evidence, presented the Commission's reasons supporting its Decision, and provided references to portions of the record, which support the Commission's findings and conclusions. The Conditions of Certification, which follow each topic section, will ensure that the ESPRP is designed, constructed, and operated in the manner necessary to protect public health and safety, provide needed electrical generation, and preserve environmental quality.

ESEC originally proposed to build a 630 megawatt (MW) natural gas-fired, once-through cooled, combined-cycle electric generating facility located at 301 Vista Del Mar, El Segundo, California. That proposal was approved by the Energy Commission on February 2, 2005.

¹ The requirements for an amendment of an Energy Commission Decision are set forth in the Commission's regulations, Title 20, California Code of Regulations, section 1769. They are summarized in subsection B, below.

² We also take administrative notice of the April 6, 2001, Commission Decision and the evidence admitted in that proceeding.

The changes to the original project proposed by the amendment are described in detail in the **Project Description** section of this Decision.

During the original decision process and again in the amendment review process, Energy Commission staff (Staff) and the Applicant carried out extensive coordination with numerous local, state, and federal agencies. These included the South Coast Air Quality Management District (SCAQMD or District), the City of El Segundo, and other regulatory agencies with an interest in this project. Through these efforts, the various parties and agencies have reached mutual agreement on almost all aspects of the proposed project and upon the necessary Conditions of Certification. As is discussed below, the evidence shows that the modified project will not create or contribute to any significant impacts to the environment nor to public health and safety, and that the project will comply with all related requirements.

The remaining sections of this Decision describe the changes to the originally approved project, the environmental effects of the amended project, and conformance of the amended project with applicable laws, ordinances, regulations and standards (LORS).

AMENDMENT PROCESS

The ESPRP and its related facilities fall within Energy Commission licensing jurisdiction. (Pub. Resources Code, §§ 25500 et seq.). During its licensing proceedings, the Commission acts as lead state agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, §§ 25519(c), 21000 et seq.), and the Commission's siting process and associated documents are functionally equivalent to the preparation of the traditional Environmental Impact Report. (Pub. Resources Code, § 21080.5.) A license issued by the Commission is in lieu of other state and local permits.

The Commission's certification process provides a thorough and timely review and analysis of all aspects of this proposed project. During the process, we conduct a comprehensive examination of a project's potential economic, public health and safety, reliability, engineering, and environmental ramifications.

Significantly, the Commission's process allows for and encourages public participation so that members of the public may become involved either informally, or on a more formal level as an Intervenor with the same legal rights and duties as the project developers. Public participation is encouraged at every stage of the process.

After a license is approved, it may be amended on the petition of the Applicant. (Title 20, California Code of Regulations, § 1769.) Depending on the complexity and expected level of public interest, an amendment may be analyzed by Staff and referred directly to the Energy Commission for decision, as was done for this proceeding. Alternatively, the amendment may be referred to a committee of two Commissioners who take evidence and submit a proposed decision to the Energy Commission. In either event, the Commission must make the following findings before approving an amendment:

- That the amended project will not have significant,³ unmitigated, environmental effects or that specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the proceeding and that the benefits of the project outweigh the unavoidable significant environmental effects of the project;
- That the amended project will remain in compliance with all applicable laws, ordinances, regulations and standards or that the facility is required for the public convenience and necessity and that there are not more prudent and feasible means of achieving the public convenience and necessity;
- That the change in the project will be beneficial to the public, Applicant, or Intervenor; and
- That there has been a substantial change in circumstances since the original approval justifying the change or that the change is based on information which was not known and could not have been known with the exercise of reasonable diligence prior to the original approval.⁴

³ The Commission's regulations use the term "significant adverse environmental effect." See, e.g., 20 Cal. Code of Regs., §1755. "Adverse" is redundant, however, in that by definition in the CEQA Guidelines (14 Cal. Code of Regs., § 15382) an effect must be "adverse" in order to be "significant;" positive or beneficial effects can not be significant. Therefore, when we use the terms "significant effect" or "significant impact" in this Decision, the reader may assume that those effects and impacts are adverse.

⁴ Title 20, California Code of Regulations, subsections 1769(a)(3), 1755(d).

PROCEDURAL HISTORY

On June 15, 2007, the Applicant filed the Amendment Petition, the subject of this amendment proceeding and Decision. After receipt of the Petition, technical staff of the Energy Commission reviewed the document and submitted data requests to the project owner, ESEC. The data requests were submitted to ESEC in two mailings, designated Data Request Sets 1 and 2 on August 14, and August 29, 2007, respectively. ESEC responded to Data Request Set 1 on September 10, 2007, and Data Request Set 2 September 28, 2007. The data requests covered all technical areas except for air quality. The Air Quality Staff Analysis section was completed on April 18, 2008, after receiving the Notice of Intent to Issue Permit from the South Coast Air Quality Management District, (SCAQMD) which was issued on March 19, 2008. A Staff Analysis (SA) was published on June 12, 2008, for a 30-day public comment period.

On June 25 2008, Energy Commission staff held a site visit and workshop regarding the amendment petition and the SA. The workshop was held to accept comments from agencies and the public regarding the proposed changes to the original Commission Decision approving the project design and conditions of certification. Members of the public and agency representatives attended the site visit and workshop held at the city of El Segundo administrative offices where they asked questions and commented on the SA. The participants were urged to submit their comments in writing and several comment letters and e-mails were received, which documented public, agency, and owner concerns and also favorable comments on the proposed changes to the project. On October 22, 2008, an Addendum was published that addressed public comments to the SA, except air quality.

The permitting of the project was delayed on July 28, 2008, when a ruling by the Superior Court of Los Angeles vacated the SCAQMD air emission offset-related program. Effective January 1, 2010, the California Legislature reinstated the offset program and SCAQMD issued the revised permit on May 18, 2010. On June 14, 2010, a Revised Staff Analysis (RSA) was published incorporating previously published material, and an updated air quality/green house gas section. No comments were received concerning this document.

Note Regarding this Decision

Where there are no changes to the findings and conclusions in the 2005 Decision, we will not repeat its analysis beyond a brief explanation of our reasons for making that determination. For the convenience of the parties and public, we will, however, reprint all of the conditions of certification for the project, whether or not they are changed from those adopted in 2005.

II. PROJECT DESCRIPTION

LOCATION

The amended project will be built on a 33-acre site at the existing El Segundo Generating Station, which it would partially replace. The site is at the southernmost city limit of the city of El Segundo on the coast of the Pacific Ocean between Dockweiler State Beach and the city of Manhattan Beach (see **PROJECT DESCRIPTION Figure 1**). The address is 301 Vista Del Mar, El Segundo, approximately two miles south of the Los Angeles International Airport. It is located less than a 1/4 mile south of the Los Angeles Department of Water & Power's Scattergood power plant and 1/2 mile south of the City of Los Angeles' Hyperion wastewater treatment plant. The Chevron El Segundo refinery is located across Vista Del Mar from ESPRP. The city of Manhattan Beach is immediately to the south.

POWER PLANT

The amended project will modify the power delivery equipment and will change the nominal plant capacity from 630 MW to 560 MW. Specification of different equipment and design will take advantage of new technology (i.e., rapid response with combined cycle) not available during the original project Application for Certification process. The new design will consist of two units with each containing a gas turbine generator (GTG), a heat recovery steam generator (HRSG), one steam turbine generator (STG) and air-cooled heat exchangers for cycle heat rejection. The air cooled design will enable closed-loop circulation of cooling water. Water/steam cycle wastewaters will be recycled back to the single-pressure reverse osmosis water storage tank where they will be diluted for reuse as evaporative cooler makeup or reprocessed by mobile demineralizers. Using a zero liquid discharge system (ZLD), in which water/steam cycle wastewaters will be recycled and reused to the extent practicable eliminating once-through cooling at the site and eliminating discharge of water/steam cycle wastewaters.

A different optional method of delivery of oversize equipment to the plant, consisting of ocean delivery by barge over the beach could be used. Under this option, very large components will be constructed off site and transported by barge to the project site. The

construction barge and ramp system will be removed following the completion of the final barge delivery and the beach will be restored as provided for in a restoration plan.

Additional improvements to the project include; modifications of the plant entrance road and gate area to facilitate delivery of oversize equipment to the plant during the construction phase, elimination of an aqueous ammonia storage tank, and the elimination of a backup diesel-fired fire water pump as backup firewater will be obtained directly from the city of El Segundo's high-pressure potable water lines. See **PROJECT DESCRIPTION Figure 2** for the facility and equipment configuration of the amended project.

NATURAL GAS FACILITIES AND TRANSMISSION LINE

No changes are proposed to the ESPRP's existing natural gas pipeline route nor transmission line route. Natural gas would be delivered via a new connection to the existing on-site metering station, interconnected to Southern California Gas Company (SoCalGas) existing 20-inch diameter pipeline. The power generated from ESPRP will be transmitted off-site to the Southern California Edison (SCE) 230 kV El Segundo Switchyard located adjacent to ESGS. This transmission will be made using existing SCE transmission line, meaning that no new off-site transmission lines will be built in connection with the proposed project modification.

WATER SUPPLY AND WASTE WATER TREATMENT

The most significant factor is the elimination of once-through sea water cooling of the combustion equipment and replacement by an air cooled condenser that causes no water dissipation. A zero liquid discharge (ZLD) system, would be added to all wastewater discharge from the facility. Water required for domestic uses and fire fighting would be provided by the city of El Segundo as originally proposed. The quantities of potable water used would remain nearly the same as under the original design. The quantities of wastewater produced would decrease significantly with the addition of the ZLD system.

SITE LAYOUT

Numerous minor adjustments to the equipment and site layout are proposed in the amendment petition. Equipment additions or modifications from the approved project are:

- Two 1x1x1 (one gas turbine generator (GTG), one HRSG, and one steam turbine generator (STG)) combined cycle power blocks.
- Addition of two air cooled heat exchangers for cycle heat.
- Use of single pressure, single-pass HRSGs instead of three pressure, vertically oriented drums.
- Movement of the northern end of the facility seawall to the west to accommodate the slightly larger footprint of the rapid response – combined cycle technology
- Modification of the plant entrance road including widening and straightening.
- Relocation of water storage tanks to the south side of existing power units.

CONSTRUCTION AND OPERATION

ESEC is currently in the demolition process for the existing facility. They propose to begin construction on the access road in January 2011, to begin construction on permanent structures in July 2011, and to complete construction in May 2013. Commercial operation of ESPRP is expected to begin in June 2013. The construction work force is anticipated to peak at 337 workers in month 13 of construction; i.e., July 2013. Once the new units are on line, the operational staff required is expected to be about 25 employees. The capital cost of the project is estimated to range between approximately \$300 and \$500 million.

FACILITY CLOSURE

The planned life of the facility is 30 years or longer. Whenever the facility is closed, either temporally or permanently, the closure procedures would follow the described plan provided in the Commission Decision and any additional LORS in effect at that time.

FINDINGS SPECIFIC TO AN AMENDMENT

As we note in the **Introduction** above, in addition to the findings necessary to approve an initial power plant license, two additional findings are required in order to approve an amendment to a license. They are 1) that the change in the project will be beneficial to the public, Applicant, or intervenors and 2) that there has been a substantial change in circumstances since the original approval justifying the change or that the change is based on information which was not known and could not have been known with the exercise of reasonable diligence prior to the original approval.

1. Benefits

Throughout this Decision to the Amendment, we describe various benefits that will accrue from the construction and operation of the ESPRP as proposed in the amendment. They include replacing the once-through cooling technology with new dry-cooling technology to eliminate the impact on the aquatic environment, and using new, low-emission combustion turbine equipment to reduce air emissions. The rapid start capability also complements wind and solar renewable generation by providing reliable localized generation that can quickly respond should wind or solar resources not be available during peak electrical demand periods.

2. Changed Information or Circumstances

The Applicant, in the Amendment Petition, explains the change in information and circumstances as follows:

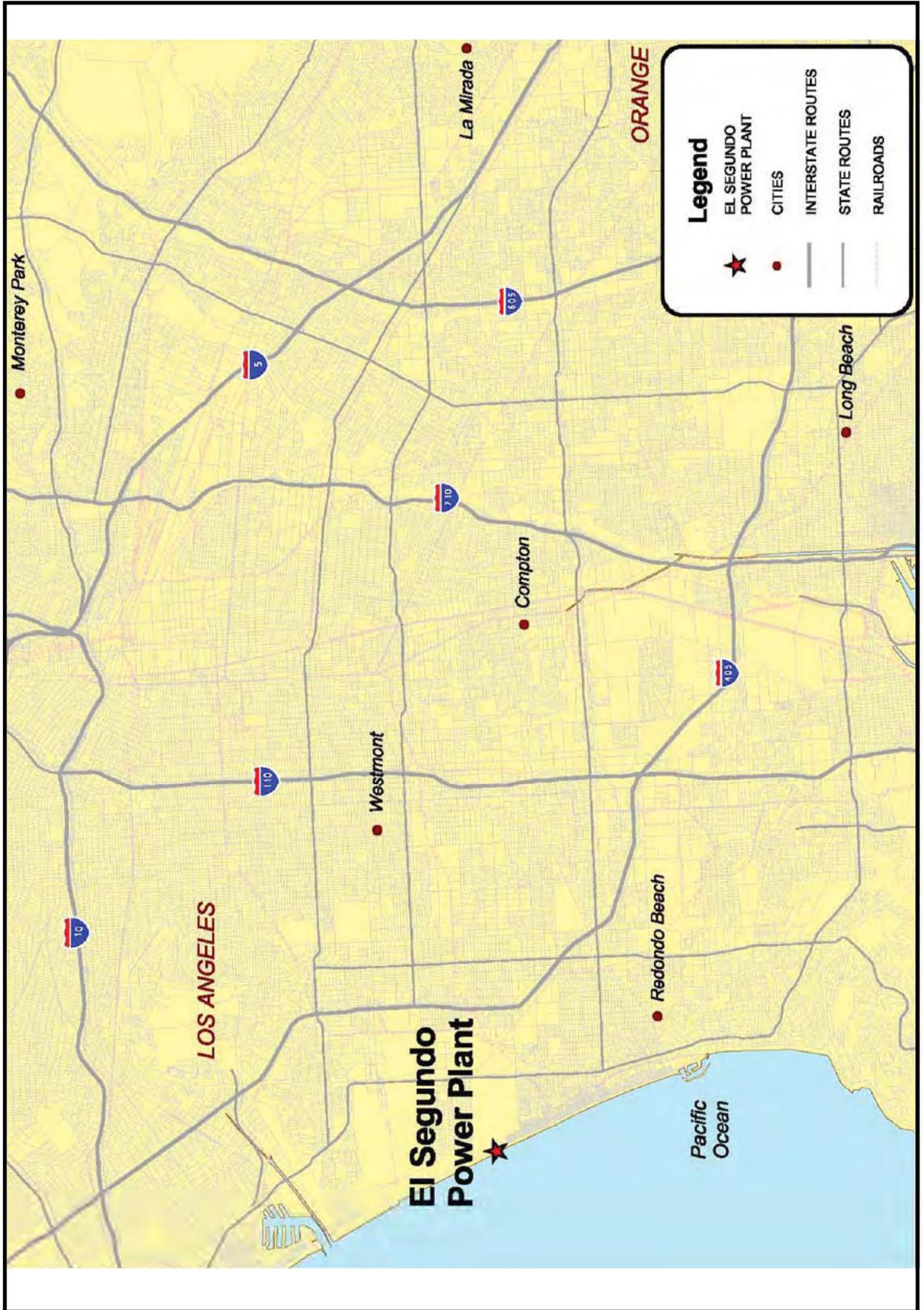
“Specification of different equipment and design to take advantage of state-of-the-art technology not available during siting of the previously permitted project (i.e., rapid response with combined cycle). Replacement of the existing less efficient, higher emitting 1950s steam generator power plant with a state-of-the-art power plant with BACT (BACT) pollution controls and that will utilize existing transmission and natural gas facilities and existing power plant labor and ancillary equipment resources. Providing much needed, highly efficient, additional power supply in the western Southern California Edison load center, replacing aged, former RMR, Units 1 and 2 with rapid starting R2C2 technology.”

FINDINGS AND CONCLUSIONS

Based upon the evidence, the Commission finds as follows:

1. The change in the project will be beneficial to the public, Applicant, and intervenor because the new facility would make the project considerably more efficient and more flexible from an operational standpoint. The new low-emission, dry-cooled combustion turbine equipment significantly reduces air pollutants from the combustion process, and will decrease environmental impacts. The rapid start capability also complements wind and solar renewable generation by providing reliable localized generation that can quickly respond should wind or solar resources not be available during peak electrical demand periods.
2. There has been a substantial change in circumstances since the original approval justifying the change in that the demand for electrical power and energy generation services, including ancillary services, has increased substantially since the original project was approved. Conversion to rapid response combined-cycle operations will allow ESEC to better respond to the market demand for various generating services in coming years.

PROJECT DESCRIPTION - FIGURE 1
 El Segundo Power Redevelopment Project - Amendment Petition For Dry Cooling - Project Description



CALIFORNIA ENERGY COMMISSION, SYSTEMS ASSESSMENT & FACILITIES SITING DIVISION, JUNE 2010
 SOURCE: SOURCE: Amendment Petition, Figure 2.0-1

PROJECT DESCRIPTION - FIGURE 2
 El Segundo Power Redevelopment Project - Amendment Petition For Dry Cooling - Site Plan

EQUIPMENT LIST

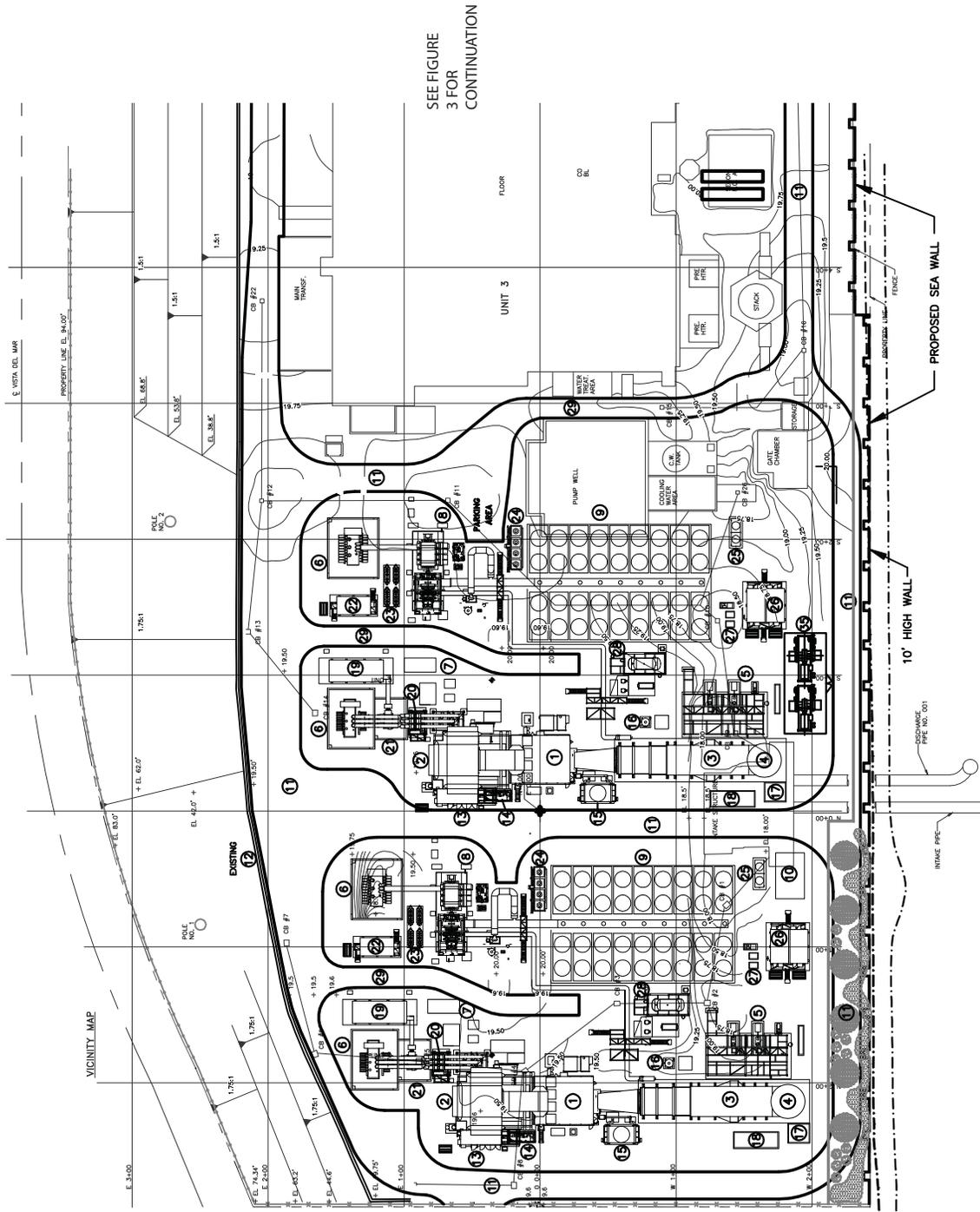
- 1 GAS TURBINE ENCLOSURE
- 2 GAS TURBINE INLET FILTER
- 3 HEAT RECOVERY STEAM GENERATOR (HRSG)
- 4 HRSG STACK
- 5 BOILER FEEDWATER PUMPS
- 6 GENERATOR TRANSFORMER
- 7 OIL/WATER SEPARATOR
- 8 STEAM TURBINE / GENERATOR
- 9 STEAM TURBINE FIN FAN COOLER
- 10 AIR COMPRESSOR AREA
- 11 ROAD ACCESS
- 12 RETAINING WALL
- 13 ELECTRICAL PACKAGE
- 14 LUBE OIL COOLER
- 15 ROTOR AIR COOLER
- 16 BOILER BLOW DOWN TANK
- 17 CONTINUOUS EMISSIONS MONITORING SYSTEM
- 18 SCR SKID
- 19 MV SWITCH GEAR
- 20 GENERATOR CIRCUIT BREAKER
- 21 AUX TRANSFORMER
- 22 STEAM TURBINE POWER CONTROL CENTER
- 23 GLAND STEAM CONDENSER
- 24 ST LUBE OIL COOLER
- 25 COND POLISHING FIN/FAN COOLER
- 26 BALANCE OF PLANT POWER CONTROL CENTER
- 27 CHEMICAL DOSING
- 28 DE-AERATOR DRAIN TANK COND. PUMP
- 29 MAINTENANCE ACCESS ROAD
- 35 GAS COMPRESSORS

GENERAL NOTES

1. THE COORDINATES OF UNITS AND UTILITIES ARE BASED ON SITE COORDINATE SYSTEM TO NAD 83. TO NAD 83, E = 1,159,182.426, CALIFORNIA STATE COORDINATE SYSTEM ZONE 7, NORTH AMERICAN DATUM OF 1827.
2. ALL ELEVATIONS SHOWN ARE REFERENCED TO MLLW. ELEVATION (0.00 FEET).
3. CONTOURS AND GRADE ELEVATIONS SHOWN ON THE PLANS INDICATE FINISH GRADE UNLESS NOTED OTHERWISE.
4. SEE DRAWING 100972500-F-11-REV-B FOR DETAILED UNIT 5,6,7 & 8 PLOT PLAN.
5. AMMONIA SUPPLY FROM CHEVRON
6. BIKE PATH LOCATION IS APPROXIMATE.

LEGEND

- EXISTING CONTOUR
- EXISTING ROAD
- FENCE
- INDICATES SLOPE



III. PROJECT ALTERNATIVES

COMMISSION DISCUSSION

Because the project is an amendment to an existing license, and because the new project modifications would increase generating capacity without increasing fuel use or environmental impact, this topic was not addressed in the Staff Analysis of the Amendment Petition.

Because no significant environmental effects of the ESPRP were found in the 2005 Decision approving the project, the applicant did not need to, nor did it attempt to weigh, the relative merits of alternative sites against the proposed project location. A similar situation exists here in that we have found no significant effects from the amended project and need not compare the new location to alternative sites or technologies.

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. If all Conditions of Certification contained in this Decision to the Amendment are implemented, construction and operation of the El Segundo Power Redevelopment Project will not create any significant direct, indirect, or cumulative environmental impacts.
2. The 2005 Decision and the evidentiary record contain an adequate review of alternative technologies, fuels, the no-project alternative and alternative site locations.
3. No feasible technology alternatives such as geothermal, solar, or wind resources are located near the project or are capable of meeting project objectives.
4. The use of alternative generating technologies would not prove efficient, cost-effective or mitigate any significant environmental impacts to levels of insignificance.
5. No significant environmental impacts would be avoided under the no-project alternative.

III. PUBLIC HEALTH & SAFETY/ENVIRONMENTAL QUALITY

A. AIR QUALITY

Staff witness Brenner Munger, Ph.D., P.E. reviewed the proposed changes to air quality associated with the amended ESPRP. He concludes that the ESPRP qualifies under SCAQMD Rule 1304(a)(2) for an exemption from the New Source Review (NSR) offset requirements in Rule 1303 because the project replaces existing boiler units with advanced combustion turbine units. With the shutdown of the additional boiler Unit 3, the total generating capacity of 685 MWs associated with the shutdown of the existing units (Units 1, 2, and 3) exceeds the 573 MW capacity of the Project. This means that with the shutdown of the three boiler units at the existing El Segundo Generating Station, the Project is fully offset under Rule 1304 and the SCAQMD will draw upon the District Account of emission reduction credits (ERCs) to provide the necessary ERCs for the Project (RSA 4.1-1 to 4.1-43).

Staff concludes that the proposed changes are based on information that was not available during the original licensing process. Staff concludes that the proposed Conditions of Certification retain the intent of the original Commission Decision and Conditions of Certification. Staff finds that with the adoption of the attached Conditions of Certification the proposed project would comply with all applicable laws, ordinances, regulations, and standards (LORS) and would not result in any significant air quality-related impacts

In addition to review by the Staff, the project was reviewed by the South Coast Air Quality Management District (SCAQMD or District), which has issued its Final Determination of Compliance (FDOC) for the project on May 18, 2010, which supersedes the previous FDOC issued on February 12, 2002. The District found the project to be in compliance with all District rules and regulations, accounts for the update to the ERC package for the Project. The revised FDOC also results in a revised Best Available Control Technology (BACT) determination, revision to some of the permit conditions contained in the Commission's 2005 decision, and the addition of several new permit conditions.

Staff has analyzed the potential incremental greenhouse gas (GHG) emission impacts from the proposed project and concludes that they are not cumulatively considerable and thus do not represent a significant impact under the California Environmental Quality Act (CEQA).

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The air quality aspects of the amended project do not create significant direct or cumulative environmental effects.

Based on this additional information, staff recommends the deletion of Conditions of Certification **AQ-9, -10, -13, -21, and -28**; the following modifications to Conditions of Certification **AQ-2, -3, -4, -5, -6, -7, -11, -12, -14, -15, -16, -17, -18, -19, -20, -22, -23, -24, -25, -26, -27 and --29** and the addition of Conditions of Certification **AQ-C6, -C7, -C8** and **AQ-30** through **AQ-40**. Because the ERC package proposed for the Project has been updated since the 2005 Commission decision, it was necessary for the Staff to revise Condition of Certification **AQ-C5** to reflect the new ERCs based on SCAQMD Rule 1304.

CONDITIONS OF CERTIFICATION

AIR QUALITY Table 10 maps out the relationship between Energy Commission condition numbering and District condition numbering.

AIR QUALITY Table 10
Mapping of Energy Commission and District Condition Numbering

Energy Commission	District	Energy Commission	District
AQ-C1	(none)	AQ-20	A433.1
AQ-C2	(none)	AQ-21	(deleted)
AQ-C3	(none)	AQ-22	E179.5
AQ-C4	(none)	AQ-23	E179.6
AQ-C5	(none)	AQ-24	A195.9
AQ-C6	(none)	AQ-25	A195.8
AQ-C7	(none)	AQ-26	A195.11
AQ-C8	(none)	AQ-27	I296.2
AQ-1	(deleted)	AQ-28	(deleted)
AQ-2	D12.11	AQ-29	C157.1

AQ-3	D12.12	AQ-30	E144.2
AQ-4	D12.13	AQ-31	E57.2
AQ-5	D29.8	AQ-32	A99.9
AQ-6	D29.7	AQ-33	A195.10
AQ-7	D29.9	AQ-34	B61.2
AQ-8	K40.4	AQ-35	C1.6
AQ-9	(deleted)	AQ-36	K67.5
AQ-10	(deleted)	AQ-37	F2.1
AQ-11	A63.2	AQ-38	A327.1
AQ-12	D12.10	AQ-39	E193.2
AQ-13	(deleted)	AQ-40	E193.3
AQ-14	D82.4		
AQ-15	D82.5		
AQ-16	A99.7		
AQ-17	A99.8		
AQ-18	A99.10		
AQ-19	A99.11		

AQ-C1: The project owner shall submit the resume(s) of their selected Construction Mitigation Manager(s) (CMM) to the Compliance Project Manager (CPM for approval). The CMM shall preferably have a minimum of 8 years experience as follows; however, the CPM will consider all resumes submitted regardless of experience:

- 5 years construction experience, as a subcontractor or general contractor;
- 1 year experience in construction project management;
- 2 year experience in air quality assessment; and
- Must have an engineering degree or equivalent or an additional 5 years construction experience.

The project owner shall make available a dedicated office for the CMM. The CMM shall be responsible for implementing all mitigation measures related to construction, as outlined in Conditions of Certification for construction **AQ-C1** through **AQ-C4**. The CMM shall be on-site or available to be on-site at any time. The CMM will be granted access to all areas of the main and related linear facility construction-sites. The CMM shall have the authority to stop construction on either the main or the related linear facility construction-sites as warranted by specific mitigation measures. The CMM position may not be terminated prior to the cessation of all construction activities unless written approval is granted by the CPM.

Verification: The project owner shall submit the CMM resume at least 60 days prior to site mobilization.

AQ-C2: The CMM shall prepare and submit for approval to the CPM, a Fugitive Dust Mitigation Plan that will specifically identify fugitive dust mitigation measures that will be employed during the construction phase of the main and related linear construction sites. The CMM will be responsible for implementing and

maintaining all measures identified in the Fugitive Dust Mitigation Plan. The Fugitive Dust Mitigation Plan must address at a minimum the following:

- the identification of the employee parking area(s) and surface of the parking area(s);
- the frequency of watering of unpaved roads;
- the application of chemical dust suppressants;
- the use of gravel in high traffic areas;
- the use of paved access aprons;
- the use of sandbags to prevent run off;
- the use of posted speed limit signs;
- the use of wheel washing areas prior to large trucks leaving the project site;
- the methods that will be used to clean tracked-out mud and dirt from the project site onto public roads;
- the transport of borrowed fill material,
- the use of vehicle covers;
- the use of wetting of the transported material;
- the use of appropriate freeboard;
- the method for the stabilization of storage piles and disturbed areas;
- the use of windbreaks at appropriate locations;
- the suspension of all earth moving activities under windy conditions; and
- the use of on-site monitoring devices.

Verification: The CMM shall submit the Fugitive Dust Mitigation Plan to the CPM for approval at least 30 days prior to site mobilization.

AQ-C3:The CMM shall prepare and submit to the CPM a Diesel Construction Equipment Mitigation Plan that will specifically identify diesel engine mitigation measures that will be employed during the construction phase of the main and related linear construction-sites. The CMM will be responsible for implementing and maintaining all measures identified in the Diesel Construction Equipment Mitigation Plan. The CMM shall submit to the CPM, in the Monthly Compliance Report, a construction mitigation report that demonstrates compliance with the AQCMP mitigation measures for purposes of controlling diesel construction-related emissions. Any deviation from the AQCMP mitigation measures shall require prior and CPM notification and approval.

The Diesel Construction Equipment Mitigation Plan shall include the following mitigation measures:

- a. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.
- b. All construction diesel engines with a rating of 50 hp or higher shall meet, at a minimum, the Tier 3 California Emission Standards for Off-Road

Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b)(1), unless a good faith effort to the satisfaction of the CPM that is certified by the on-site AQCMM demonstrates that such engine is not available for a particular item of equipment. In the event that a Tier 3 engine is not available for any off-road equipment larger than 100 hp, that equipment shall be equipped with a Tier 2 engine, or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 2 levels unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is “not practical” for the following, as well as other, reasons:

1. There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question to Tier 2 equivalent emission levels and the highest level of available control using retrofit or Tier 1 engines is being used for the engine in question; or
2. The construction equipment is intended to be on site for 10 days or less.

The CPM may grant relief from this requirement if the AQCMM can demonstrate a good faith effort to comply with this requirement and that compliance is not practical.

- c. The use of a retrofit control device may be terminated immediately, provided that the CPM is informed within 10 working days of the termination and that a replacement for the equipment item in question meeting the controls required in item “b” occurs within 10 days of termination of the use, if the equipment would be needed to continue working at this site for more than 15 days after the use of the retrofit control device is terminated, if one of the following conditions exists:
 1. The use of the retrofit control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure.
 2. The retrofit control device is causing or is reasonably expected to cause engine damage.
 3. The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public.
 4. Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination.
- d. All heavy earth-moving equipment and heavy duty construction-related trucks with engines meeting the requirements of (b) above shall be properly maintained and the engines tuned to the engine manufacturer’s specifications.

- e. All diesel heavy construction equipment shall not idle for more than 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 CMM shall submit the initial Diesel Construction Equipment Mitigation Plan to the CPM for approval at least 30 days prior to site mobilization. The CMM will update the initial Diesel Construction Equipment Mitigation Plan as necessary, no less than 10 days prior to a specific contractor gaining access to either the main or related linear construction-sites. The CMM will notify the CPM of any emergency termination within 10 working days of the termination.

AQ-C4: The CMM will submit to the CPM for approval, the Monthly Construction Compliance Report that will summarize all compliance actions taken germane to Conditions of Certification **AQ-C2** and **AQ-C3**. The Monthly Construction Compliance Report will include the following elements:

Fugitive Dust Mitigation Monthly Report (see Condition of Certification **AQ-C2**):

- Identification of each mitigation measure approved by the CPM.
- Identification of specific mitigation measure performed, the location performed, date performed and date enforced or verified as remaining effective.
- Identification of any transgressions or circumventions of mitigation measure and the actions taken to correct the situation.
- Identification of any observation by the CMM of dust plumes beyond the property boundary of the main construction-site or beyond an acceptable distance from the linear construction-site and what actions (if any) were taken to abate the plume.

Diesel Construction Equipment Mitigation Monthly Report (see Condition of Certification **AQ-C3**).

- Identification of any changes, as approved by the CPM, to the Diesel Construction Equipment Mitigation Plan from the initial report or the last monthly report including any new contractors and their diesel construction equipment.
- A copy of all receipts or other documentation indicating type and amount of fuel purchased, from whom, where delivery occurred and on what date for the main and related linear construction-sites.
- Identification and verification of all diesel engines required to meet EPA or CARB Tier 3 or better off-road diesel equipment emission standards.
- The identification of any suitability report being initiated, pursued or the completed report should be included in the monthly report (in the month that it was completed) as should the verification of any subsequent installation of a catalyzed diesel particulate filter. The suitability of the use of a catalyzed diesel particulate filter for a specific piece of construction

equipment is to be determined by a qualified mechanic or engineer who must submit a report through the CMM to the CPM for approval.

- Identification of any observation by the CMM of dark plumes emanating from diesel-fired construction equipment that extend beyond the property boundary of the main construction-site or beyond an acceptable distance from the linear construction-site and what actions (if any) were taken to abate the plume or future expected plumes.

Verification: CMM shall submit to the CPM for approval, the Monthly Construction Compliance Report by the 10th day of each month while construction is occurring at the main or related linear construction-sites.

AQ-C5: Within 90 days of startup of the combined cycle gas turbines, the project owner shall shutdown El Segundo Generating Station Units 1, 2, and 3 and use the SCAQMD Rule 1304 boiler replacement offset exemption to fully offset the project SOx, VOC, and PM10 emissions. The project owner shall request from the District a report of the NSR Ledger Account for the ESPRP after the District has granting the ESPRP a Permit to Construct. Such report to specifically identify the Rule 1304 Exempted Emissions used to offset the project emissions. The project owner shall submit this report to the CPM prior to turbine first fire.

Verification: No more than 15 days following the issuance of the District's Permit to Construct, the project owner shall request from the District the report of the NSR Ledger Account for the ESPRP. The project shall submit the report of the NSR Ledger Account for the ESPRP to the CPM no less than 30 days prior to turbine first fire.

AQ-C6: The owner/operator shall employ tug boats and self-propelled motorized transporters (SPMT) for all barge delivery operations that are equipped with EPA Tier 2 diesel engines or better, unless certified by the onsite environmental compliance manager that tugboats equipped with Tier 2 diesel engines are not available. For purposes of this condition, "not available" means that proper size tugboats equipped with Tier 2 diesel engines are not in existence at the Ports of Los Angeles/Long Beach and cannot readily be made available for use by the project owner at or near the time of the barge deliveries to the project site.

As a contract element for the employment of any and all SPMT and tug boats for the purpose of barge delivery operations, the project owner shall include a provision to certify that the SPMT or tug boat primary source of power is based on an EPA Tier 2 diesel engine or that SPMTs or tugboats with Tier 2 diesel engines are not available.

Verification: No less than 5 days prior to a SPMT or tug boat being used for any type of barge delivery operation, the owner/operator shall submit the certification to the CPM for approval.

AQ-C7: The owner/operator shall install and make operational an oxidation catalyst at the earliest point practical during the initial commissioning phase of each combustion turbine train. The installation must seek to maximize the reduction of VOC emissions and must not compromise safety in any way.

Verification: The owner/operator shall submit to the CPM for approval a letter stating that the installation of the oxidation catalyst is complete and operational and include the estimated effectiveness in terms of percent of VOC emission reduction achieved. This letter shall be signed and stamped by a California Registered Professional Engineer.

AQ-C8: The project owner shall submit to the Commission, Quarterly Operational Reports that include the fuel use associated with each gas turbine, in addition to the CO and NOx CEMS recorded data for each gas turbine exhaust stack on an hourly basis in order to verify the following emissions limits.

Except during startup, shutdown and initial commissioning, emissions from each gas turbine exhaust stack shall not exceed the following limits:

NOx (measured as NO ₂):	2.0 ppm at 15% oxygen on a dry basis averaged over 1 hour.
CO:	2.0 ppm at 15% oxygen on a dry basis averaged over 1 hour.
VOC:	2.0 ppm at 15% oxygen on a dry basis averaged over 1 hour.
Ammonia:	5 ppm at 15% oxygen on a dry basis.

Verification: The project owner shall submit the Quarterly Operational Reports as specified herein to the CPM no later than 30 days following the end of each calendar quarter.

AQ-1: Deleted

AQ-2: The operator shall install and maintain a flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH₃) to the SCR in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The ammonia injection rate shall remain between 4.8 gallons per hour and 11.5 gallons per hour.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-3: The operator shall install and maintain a temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The temperature shall remain between 400 degrees F and 750 degrees F. The catalyst temperature shall not exceed 750 degrees F during the startup period.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United

States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-4: The operator shall install and maintain a pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column in combined cycle turbines 5 and 7. The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months. The pressure drop across the catalyst shall remain between 1 inch of water column and 4 inches of water column. The pressure drop across the catalyst shall not exceed 4 inches of water column during the startup period.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-5: The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutants to be Tested	Test Method	Averaging Time	Test Location
NH ₃ Emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of SCR serving this equipment

The test shall be conducted and the results submitted to the District within 45 days after the test date. The District shall be notified of the date and time of the test at least 7 days prior to the test.

The test shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NO_x concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NO_x emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

If the equipment is not operated in any given quarter, the operator may elect to defer the required testing to a quarter in which the equipment is operated.

Verification: The project owner shall submit the proposed protocol for the source tests no later than 45 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 10 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

AQ-6: The operator shall conduct source test(s) for the pollutant(s) identified below on combined-cycle turbine units 5 and 7.

Pollutants To be Tested	Required Test Method	Averaging Time	Test Location
NOx Emissions	District Method 100.1	1 hour	Outlet of SCR serving this equipment
CO Emissions	District Method 100.1	1 hour	Outlet of SCR serving this equipment
SOx Emissions	District Method 307-91	N/A	Fuel Sample
VOC Emissions	District Method 25.3	1 hour	Outlet of SCR serving this equipment
PM10 Emissions	District Method 5	4 hours	Outlet of SCR serving this equipment
NH ₃ Emissions	District Method 207.1 and 5.3 or EPA Method 17	1 hour	Outlet of SCR serving this equipment

The test shall be conducted after District and CPM approval of the source test protocol, but no later than 180 days after initial start-up. The District and CPM shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with a District and CPM approved source test protocol. The protocol shall be submitted to the District and the CPM no later than 45 days before the proposed test date and shall be approved by the District and CEC before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of District Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at maximum, average and minimum loads.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas-fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters is done with zero gas analyzed/certified to contain less than 0.5 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA method TO-12 (with preconcentration) and temperature of canisters when extracting samples for analysis is not below 70 deg. F. The use of this alternative method for VOC compliance determination does not mean that it is more accurate than District method 25.3, nor does it mean that it may be used in lieu of District method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of the District, EPA and CPM.

Verification: The project owner shall submit the proposed protocol for the initial source tests no later than 45 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM. The project owner shall notify the District and CPM no later than 10 days prior to the proposed initial source test date and time.

AQ-7: The operator shall conduct source test(s) for the pollutant(s) identified below on combine cycle turbine units 5 and 7.

Pollutants to be Tested	Required Test Method	Averaging Time	Test Location
SOx Emissions	AQMD Method 307-91	N/A	Fuel Sample
VOC Emissions	District Method 25.3	1 hour	Outlet of SCR serving this equipment
PM Emissions	District Method 5	4 hours	Outlet of SCR serving this equipment

The tests shall be conducted at least once every three years for SOx and PM₁₀, and annually for VOC.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the test shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in megawatts (MW).

The test shall be conducted in accordance with District- approved test protocol. The protocol shall be submitted to the District and the CPM no later than 45 days before the proposed test date and shall be approved by the District and the CEC before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at 100 percent load.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas-fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters is done with zero gas analyzed/certified to contain less than 0.5 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA method TO-12 (with preconcentration) and temperature of canisters when extracting samples for analysis is not below 70 deg. F. The use of this alternative method for VOC compliance determination does not mean that it is more accurate than District method 25.3, nor does it mean that it may be used in lieu of District

method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines. The test results shall be reported with two significant digits.

For the purpose of this condition, alternative test methods may be allowed for each of the above pollutants upon concurrence of the District, EPA and CPM.

Verification: The project owner shall submit the proposed protocol for the source tests no later than 45 days prior to the proposed source test date to both the District and CPM for approval. The project owner shall notify the District and CPM no later than 10 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 60 days following the source test date to both the District and CPM.

AQ-8: The operator shall provide to the District and CPM any source test report in accordance with the following specifications:

- Source test results shall be submitted to the District and CPM no later than 60 days after the source test was conducted.
- Emission data shall be expressed in terms of concentration (ppmvd), corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM cubic feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.
- All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).
- All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.
- Source test results shall also include the oxygen levels in the exhaust, the fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

Verification: See verifications for **AQ-5, -6, and -7.**

AQ-9: Deleted

AQ-10: Deleted

AQ-11: The operator shall limit emissions from this equipment as follows:

Contaminant	Emissions Limit
PM ₁₀	6,935 LBS IN ANY 1 MONTH
VOC	4,930 LBS IN ANY 1 MONTH
SOx	1,065 LBS IN ANY 1 MONTH

The operator shall calculate the monthly emissions for VOC, PM₁₀ and SOx using the equation below and the following emission factors: PM₁₀ 4.66 lbs/mmscf, VOC 2.93 lbs/mmscf, and SOx 0.72 lbs/mmscf.

Monthly Emissions, lb/month = X (E. F.)

Where X = monthly fuel use, mmscf/month and E. F = emission factor indicated above.

For the purposes of this condition, the limit(s) shall be based on the emissions from each individual combined cycle gas turbine No. 5 and No. 7.

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (**AQ-C8**).

AQ-12: The operator shall install and maintain a flow meter to accurately indicate the fuel usage for each of the turbines. The operator shall also install and maintain a device to continuously record the parameter being measured.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-13: Deleted

AQ-14: The operator shall install and maintain a CEMS to measure CO concentration in ppmv. Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operated, in accordance with an approved District Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from District. The CO CEMS shall be installed and operated within 90 days after the initial start-up of the gas turbines. The CEMS shall be installed and operated to measure CO concentration over a 15 minute averaging time period. Within two weeks of turbine start-up, the operator shall provide written notification to the District of the exact date of start-up.

The CEMS shall convert the actual CO concentrations to mass emission rates (lbs/hr) using the equation below and record the hourly emission rates on a continuous basis:

$$\text{CO Emission Rate (lb/hr)} = K * C_{co} * F_d * (20.9 / (20.9\% - \%O_2 d))^* \\ ((Q_g * HHV) / 1E6),$$

Where:

$$K = 7.267E-8 \text{ (lb/scf)/ppm}$$

C_{co} = Hourly average ppm based on four consecutive 15-min average CO concentrations, ppm

F_d = 8710 dscf/mmBtu natural gas

$\%O_2 d$ = Hourly average % by volume O₂, dry basis, corresponding to C_{co}

Q_g = Fuel gas usage during the hour, scf/hr

HHV = Gross high heating value of fuel, Btu/scf

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-15: The operator shall install and maintain a CEMS to measure NO_x concentration in ppmv. Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operating (for BACT purposes only) no later than 90 days after initial start-up of the turbine and shall comply with the requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(h)(2) and 2012(h)(3). Within two weeks of the turbine startup date, the operator shall provide written notification to the District of the exact date of start-up.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-16: The 2.0 PPM NO_x emission limit(s) shall not apply during turbine commissioning, startup and shutdown periods. The commissioning period shall not exceed 415 gas turbine operating hours. Startup time shall not exceed 60 minutes for each startup. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of commissioning, start-ups and shutdowns shall be maintained and made available upon request from the District.

A gas turbine operating hour during the commissioning period consists of 60 operating minutes. An operating minute occurs when the gas turbine fuel flow during that minute is greater than zero.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-17: The 2.0 4 PPM CO emission limits shall not apply during turbine commissioning, startup and shutdown periods. The commissioning period shall not exceed 415 gas turbine operating hours. Startup time shall not exceed 60 minutes for each startup. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of commissioning, start-ups and shutdowns shall be maintained and made available upon request from the District.

A gas turbine operating hour during the commissioning period consists of 60 operating minutes. An operating minute occurs when the gas turbine fuel flow during that minute is greater than zero.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United

States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-18: The 16.55 LBS/MMCF NOx emission limit(s) shall only apply during the interim reporting period during the initial turbine commissioning period to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from entry into RECLAIM.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-19: The 8.66 LBS/MMCF NOx emission limit(s) shall only apply during the interim reporting period after initial turbine commissioning to report RECLAIM emissions. The interim reporting period shall not exceed 12 months entry into RECLAIM.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-20: The owner/operator shall comply at all times with the 2.0 ppm 1-hour BACT limit for NOx, except as defined in condition **AQ-16** and with the following additional restriction on startup.

NOx emissions shall not exceed 112 lbs total per startup per turbine. Each turbine shall be limited to 200 startups per year with each startup not to exceed 60 minutes in duration.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-21: **Deleted**

AQ-22: For the purpose of the following condition numbers, the phrase “continuously record” shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

Condition no. **AQ-2**

Condition no. **AQ-3**

Verification: See verifications for **AQ-2** and **3**.

AQ-23: For the purpose of the condition number **AQ-4**, the phrase “continuously record” shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month. See condition **AQ-4**.

Verification: See verifications for **AQ-4**.

AQ-24: The 2.0 PPMV NO_x emission limit is averaged over 60 minutes at 15 percent oxygen, dry.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-25: The 2.0 4 PPMV CO emission limit is averaged over 60 minutes at 15 percent oxygen, dry.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-26: The 5 PPMV NH₃ emissions limit(s) are averaged over 60 minutes at 15 percent O₂, dry. The operator shall calculate and continuously record the NH₃ slip concentration using the following:

$$\text{NH}_3 \text{ (ppmv)} = [a - b * c / 1E6] * 1E6 / b$$

Where:

a = NH₃ injection rate (lb/hr) / 17(lb/lb-mol),

b = dry exhaust gas flow rate (scf/hr) / 385.3 (scf/lb-mol),

c = change in measured NO_x across the SCR (ppmvd at 15% O₂)

The owner/operator shall install and maintain a NO_x analyzer to measure the SCR inlet NO_x ppm accurate to within +/- 5 percent calibrated at least once every 12 months. The NO_x analyzer shall be installed and operated within 90 days of initial startup. The owner/operator shall use the above described method or another alternative method approved by the District's Executive Officer. The above described ammonia slip calculation procedure shall not be used for compliance determination or emission information determination without corroborative data using a reference method approved by the District for the determination of ammonia.

Verification: The project owner shall include ammonia slip concentrations averaged on an hourly basis as part of the Quarterly Operational Report required in Condition of Certification **AQ-C8**. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. Exceedances of the ammonia limit shall be reported as prescribed herein. Chronic exceedances of the ammonia slip limit shall be identified by the project owner and confirmed by the CPM within 60 days of the fourth quarter Quarterly Operational Report (**AQ-SC8**) being submitted to the CPM. 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.

AQ-27: This equipment shall not be operated unless the operator demonstrates to the District's Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the District's Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility

holds sufficient RTCs in an amount equal to the annual emissions increase. The project owner shall submit all such information to the CPM for approval.

The operator shall, prior to the 1st compliance year, hold a minimum NOx Reclaim Trading Credits (RTCs) of 104,864 lbs/yr. This condition shall apply during the 1st months of operation, commencing with the initial operation of the gas turbine.

The operator shall, prior to the beginning of all years subsequent to the 1st compliance year, hold a minimum of lbs/yr of 90,953 NOx RTC's for operation of the gas turbine. In accordance with District Rule 2005 (f), unused RTC's may be sold only during the reconciliation period for the fourth quarter of the applicable compliance year inclusive of the 1st compliance year.

This condition shall apply to each turbine individually.

Verification: The project owner shall submit to the CPM copies of all RECLAIM reports filed with the District in each Quarterly Operational Report (see **AQ-C8**).

AQ-28 Deleted

Conditions of Certification **AQ-29** through **AQ-31**, below, pertain to the following equipment:

Underground Aqueous Ammonia Storage Tank, TK-001, carbon steel, double walled with three transfer pumps and a PVR set at 50 PSIG, 20000 gallons capacity. (ID. No. D30)

(Ammonia Storage Tank)

AQ-29 The operator shall install and maintain a pressure relief valve with a minimum pressure set at 50 psig.

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

AQ-30 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

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

AQ-31 The operator shall vent this equipment to the two-stage venture scrubber described as Device C64 whenever the tank is undergoing loading of ammonia.

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

AQ-32 The 2.0 PPM VOC emission limit shall not apply during turbine commissioning, startup and shutdown periods. The commissioning period shall not exceed 415 operating hours. Startup time shall not exceed 60 minutes for each startup.

Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 200 startups per year. Written records of commissioning, startups and shutdowns shall be maintained and made available upon request from the District.

A gas turbine operating hour during the commissioning period consists of 60 operating minutes. An operating minute occurs when the gas turbine fuel flow during that minute is greater than zero.

Verification: The project owner shall make the site available for inspection by representatives of the District, California Air Resources Board (CARB), the United States Environmental Protection Agency (EPA) and the California Energy Commission (Commission).

AQ-33 The 2.0 ppmv VOC emission limit is averaged over 60 minutes at 15 percent O₂, dry basis.

Verification: The project owner shall submit CEMS records demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-34 The project owner/operator shall not use natural gas containing H₂S greater than 0.25 grains per 100 scf. This concentration limit is an annual average based on monthly samples of natural gas composition or gas supplier documentation. The gaseous fuel samples shall be tested using District Method 307-91 for total sulfur calculated as H₂S.

Verification: The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-35 The owner/operator shall limit the total fuel usage for each turbine to no more than 1,500 million cubic standard feet (mmcsf) in any one calendar month.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

Verification: The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-36 The owner/operator shall keep records, in a manner approved by the District, for the following parameters or items:

Natural gas fuel use after CEMS certification.

Natural gas fuel use during the commissioning period.

Natural gas fuel use after the commissioning period and prior to the CEMS certification.

Verification: The project owner shall submit fuel usage records and all other records and calculations required to demonstrate compliance with this condition as part of the Quarterly Operational Report required in **AQ-C8**.

AQ-37 The owner/operator shall limit PM emissions from this facility to less than 100 tons in any one year. For the purpose of this condition, the PM emission limit

shall be applicable to particulate matter with an aerodynamic diameter of less than 2.5 microns. For the purpose of this condition, any one year shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month.

Verification: The project owner shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQ-C8**.

AQ-38 For the purpose of determining compliance with District Rule 475, combustion contaminants emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

Verification: The project owner shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report of Condition of Certification **AQ-C8**.

AQ-39 The operator shall on completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all air quality mitigation measures stipulated in the final California Energy Commission decision for the 00-AFC-14C project.

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

AQ-40 The operator shall on completion of construction, operate and maintain this equipment according to the following specifications:

The combined cycle gas turbine units 5 and 7 shall not operate simultaneously with boiler units 1,2, or 3 except for the 90 day period as stipulated in District Rule 1313. El Segundo Power shall surrender the Permit to Operate (P/N F14448) for boiler no. 3 within 90 days of the start-up of the combined cycle gas turbines.

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

ACRONYMS

AAQS	Ambient Air Quality Standard
AERMOD	ARMS/EPA Regulatory Model
AFC	Application for Certification
AQCMM	Air Quality Construction Mitigation Manager
AQCMP	Air Quality Construction Mitigation Plan
AQMD	Air Quality Management District
ARB	California Air Resources Board
ATC	Authority to Construct
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
bhp	brake horsepower
BLM	Bureau of Land Management
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission (or Energy Commission)
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CPM	(CEC) Compliance Project Manager
DPM	Diesel Particulate Matter
dscf	dry standard cubic feet
EIS	Environmental Impact Statement
ERC	Emission Reduction Credit
ESPRP	El Segundo Power Redevelopment Project
FDOC	Final Determination Of Compliance
FID	Flame Ionization Detector
GHG	Greenhouse Gas
gpm	gallon per minute
H ₂ S	Hydrogen Sulfide
hp	horsepower
HSC	Health and Safety Code
ISC	Interruptible Service Contract
kV	Kilovolt
lbs	Pounds
LORS	Laws, Ordinances, Regulations and Standards
LRP	Load Reduction Program
µg/m ³	microgram per cubic meter
mg/m ³	milligrams per cubic meter
MW	Megawatts (1,000,000 Watts)
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Protection Act
NMHC	non-methane-hydrocarbons
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen or Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review

O ₂	Oxygen
O ₃	Ozone
OLM	Ozone Limiting Method
PDOC	Preliminary Determination Of Compliance
PID	photoionization detector
PM	Particulate Matter
PM ₁₀	Particulate Matter less than 10 microns in diameter
PM _{2.5}	Particulate Matter less than 2.5 microns in diameter
ppm	Parts Per Million
ppmv	Parts Per Million by Volume
ppmvd	Parts Per Million by Volume, Dry
PSD	Prevention of Significant Deterioration
PTO	Permit to Operate
RACT	Reasonably Available Control Technology
SA	Staff Assessment (this document)
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO ₄	Sulfate
SO _x	Oxides of Sulfur
SWPPP	Storm Water Pollution Prevention Plan
TDS	total dissolved solids
tpy	tons per year
U.S.EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

B. BIOLOGICAL RESOURCES

Staff witness Rick York reviewed the petition for new potential issues related to biological resources. Staff believes that the petition to amend the ESPRP decision proposes to make major project changes that will considerably alter potential effects on biological resources in Santa Monica Bay and the immediate vicinity making the original conditions of certification no longer necessary, but requiring new conditions for the amended project. Marine impacts related to the new design are now associated with the possible beach delivery system for which impact identification and appropriate mitigation are localized in comparison to the original project. In addition, project effects on terrestrial biota warrant re-examination for the new parking/laydown area. (RSA, pp. 4.2-1 to 4.2-12.)

It is staff's position that project related effects and potential impacts on biological resources will not result in unmitigated significant adverse impacts if the proposed Conditions of Certification are adopted and implemented. If unanticipated circumstances arise, they can be adequately dealt with under the guidance and specifications of the required Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). Although the California Department of Fish and Game indicated a Section 2081 "take authorization" for state listed species would not likely be necessary for the proposed project (CDFG 2007c), terms and conditions in US Fish and Wildlife Service and/or National Marine Fisheries Service permits, should they be required, will be incorporated into the BRMIMP. As such, compliance with applicable laws, ordinances, regulations, and standards (LORS) concerning biological resources is expected to occur.

The once-through cooling system proposed for the original project is not included in the petition to amend. As such, staff believes Conditions of Certification **BIO-1** through **BIO-5** are not necessary. Based on other project changes, staff recommends that new Conditions **BIO-6** through **BIO-13** be added. With the revised Conditions, he finds that the amended project would comply with all LORS and "would not have a significant effect on sensitive species or their habitat near the project."

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Biological Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

BIO-1 **Deleted**

BIO-2 **Deleted**

BIO-3 **Deleted**

BIO-4 **Deleted**

BIO-5 **Deleted**

DESIGNATED BIOLOGIST

BIO-6 The project owner shall submit the resume, including contact information, of the proposed Designated Biologist to the CPM for approval.

Verification: The project owner shall submit the specified information at least 60 days prior to the start of any site mobilization related to the beach front or the beach delivery system. These site and related facility activities shall not commence until an approved Designated Biologist is available to be on site.

The Designated Biologist must meet the following minimum qualifications:

- Bachelor's Degree in biological sciences, zoology, botany, ecology, or a closely related field;
- Three years of experience in field biology or current certification of a of a nationally recognized biological society, such as The Ecological society of America or The Wildlife Society; and
- At least one year of field experience with biological resources found in or near the project area.

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

Designated Biologist Duties

BIO-7 The Designated Biologist shall perform the following during any beach front or the beach delivery system site mobilization, ground disturbance, grading, construction, operation, and closure activities:

1. Advise the project owner's Construction/Operation Manager, supervising construction and operations engineer on the implementation of the biological resources Conditions of Certification;
2. Be available to supervise or conduct 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;
3. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;
4. Notify the project owner and the CPM of any non-compliance with any biological resources Condition of Certification; and
5. Respond directly to inquiries of the CPM regarding biological resource issues.

Verification: The Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted in the Monthly Compliance Reports.

As necessary during project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

Designated Biologist Authority

BIO-8 The project owner's Construction/Operation Manager shall act on the advice of the Designated Biologist to ensure conformance with the biological resources Conditions of Certification.

If required by the Designated Biologist, 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 adverse impact to biological resources if the activities continued;
2. Inform the project owner and the Construction/Operation Manager when to resume activities; and
3. Notify the CPM if there is a halt of any activities due to conflicts with biological resources, and advise the CPM of any corrective actions that have been taken, or will be instituted, as a result of the halt.

Verification: The Designated Biologist must notify the CPM immediately (and no later than the following morning of 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.

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-9 The project owner shall submit to the CPM for review and approval a copy of the final Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and, once approved, shall implement the measures identified in the plan. The BRMIMP shall apply to beach delivery only.

The BRMIMP shall include:

1. All new Biological Resource conditions included in the Energy Commission's Final Decision as amended;
2. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner;
3. A list and a map of locations of all sensitive biological resources to be impacted, avoided, or mitigated by project construction and operation;
4. A list of all terms and conditions set forth by USACE permits and necessary state LARWQCB certifications, should these become necessary throughout the life of the project;
5. Detailed descriptions of all measures that will be implemented to avoid and/or minimize impacts to sensitive species and reduce habitat disturbance;
6. All locations, on a map of suitable scale, of areas requiring temporary protection and avoidance during construction;
7. Duration for each type of monitoring and a description of monitoring methodologies and frequency;
8. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;
9. All performance standards and remedial measures to be implemented if performance standards are not met;
10. A discussion of biological resource-related facility closure measures;

11. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval;
12. A copy of any State or USFWS Biological Opinion or NMFS consultation, and incorporation of all terms and conditions into the final BRMIMP, should a biological opinion become necessary any time throughout the life of the project;
13. Protocols for dealing with wildlife that gain access the barges, beach delivery ramp, and other project features whereby their well being could be at risk; and
14. Vegetation restoration that provides for planting seacliff buckwheat (*Eriogonum parviflorum*), eradication of ice plant (*Caprobrotus chilensis*), and is coordinated with Visual Resources landscaping requirements.

Verification: At least 30 days prior to start of any site mobilization activities related to the beach front or the beach delivery system, the project owner shall provide the CPM with the final version of the BRMIMP for this project, and the CPM will determine the plans acceptability. The project owner shall notify the CPM five (5) working days before implementing any CPM approved modifications to the BRMIMP.

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

WORKER ENVIRONMENTAL AWARENESS PROGRAM

BIO-10 The project owner shall develop and implement a CPM approved Worker Environmental Awareness Program in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or related facilities during construction and operation, are informed about sensitive biological resources associated with the project. The training may be presented on electronic media in the form of a video recording.

The Worker Environmental Awareness Program must:

1. Be developed by the Designated Biologist and consist of an on-site or training center presentation in which supporting written material may be made available to all participants;
2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas;
3. Present the reasons for protecting these resources;
4. Present the meaning of various temporary and/or permanent habitat protection measures; and
5. Identify whom to contact if there are further comments and questions about the material discussed in the program.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist. Each participant in the on-site Worker Environmental Awareness Program shall sign a statement declaring that the individual understands and shall abide by the guidelines set forth in the program materials. The person administering the program shall also sign each statement.

Verification: No less than 30 days prior to the start of any site mobilization activities related to the beach front or the beach delivery system, the project owner shall provide copies of the Worker Environmental Awareness Program and all supporting written materials prepared by the Designated Biologist and the name and qualifications of the person(s) administering the program to the CPM for approval. The project owner shall state in the Monthly Compliance Report the number of persons who have completed the training in the prior month and keep record of all persons who have completed the training to date. The signed statements for the construction phase shall be kept on file by the project owner and made available for examination by the CPM for a period of at least six months after the start of commercial operation. During project operation, signed statements for active project operational personnel shall be kept on file for the duration of their employment and for six months after their termination.

U. S. ARMY CORPS OF ENGINEERS PERMIT

BIO-11 The project owner shall acquire any USACE permit required and incorporate its terms and conditions into the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP).

Verification: No less than 30 days prior to the start of any site mobilization activities related to the beach front or the beach delivery system, the project owner shall submit to the CPM a copy of the USACE permit required to construct any project related features. Permit terms and conditions will be incorporated into the BRMIMP.

USFWS BIOLOGICAL OPINION

BIO-12 If formal or informal consultation between the USFWS and USACE occurs, the project owner shall incorporate into the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) any resulting biological resources recommendations.

Verification: No less than 30 days prior to the start of any site mobilization activities related to the beach front or the beach delivery system, the project owner must provide the CPM with a copy of the USFWS recommendations. All terms and conditions resulting from the consultation will be incorporated into the BRMIMP.

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD CERTIFICATION

BIO-13 The project owner will acquire and implement the terms and conditions of a Los Angeles Regional Water Quality Control Board Section 401 State Clean Water Act certification pertaining to the project.

Verification: No less than 30 days prior to the start of any site mobilization activities related to the beach front or the beach delivery system, the project owner will provide the CPM with a copy of the final Regional Water Quality Control Board certification. The terms and conditions of the certification will be incorporated into the project's Biological Resources Mitigation Implementation and Monitoring Plan.

FACILITY CLOSURE

BIO-14 The project owner will incorporate into the planned permanent or unexpected permanent closure plan measures that address the local biological resources. The biological resource facility closure measures will also be incorporated into the project Biological Resources Mitigation Implementation and Monitoring Plan.

Verification: At least 12 months (or a mutually agreed upon time) prior to the commencement of closure activities, the project owner shall address all biological resource-related issues associated with facility closure in a Biological Resources Element. The Biological Resources Element will be incorporated into the Facility Closure Plan, and include a complete discussion of the local biological resources and proposed facility closure mitigation measures.

C. CULTURAL RESOURCES

Staff witness Dorothy Torres Staff reviewed the petition for new potential issues related to cultural resources, and concluded that the amended project would not result in unmitigated significant adverse impacts to either known cultural resources or cultural resources that have not yet been discovered. With the implementation of the existing Conditions of Certification, there would be no impacts to newly discovered archaeological resources and the project would comply with all applicable LORS. (RSA, pp 4.3-1 to 4.3-3.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Cultural Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

DESIGNATED CULTURAL RESOURCES SPECIALIST

CUL-1 Prior to the start of ground disturbance, the project owner shall submit the resume of the proposed Cultural Resources Specialist (CRS), and one alternate CRS, if an alternate is proposed, to the CPM for review and approval. The CRS will be responsible for implementation of all cultural resources conditions of certification. and may obtain qualified cultural resource monitors (CRMs) to monitor as necessary on the project.

The resume for the CRS and alternate, shall include information that demonstrates that the minimum qualifications specified in the U.S. Secretary of Interior Guidelines, as published by the CFR 36, CFR Part 61 are met. In addition, the CRS shall have the following qualifications:

- a. The technical specialty of the CRS shall be appropriate to the needs of the project and shall include, a background in anthropology, archaeology, history, architectural history or a related field;

- b. At least three years of archaeological or historic, as appropriate, resource mitigation and field experience in California; and

The resume shall include the names and phone numbers of contacts familiar with the work of the CRS on referenced projects and demonstrate that the CRS has the appropriate education and experience to accomplish the cultural resource tasks that must be addressed during ground disturbance, grading, construction and operation. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed CRS or alternate has the appropriate training and background to effectively implement the conditions of certification.

CRMs shall meet the following qualifications:

- a. A BS or BA degree in anthropology, archaeology, historic archaeology or a related field and one year experience monitoring in California; or
- b. An AS or AA in anthropology, archaeology, historic archaeology or a related field and four years experience monitoring in California; or
- c. Enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historic archaeology or a related field and two years of monitoring experience in California.

The project owner shall ensure that the CRS completes any monitoring, mitigation and curation activities necessary; fulfills all the requirements of these conditions of certification; ensures that the CRS obtains technical specialists, and CRMs, if needed; and that the CRS evaluates any cultural resources that are newly discovered or that may be affected in an unanticipated manner for eligibility to the California Register of Historic Resources (CRHR).

Verification: The project owner shall submit the resume for the CRS at least 45 days prior to the start of ground disturbance. At least 10 days prior to a termination or release of the CRS, the project owner shall submit the resume of the proposed replacement CRS. At least 20 days prior to ground disturbance, the CRS shall submit written notification identifying anticipated CRMs for the project stating they meet the minimum qualifications required by this condition. If additional CRMs are needed later, the CRS shall submit written notice one week prior to any new CRMs beginning work.

PROJECT MAPS SHOWING GROUND DISTURBANCE

CUL-2: Prior to the start of ground disturbance, the project owner shall provide the CRS and the CPM with maps and drawings showing the footprint of the power plant and all linear facilities. Maps will include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1" = 200') for plotting individual artifacts. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM.

If the footprint of the power plant or linear facilities changes, the project owner shall provide maps and drawings reflecting these changes, to the CRS and the CPM for approval. Maps shall identify all areas of the project where ground disturbance is anticipated.

If construction of the project will proceed in phases, maps and drawings, not previously submitted, shall be submitted prior to the start of each phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

At a minimum, the CRS shall consult weekly with the project construction manager to confirm area(s) to be worked during the next week, until ground disturbance is completed.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification: The project owner shall submit the subject maps and drawings at least 40 days prior to the start of ground disturbance.

If there are changes to any project related footprint, revised maps and drawings shall be provided at least 15 days prior to start of ground disturbance for those changes.

If project construction is phased, the project owner shall submit the subject maps and drawings 15 days prior to each phase.

A current schedule of anticipated project activity shall be provided to the CRS on a weekly basis during ground disturbance and also provided in each Monthly Compliance Report (MCR).

The project owner shall provide written notice of any changes to scheduling of construction phases within 5 days of identifying the changes. A copy of the current schedule of anticipated project activities shall be submitted in each MCR.

CULTURAL RESOURCES MONITORING AND MITIGATION PLAN

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 the CRS, to the CPM for approval. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Copies of the CRMMP shall reside with the CRS, alternate CRS, each monitor, and the project owner's on-site manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures.

1. The following statement shall be added to the Introduction: Any discussion, summary, or paraphrasing of the conditions in this CRMMP is intended as general guidance and as an aid to the user in understanding the conditions and their implementation. If there appears to be a discrepancy between the conditions and the way in which they have been summarized described, or interpreted in the CRMMP, the conditions, as written in the Final Decision, supercede any interpretation of the Conditions in the CRMMP. The cultural

resources conditions of certification are attached as an appendix to this CRMMP.

2. A proposed general research design that includes a discussion of research questions and testable hypotheses applicable to the project area. A refined research design will be prepared for any resource where data recovery is required.
3. Specification of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during ground disturbance, construction, and post-construction 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 discussion of the inclusion of Native American observers or monitors, the procedures to be used to select them, and their role and responsibilities.
6. A discussion of all avoidance measures such as flagging or fencing, to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during construction and/or operation, and identification of areas where these measures are to be implemented. The discussion shall address how these measures will be implemented prior to the start of construction and how long they will be needed to protect the resources from project-related effects.
7. A discussion of the requirement that all cultural resources encountered will be recorded on a DPR form 523 and mapped (may include photos). In addition, all archaeological materials collected as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with The State Historical Resources Commission's "Guidelines for the Curation of Archaeological Collections," into a retrievable storage collection in a public repository or museum. The public repository or museum must meet the standards and requirements for the curation of cultural resources set forth at Title 36 of the Federal Code of Regulations, Part 79.
8. A discussion of any requirements, specifications, or funding needed for curation of the materials to be delivered for curation and how requirements, specifications and funding will be met. The name and phone number of the contact person at the institution. Include a statement in the discussion of requirements that the project owner will pay all curation fees and that any agreements concerning curation will be retained and available for audit for the life of the project.
9. A discussion of the availability and the designated specialist's access to equipment and supplies necessary for site mapping, photographing, and recovering any cultural resource materials encountered during construction.
10. A discussion of the proposed Cultural Resource Report (CRR) which shall be prepared according to Archaeological Resource Management Report (ARMR) Guidelines.

Verification: The project owner shall submit the subject CRMMP at least 30 days prior to the start of ground disturbance. Per ARMR Guidelines the author's name shall appear on the title page of the CRMMP. Ground disturbance activities may not commence until the CRMMP is approved. At least 30 days prior to ground disturbance, a letter shall be provided to the CPM indicating that the project owner will pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

CULTURAL RESOURCES REPORT

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall report on all field activities including dates, times and locations, findings, samplings and analysis. All survey reports, DPR 523 forms and additional research reports not previously submitted to the California Historic Resource Information System (CHRIS) shall be included as an appendix to the CRR.

Verification: The project owner shall submit the subject CRR within 90 days after completion of ground disturbance (including landscaping). Within 10 days after CPM approval, the project owner shall provide documentation to the CPM that copies of the CRR have been provided to the curating institution (if archaeological materials were collected), the State Historic Preservation Officer (SHPO) and the CHRIS.

WORKER ENVIRONMENTAL AWARENESS PROGRAM

CUL-5 Worker Environmental Awareness Program (WEAP) shall be provided, on a weekly basis, to all new employees starting prior to and for the duration of, ground disturbance. The training may be presented in the form of a video. 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. Information that the CRS, alternate CRS, and CRMs have the authority to halt construction to the degree necessary, as determined by the CRS, in the event of a discovery or unanticipated impact to a cultural resource;
4. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources find, and shall contact their supervisor and the CRS or CRM; redirection of work will be determined by the construction supervisor and the CRS;
5. An informational brochure that identifies reporting procedures in the event of a discovery;
6. An acknowledgement form signed by each worker indicating that they have received the training; and
7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: The project owner shall provide in the Monthly Compliance Report the WEAP Certification of Completion form of persons who have completed the training in the prior month and a running total of all persons who have completed training to date.

CULTURAL RESOURCES MONITORING

CUL-6 The CRS, alternate CRS, or monitors shall monitor ground disturbance full time in the vicinity of the project site, linear facilities and ground disturbance at laydown areas or other ancillary areas to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner. In the event that the CRS determines that full-time monitoring is not necessary in certain locations, a letter or e-mail providing a detailed justification for the decision to reduce the level of monitoring shall be provided to the CPM for review and approval prior to any reduction in monitoring.

CRMs shall keep a daily log of any monitoring or cultural resource activities and the CRS shall prepare a weekly summary report on the progress or status of cultural resources-related activities. The CRS may informally discuss cultural resource monitoring and mitigation activities with Energy Commission technical staff.

The CRS shall notify the project owner and the CPM, by telephone or e-mail, of any incidents of non-compliance with any cultural resources conditions of certification within 24 hours of becoming aware of the situation. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the conditions of certification.

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 of certification.

A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts may be discovered. Informational lists of concerned 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 will be monitored.

Verification:

1. During the ground disturbance phases of the project, if the CRS wishes to reduce the level of monitoring occurring at the project, a letter identifying the area(s) where the CRS recommends the reduction and justifying the reductions in monitoring shall be submitted to the CPM for review and approval.
2. During the ground disturbance phases of the project, the project owner shall include in the MCR to the CPM copies of the weekly summary reports prepared by the CRS regarding project-related cultural resources monitoring. Copies of daily logs shall be retained on-site and made available for audit by the CPM.
3. Within 24 hours of recognition of a non-compliance issue, the CRS shall notify the CPM by telephone of the problem and of steps being taken to resolve the problem. The telephone call shall be followed by an e-mail or fax detailing the non-compliance issue and the measures necessary to achieve resolution of the issue. Daily logs

shall include forms detailing any instances of non-compliance with conditions of certification. In the event of a non-compliance issue, a report written no sooner than two weeks after resolution of the issue that describes the issue, resolution of the issue and the effectiveness of the resolution measures, shall be provided in the next MCR.

4. One week prior to ground disturbance in areas where there is a potential to discover Native American artifacts, the project owner shall send notification to the CPM identifying the person(s) retained to conduct Native American monitoring. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM who will initiate a resolution process.

DESIGNATED CULTURAL RESOURCE SPECIALIST AUTHORITY

CUL-7 The CRS, alternate CRS and the CRMs shall have the authority to halt construction if previously unknown cultural resource sites or materials are encountered, or if known resources may be impacted in a previously unanticipated manner. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor.

If such resources are found or impacts can be anticipated, the halting or redirection of construction shall remain in effect until 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 find description and the work stoppage;
2. The CRS, the project owner, and the CPM have conferred and determined what, if any, data recovery or other mitigation is needed;
3. Any necessary data recovery and mitigation has been completed.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM with a letter confirming that the CRS, alternate CRS and CRMs have the authority to halt construction activities in the vicinity of a cultural resource find, and that the CRS or project owner will notify the CPM immediately (no later than the following morning of the incident or Monday morning in the case of a weekend) of any halt of construction activities, including the circumstance and proposed mitigation measures. The project owner shall provide the CRS with a copy of the letter granting the authority to halt.

WATER PIPELINE REALIGNMENT

CUL-8 The route for the water lines shall extend down Grand Avenue to Eucalyptus St. to El Segundo Blvd, which is within the water pipeline study area, bordered by El Segundo Blvd., Loma Vista St., Grand Ave. and Eucalyptus St. (Applicant has conducted a cultural resources assessment in the pipeline study area and within the area defined as the proposed project). If the water lines and associated pipelines are to be located anywhere but in an area originally defined as part of the proposed project, a cultural resource assessment shall be conducted prior to any ground disturbance. The cultural resource assessment

shall consist of a records search and a pedestrian survey. This approach gives equal emphasis to prehistoric and historic resources and an evaluation of significance. A Native American monitor from a group with historic ties to the affected area shall be retained as part of the cultural resources team during any surveys or subsurface investigation.

Verification: Forty days prior to the start of any ground disturbance or project site preparation at the newly identified location of the waterlines and associated pipelines, the project owner shall submit the following for approval by the CPM: (1) the results of the records search and the results of the survey; (2) an evaluation, including site records, of all cultural resources within or adjacent to the project Area of Potential Effects; and (3) the information shall also include the name and tribal affiliation of the Native American monitor.

D. GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

Dal Hunter, Ph.D., C.E.G, testified on behalf of the Staff that with the implementation of Staff's recommended geological and paleontological Conditions of Certification, the amended ESPRP will continue to comply with all applicable LORS and will not create significant adverse direct or cumulative impacts related to geological and paleontological resources. (RSA, pp 5.2-1 to 5.2-2.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Geological and Paleontological Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

GEO-1: Prior to the start of construction, the project owner shall assign to the project an engineering geologist(s) and a geotechnical engineer(s) certified by the State of California, to carry out the duties required by the 2001 edition of the California Building Code (CBC) Appendix Chapter 33, Section 3309.4. The certified engineering geologist(s) and geotechnical engineer(s) assigned must be approved by the CBO and submitted to the Compliance Project Manager (CPM) for concurrence.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CPM) prior to the start of construction, the project owner shall submit to the CBO for approval the resume and license number(s) of the certified engineering geologist(s) and geotechnical engineer(s) assigned to the project. The submittal should include a statement that CPM concurrence is needed.

The CBO and CPM will approve or disapprove of the engineering geologist(s) and geotechnical engineer(s) and will notify the project owner of its findings within 15 days of receipt of the submittal. If the engineering geologist(s) and geotechnical engineer(s) are subsequently replaced, the project owner shall submit for approval the resume(s) and license number(s) of the newly assigned individual(s) to the CBO and CPM. The CBO and CPM will approve or disapprove of the engineering geologist(s) and geotechnical engineer(s) and will notify the project owner of the findings within 15 days of receipt of the notice of personnel change.

GEO-2: Prior to the initiation of ground disturbance, the owner shall have a liquefaction analysis conducted for the power plant site and adjacent existing cut slope to the east. The liquefaction analysis shall be implemented by following the recommended procedures contained in *Recommended Procedures for Implementation of California Division of Mines and Geology Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California* dated March 1999. (The document is available through the Southern California Earthquake Center at the University of Southern California.)

Verification: The project owner shall include in the application for a grading permit (see Condition of Certification **GEO-5**) a report of the liquefaction analysis and a summary of how the results of this analysis were incorporated into the project foundation and grading plan design for the CBO's review and comment. A copy of the liquefaction analysis and summary of incorporated results shall be sent to the CPM prior to grading.

GEO-3: Prior to completion of the final design of the project, the owner shall have a slope stability analysis conducted for the existing cut slope east of Units 1 and 2. The analysis shall consider both static and earthquake conditions, as well as the effects of any liquefaction of the foundation soils. Since cohesionless soils may be present, the proposed 1.5:1 perimeter excavation should also be evaluated for stability, but only for static conditions.

Verification: The project owner shall include in the application for a grading permit (see Condition of Certification **GEO-5** below) a report of the slope stability analysis and a summary of how the results of this analysis were incorporated into the project foundation and grading plan for the CBO's review and comment. A copy of the CBO's comments shall be sent to the CPM prior to grading.

GEO-4: Applicant shall designate and use a Coastal or Geotechnical Engineer, or geologist familiar with geomorphology, to conduct a shoreline monitoring program and assess erosion on the beach area and at the foot of the revetment on an annual basis for at least ten years. Applicant shall report such results to the CPM and California Coastal Commission annually.

A detailed baseline survey is required, along with some historical research including air photos, a summary of past beach nourishment and shoreline damage. Sand sampling and testing shall be conducted. A series of onshore/offshore shore-normal transects every few hundred feet shall be conducted 4 times per year. Annually, photos from set positions can be taken (e.g. from the groin and from a high elevation in the plant). Shoreline response during and after a major storm will be documented.

After ten continuous years of monitoring, the owner shall prepare and submit a final report. The final report will serve as the annual report for year ten and will include a summary of findings over the 10-year period. Based on the ten-year summary report, the final report will include recommendations for either:

- continued monitoring on an annual basis in accordance with the established protocol if there is evidence of an adverse shoreline erosion condition;

- modifications to the monitoring program and continuation of the program, if modifications are warranted to increase, decrease, otherwise adjust the type and frequency of data collected; or,
- suspension of monitoring due to absence of an adverse shoreline erosion condition related to construction and operation of the ESPR.

Verification: At least thirty days prior to commencing construction, the Applicant shall designate the geologist and submit for approval the resumes of the engineer or geologist to the CBO and CPM. The engineer or geologist shall be experienced in shoreline monitoring, and understand coastal processes. Applicant shall submit as part of its annual compliance report the results of the assessment. Applicant shall also, at that time, forward the results to the California Coastal Commission and the City of El Segundo with a copy of the transmittal letter to the CPM. During the first 3 years following commencement of construction, the Applicant shall submit the above mentioned quarterly reports. The tenth annual report shall contain the final report.

GEO-5: The assigned engineering geologist(s) shall carry out the duties required by the 1998 CBC, Appendix Chapter 33, Section 3309.4 Engineered Grading Requirements, and Section 3318.1 – Final Reports. Those duties are:

- Prepare the Engineering Geology Report. This report shall accompany the Plans and Specifications when applying to the CBO for the grading permit.
- Monitor geologic conditions during construction.
- Prepare the Final Engineering Geology Report.

The Engineering Geology Report required by the 1998 CBC Appendix Chapter 33, Section 3309.3 Grading Designation, shall include an adequate description of the geology of the site, conclusions, and recommendations regarding the effect of geologic conditions on the proposed development, and an opinion on the adequacy of the site for the intended use as affected by geologic factors.

The Final Engineering Geology Report to be completed after completion of grading, as required by the 1998 CBC Appendix Chapter 33, Section 3318.1, shall contain the following: A final description of the geology of the site and any new information disclosed during grading; and the effect of same on recommendations incorporated in the approved grading plan. The engineering geologist shall submit a statement that, to the best of his or her knowledge, the work within their area of responsibility is in accordance with the approved Engineering Geology Report and applicable provisions of this chapter.

Verification:

- (1) Within 15 days after submittal of the application(s) for grading permit(s) to the CBO, the project owner shall submit a signed statement to the CPM stating that the Engineering Geology Report has been submitted to the CBO as a supplement to the plans and specifications and that the recommendations contained in the report are incorporated into the plans and specifications.
- (2) Within 90 days following completion of the final grading, the project owner shall submit copies of the Final Engineering Geology Report required by the 1998 CBC

Appendix Chapter 33, Section 3318 Completion of Work, to the CBO and to the CPM.

GEO-6: The design for additional seawall or perimeter wall, including any necessary modifications to the existing seawall, shall be performed by a coastal engineer, geotechnical engineer, or engineering geologist, familiar with coastal processes and in accordance with the requirements of the California Coastal Commission Procedural Memo #19 (July 29, 1992).

If additional seawall is installed, performance of the seawall, with respect to shoreline erosion, will need to be addressed and verified in the shoreline monitoring program described under **GEO-4**. The wall should be textured and colored appropriately to minimize visual impacts.

Verification: Once a seawall design plan is available, the Applicant shall obtain approval of the design and construction methods from the CBO who will forward all approved plans and comments to the CPM. The CPM shall then forward this information to the Coastal Commission and the City of El Segundo.

PAL-1: The project owner shall provide the CPM with the resume and qualifications of its Paleontological Resource Specialist (PRS) and Paleontological Resource Monitors (PRMs) for review and approval. If the approved PRS or one of the PRMs is replaced prior to completion of project mitigation and report, the project owner shall obtain CPM approval of the replacement.

The resume shall include the names and phone numbers of contacts. The resume shall also demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the required paleontological resource tasks.

As determined by the CPM, the PRS shall meet the minimum qualifications for a vertebrate paleontologist as described in the Society of Vertebrate Paleontologists (SVP) guidelines of 1995. The experience of the PRS shall include the following:

1. institutional affiliations or appropriate credentials and college degree;
2. ability to recognize and recover fossils in the field;
3. local geological and biostratigraphic expertise;
4. proficiency in identifying vertebrate and invertebrate fossils;
5. publications in scientific journals; and
6. the PRS shall have 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 PRS shall obtain qualified paleontological resource monitors to monitor as necessary on the project. Paleontologic resource monitors (PRMs) shall have the equivalent of the following qualifications:

- 1) BS or BA degree in geology or paleontology and one year experience monitoring in California; or
- 2) AS or AA in geology, paleontology or biology and four years experience monitoring in California; or

- 3) 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.
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 and stating that the identified monitors meet the minimum qualifications for paleontological resource monitoring required by the condition. If additional monitors are obtained during the project, the PRS shall provide additional letters and resumes to the CPM for approval. The letter shall be provided to the CPM no later than one week prior to the monitor 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.

PROJECT MAPS

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 and all linear 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 the plan and profile drawings for the utility lines would normally be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and can be 1 inch = 40 feet to 1 inch = 100 feet range. If the footprint of the power plant or linear facility changes, the project owner shall provide maps and drawings reflecting these changes to the PRS and CPM.

If construction of the project will proceed 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. Prior to work commencing on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes.

At a minimum, the PRS shall consult weekly with the project superintendent or construction field manager to confirm area(s) to be worked during the next week, 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.
2. If there are changes to the footprint of the project, revised maps and drawings shall be provided 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 PRS shall prepare, and the project owner shall submit to the CPM for review and approval, a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting and sampling activities and may be modified with CPM approval. This document shall be used as a basis for discussion in the event that on-site decisions or changes are proposed. Copies of the PRMMP shall reside with the PRS, each monitor, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the Society of the Vertebrate Paleontologists (SVP, 1995) and shall include, but not be limited to, the following:

- 1) Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation will be performed according to the PRMMP procedures;
- 2) Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and all conditions for certification;
- 3) A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units;
- 4) An explanation of why, how, and how much sampling is expected to take place and in what units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained beds;
- 5) A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed schedule for the monitoring;
- 6) A discussion of the procedures to be followed in the event of a significant fossil discovery, including notifications;
- 7) A discussion of equipment and supplies necessary for recovery 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 meets the Society of Vertebrate Paleontologists standards and requirements for the curation of paleontological resources; and
- 9) Identification of the institution that has agreed to receive any data and fossil materials recovered, 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 thirty (30) days prior to ground disturbance, the project owner shall provide a copy of the PRMMP to the CPM. The PRMMP shall include an affidavit of authorship by the PRS, and acceptance of the project owner evidenced by a signature.

EMPLOYEE AWARENESS TRAINING PROGRAM

PAL-4: Prior to ground disturbance and for the duration of construction, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for all project managers, construction supervisors and workers who operate ground disturbing equipment or tools. Workers to be involved in ground disturbing activities in sensitive units shall not operate equipment prior to receiving worker training. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or any other areas of interest or concern.

The Worker Environmental Awareness Program (WEAP) shall address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. In-person training shall be provided for each new employee involved with ground disturbing activities, while these activities are occurring in highly sensitive geologic units, as detailed in the PRMMP. The in-person training shall occur within four days following a new hire for highly sensitive sites and as established by the PRMMP for sites of moderate, low, and zero sensitivity. Provisions will be made to provide the WEAP training to workers not fluent in English.

The training shall include:

1. A discussion of applicable laws and penalties under the law;
2. For training in locations of high sensitivity, the PRS shall provide good quality photographs or physical examples of vertebrate fossils that may be expected in the area;
3. Information that the PRS or PRM has the authority to halt or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;
4. Instruction that employees are to halt or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM;
5. An informational brochure that identifies reporting procedures in the event of a discovery;
6. A Certification of Completion of WEAP form signed by each worker indicating that they have received the training; and
7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification:

1. At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP including the brochure with the set of reporting procedures the workers are to follow.
2. At least 30 days prior to ground disturbance, the project owner shall submit the script and final video to the CPM for approval if the project owner is planning on using a video for interim training.
3. If an alternate paleontological trainer is requested by the owner, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval. Alternate trainers shall not conduct training prior to CPM authorization.
4. The project owner shall provide in the Monthly Compliance Report the WEAP copies of the Certification of Completion forms with the names of those trained and the trainer for each training offered that month. The Monthly Compliance Report shall also include a running total of all persons who have completed the training to date.

PAL-5: The PRS and PRM(s) shall monitor consistent with the PRMMP, all construction-related grading, excavation, trenching, and auguring in areas where potentially fossil-bearing materials have been identified. 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 PRS shall notify and seek the concurrence of the CPM.

The PRS and PRM(s) shall have the authority to halt or redirect construction if paleontological resources are encountered. The project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows:

- 1) Any change of monitoring different from the accepted schedule presented in the PRMMP shall be proposed in a letter from the PRS and the project owner to the CPM prior to the change in monitoring. The letter shall include the justification for the change in monitoring and submitted to the CPM for review and approval.
- 2) PRM(s) shall keep a daily log of monitoring of paleontological resource activities. The PRS may informally discuss paleontological resource monitoring and mitigation activities with the CPM at any time.
- 3) The PRS shall immediately notify the project owner and the CPM 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 immediately (no later than the following morning after the find, or Monday morning in the case of a weekend) of any halt of construction activities.

Verification: The PRS shall prepare a summary of the monitoring and other paleontological activities that will be placed in the Monthly Compliance Reports. The summary will include the name(s) of PRS or monitor(s) active during the month; general descriptions of training and construction activities and general locations of excavations, grading, etc. A section of the report will include the geologic units or subunits encountered; descriptions of sampling within each unit; and a list of fossils identified in the field. 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 and any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the project shall include a justification in summary as to why monitoring was not conducted.

The PRS shall submit the summary of monitoring and paleontological activities in the Monthly Compliance Report.

PAL-6: The project owner, through the designated PRS, shall ensure the recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during the monitoring, data recovery, mapping, and mitigation activities related to the project.

Verification: The project owner shall maintain in their compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of three years after completion and approval of the CPM-approved PRR. The project owner shall be responsible to pay curation fees for fossils collected and curated as a result of paleontological monitoring and mitigation.

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 recovered fossil materials and related information and submitted to the CPM for review and approval.

The report shall include, but not be limited to, a description and inventory of recovered fossil materials; a map showing the location of paleontological resources encountered; determinations of sensitivity and significance; and a statement by the PRS that project impacts to paleontological resources have been mitigated.

Verification: Within ninety (90) days after completion of ground disturbing activities, including landscaping, the project owner shall submit the Paleontological Resources Report under confidential cover.

Certification of Completion of Worker Environmental Awareness Program

EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14)

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, Paleontology & Biology Resources for all personnel (i.e. construction supervisors, crews and plant operators) working on-site or at related facilities. By signing below, the participant indicates that they understand and shall abide by the guidelines set forth in the Program materials. Please include this completed form in your Monthly Compliance Report.

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Cul Trainer: _____ Signature: _____ Date: ___/___/___
 PaleoTrainer: _____ Signature: _____ Date: ___/___/___
 Bio Trainer: _____ Signature: _____ Date: ___/___/___

E. HAZARDOUS MATERIALS MANAGEMENT

Staff witnesses Dr. Alvin Greenberg, Ph.D. & Rick Tyler have reviewed the petition for new potential issues related to hazardous materials management. Based on this review, the Conditions of Certification in the 2005 Final Commission Decision remain adequate to minimize the risk related to the use and storage of hazardous materials at the project site. The proposed amendment has less than significant impacts on hazardous material management. While no additional Conditions of Certification are proposed, **HAZ-4** has been deleted because equipment change eliminates the need for hydrazine.

FINDINGS AND CONCLUSIONS

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Hazardous Materials Management aspects of the proposed project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

HAZ-1 The project owner shall obtain the advance approval of the CPM if the facility intends to store, handle, use or move (or combination of these activities) a material, in quantities that exceed those specified in Title 40, CFR Part 355, Subpart J section 355.50.

Verification: The project owner shall provide to the CPM, in the Annual Compliance Report, a list of those hazardous materials designated as regulated substances as set forth in Title 40, CFR Part 355, Subpart J section 355.50. The list shall also include maximum quantities of these substances at the facility. Copies of the list should also be provided to the City of El Segundo Fire Department (CESFD) and the City of Manhattan Beach Fire Department (CMBFD).

BUSINESS PLAN REVISION

HAZ-2 The project owner shall update its existing Business Plan.

Verification: At least 45 days prior to the start-up of the ESPR project Units 5, 6 and 7, the owner shall undertake a hazardous materials floor plan exercise for each shift at the plant with the CESFD and provide a copy of the revised Business Plan, commented on

by the CESFD, to the CPM. A copy of the revised Plan shall also be provided to the CMBFD.

RISK MANAGEMENT PLAN REVISION

HAZ-3 The project owner shall revise the existing CalARP Program Risk Management Plan (RMP). Similarly, the project owner shall also revise its existing RMP pursuant to the USEPA RMP Program. Both RMPs shall be expanded to include discussions to prevent and control the accidental release of ammonia from the pipeline. Those discussions shall elaborate on the various safety devices selected for the pipeline including double sleeve construction, provisions for backup safety devices, protective shut-in actions, emergency support systems, monitoring programs and personnel training, as a minimum. The shut-in actions shall include responses to pipeline overpressures and also leaks. Backup safety devices to be considered for the pipeline shall include sprinklers, sprays, deluge systems or equivalent systems. Special emphasis shall be placed on the deployment of such devices in the vicinity of the overpass at Vista Del Mar Boulevard in order to eliminate any vulnerabilities at that location.

Verification: At least 45 days prior to start-up of Units 5, 6, and 7, the project owner shall furnish a final copy of each updated RMP to the CPM, CESFD and CMBFD. An initial draft of the CalARP RMP shall be provided to the CPM and the CESFD for review and comments. The final CalARP RMP shall be approved by the CPM. Similarly, an initial draft of the USEPA RMP shall be provided to the CPM and the CESFD for review and comments, at the time it is submitted to the USEPA for review. The final copy of the USEPA RMP shall reflect recommendations of the CPM and the CESFD.

F. LAND USE

Staff witness Mark Hamblin reviewed the petition for new potential issues related to land use and found that the petition involves major changes to power plant equipment including a request to allow a beach delivery of new oversized equipment and a new offsite construction laydown area. (RSA, pp 4.5-1 to 4.5-19.)

The implementation of the beach delivery option would restrict public access and use of an approximate 300-foot wide by 300-foot long beach area west of the project and would cause intermittent closure of the Marvin Braude Bikeway adjacent to the power plant. The bikeway is a Los Angeles County maintained Class 1 bicycle trail. The closure of the bikeway would conflict with **LAND-10** of the 2005 Decision. The petition also includes the use of a new offsite construction laydown and parking area in the city of Los Angeles to replace the use of the Federal Express laydown/parking area in El Segundo that is identified in the license.

Staff recommends various revisions to the Conditions of Certification to conform to the proposed changes in the project's features including a revision of **LAND-10** and the addition of Conditions of Certification **LAND-11, 12, 13 and 14**.

The construction of the proposed project with the effective implementation of the mitigation measures identified by the project owner and staff's recommended conditions of certification (below), would not cause a direct, indirect or cumulative adverse land use planning impact under CEQA, and would ensure conformance with the applicable LORS pertaining to land use. The proposed amendment to the licensed project does not involve federal managed lands, or applicable federal land use planning related laws ordinances, regulations and standards (LORS).

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with

applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.

3. The Land Use aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

LAND-1: The project owner shall ensure that the project and its associated facilities are in compliance with the affected local jurisdiction's applicable adopted county or municipal code requirements for the project site's development (e.g., setbacks, zone district requirements, design criteria, height, sign requirements, etc.).

The project owner shall submit to the applicable city/county planning department for review and comment, a development plan showing site dimensions, design and exterior elevation(s) and any other item(s) that may be required by the local jurisdiction's planning department to conduct a ministerial review of the project and its associated facilities in accordance with the jurisdiction's site development requirements. The city/county planning department shall have 60 calendar days to review the plan(s) and provide written comments to the project owner. The project owner shall provide a copy of the city/county planning department's written comments and a copy of the development plan to the CPM.

Verification: At least 90 calendar days prior to the site mobilization on the power plant project site and its associated facilities, the project owner shall submit the proposed development plan to the affected jurisdiction for review and comment. The project owner shall provide any comment letters received from the local jurisdiction along with the proposed development plan to the CPM for review and approval.

LAND-2: The project owner shall identify the secured lay down/staging area(s) for the project prior to site mobilization. The project owner shall provide a plot plan and location map showing the lay down/staging area(s) to the affected local jurisdiction(s) planning department(s) (i.e. County of Los Angeles, the City of El Segundo, City of Manhattan Beach, etc.) and to the Executive Director of the California Coastal Commission if located within the State designated Coastal Zone for review and comment. The local jurisdiction(s) and the Executive Director (if applicable) shall have 60 calendar days to review the lay down/staging area(s) and provide written comments to the project owner. The project owner shall provide a copy of the local jurisdiction's and the Executive Director's (if applicable) written comments and a copy of the secure lay down/staging area(s) to the CPM for review and approval.

Verification: The project owner shall provide a copy of the lay down/staging area(s) to the affected local jurisdiction and the Executive Director of the California Coastal Commission (if applicable) for written comment. At least 30 days prior to the start of site mobilization, the project owner shall provide any plan(s), map(s) showing the secured laydown and staging area(s) along with any comment letters from the local jurisdiction and the California Coastal Commission to the CPM for review and approval.

LAND-3 The project owner shall provide appropriate evidence of compliance with Federal Aviation Administration (FAA) regulations regarding the marking and/or lighting of the project's new exhaust stacks.

Verification: Pursuant to the schedule contained in Condition of Certification **TRANS-6**, the project owner shall submit copies of the FAA Form 7460-1 with copies of the FAA response to Form 7460-1 to the CPM.

LAND-4: The project owner shall either bore the proposed sewer line under 45th Street in the City of Manhattan Beach or use conventional excavation techniques using steel cover plates to allow traffic to have access to the Strand parking lot at all times. The time period necessary to complete the 45th Street sewer excavation/trenching and connection shall be kept to a minimum. The Applicant shall obtain the required encroachment permit(s) from the local government of jurisdiction(s). The sewer line shall be constructed during the off-peak season of September to May.

Verification: The project owner shall submit to the City of Manhattan Beach Public Works Department an encroachment permit application for their review and approval and to the CPM for final approval. The permit application shall include a description of the method that would be used to complete any excavations in 45th Street. The application shall include the proposed time to begin and complete the sewer line connection. Also, the permit application shall illustrate how the construction crew and traffic control will ensure that access to the parking lot is not disrupted.

The project owner shall monitor the construction of the sewer line in the 45th Street right-of-way at all times and promptly notify the City of Manhattan Beach Public Works Department and CPM of any difficulties experienced.

Prior to any ground disturbance within the 45th Street public right-of-way a copy of the City of Manhattan Beach approved/issued encroachment permit shall be submitted to the CPM.

The CPM or City of Manhattan Beach designated representative may conduct random site visits to verify compliance, and the CPM may temporarily stop construction to ensure access is maintained.

LAND-5: The project owner shall provide written notification to the CPM when any plans for use of the abandoned fuel tank farm area (Parcel 2) are developed and indicate whether the project owner believes such plans are subject to the Energy Commission's permitting authority in accordance to the Warren-Alquist Act. The written notification shall include a description of the development and an analysis of which agency has proper jurisdiction over the development according to the enacted laws, ordinances and standards in effect at the time such development is to be proposed.

Verification: The project owner shall provide written notification to the planning departments of the City of El Segundo and the City of Manhattan Beach and to the Executive Director of the California Coastal Commission who shall have 30 calendar days to provide written comments to the CPM to review.

At least 60 days prior to submitting any applications to any other agency for development of the abandoned fuel tank farm area (Parcel 2); the project owner shall provide a copy of the written notification to the CPM. The project owner shall also provide copies of the written notification sent to the Cities of El Segundo, Manhattan Beach and to the Executive Director of the California Coastal Commission to the CPM.

LAND-6: The abandoned fuel storage tanks on Parcel 2 shall be removed prior to the start of commercial operation of the new generating units. Any site remediation and/or soil restoration activities required by appropriate authorities shall be completed following tank removal.

Following site remediation, the tank farm area shall be paved and landscaped in accordance with the landscape plan submitted and approved pursuant to condition of certification, **VIS-2**. The tank farm uses will be restricted to parking in the designated parking areas and approved uses in the paved area south of the designated parking area. Approved uses include temporary equipment staging and overflow parking during maintenance evolutions. The paved area shall not be used for permanent storage of vehicles, equipment or materials.

Verification: The project owner shall submit a detailed schedule for the removal of the fuel storage tanks, site remediation and/or soil restoration to the CPM for review and approval prior to the start of construction.

LAND-7: The project owner shall provide copies of final grading and drainage plans to the planning departments of the Cities of El Segundo and Manhattan Beach.

Verification: Pursuant to the schedule contained in Condition of Certification **CIVIL-1** the project owner shall also submit copies of the proposed drainage structures and grading plan to the City of El Segundo planning department and the City of Manhattan Beach planning department concurrent with their submittal to the Chief Building Official (CBO) and CPM.

LAND-8: The project owner shall maintain lease rights for the tideland and submerged land owned by the State of California leased via the California State Lands Commission. Project owner shall provide copies to the CPM of all new or amended leases and all relevant correspondence between the project owner and the State Lands Commission regarding lease terms.

Verification: The project owner shall provide the CPM with a copy of submitted lease applications filed with the State Lands Commission and other relevant correspondence. The project owner shall submit to the CPM a copy of all new or amended lease agreements with the California State Lands Commission.

LAND-9: The project owner shall provide copies of the final perimeter landscape plan(s) to the CPM. The landscape plans shall identify the area to be designated for public use, subject to restrictions for security and public safety as determined by the CPM. The project owner shall install public park-type benches within the public use area along the west property line of the ESGS property.

Verification: The public park-type benches shall be installed pursuant to the schedule contained in Condition of Certification **VIS-2**. Within 14 days after completion of the public use area, the project owner shall contact the CPM to request a final inspection.

BIKEWAY CLOSURE OR WIDTH REDUCTION

LAND-10 The project owner shall not prohibit public access and use of the Los Angeles County maintained Class 1 bicycle trail known as the “Marvin Braude Bikeway” (bikeway) during beach delivery activities except as stipulated below for the project:

1. Prior to the start of pre-construction activity involving the bikeway, the project owner shall contact the Los Angeles County Department of Public Works and provide for its review a schedule for bike trail closure and trail use interruption, the detour route, the location of delineators or barricades to channelize individuals past the work site, and the placement of public signage (e.g., construction warning signs).
2. Prior to the first closure of the bikeway to perform necessary project pre-construction or construction activity, the project owner shall:
 - a. Provide the final schedule and timing of bike trail closures to the Department of Public Works Construction Division and Bikeway Coordinator, and CPM,
 - b. Provide a detour plan to the Department of Public Works Construction Division, Bikeway Coordinator and CPM showing a safe bicycle route around the project site for bicyclists.
 - c. Provide the Department of Public Works Construction Division and Bikeway Coordinator 30-calendar days to review and provide written comments to the project owner on a. and b. above.
 - d. Provide to the CPM a copy of the transmittal letter submitted to the Department of Public Works Construction Division and Bikeway Coordinator requesting their review of the items identified in a. and b. above.
 - e. Provide to the CPM a copy of the Department of Public Works Construction Division and Bikeway Coordinator written comments on the items identified in a. and b. above for approval.
 - f. Notify the Bikeway Coordinator within 24-hours after any reopening of the bikeway.
3. If the bikeway’s existing width must be reduced in size to perform necessary project construction activity, the project owner shall provide the following:

Eight (8) feet of bicycle trail width shall be maintained around the project site to the greatest extent possible. The project owner shall post construction signs warning “CONSTRUCTION AHEAD” and “BIKEWAY NARROWS” in advance of the project site on all approaches along with delineators and barricades for channelization.

If a minimum of eight feet of paved bicycle trail cannot be provided, construction signs warning “CONSTRUCTION AHEAD” and “WALK BIKE” shall be posted in advance of the project site on all approaches. Where bicyclists are instructed to walk their bikes, flagmen shall be present at all approaches. Delineators or barricades shall also be placed to channelize pedestrians past the work site.

Vertical clearance to obstructions across the clear width of the bicycle trail shall be a minimum of 8 feet.

4. Required public signage shall be posted at least 14-calendar days prior to the start of pre-construction activity involving the bikeway. The Department of Public Works Construction Division and Bikeway Coordinator, and the CPM shall be notified that signage has been installed within 24-hours after posting.
5. To the extent feasible, the project owner shall make the bicycle trail open to the public on weekends and holidays. The bicycle trail shall be completely free of obstructions including barricades, swept clean, and have a minimum of eight-feet of vertical clearance with a two-foot wide shoulder. If a two-foot wide shoulder cannot be maintained, the project owner shall provide warning signage.
6. Within 48-hours after receiving a bicycle related trail complaint specific to the project’s bikeway pre-construction and construction activities, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions and a written explanation of the resolution to the complaint.

Verification: At least 30 days prior to start of pre-construction activity involving the bikeway, the project owner is to contact the Los Angeles County Department of Public Works Construction Division and Bikeway Coordinator.

The project owner is to provide to the CPM a copy of the transmittal letter submitted to the Department of Public Works Construction Division and the Bikeway Coordinator requesting their review.

The project owner is to provide to the CPM a copy of the written comments provided by the Department of Public Works Construction Division and the Bikeway Coordinator on the scheduled for bike trail closure and trail use interruption, the detour route, the installation of public signage and notification.

The project owner is to notify the Construction Division, Bikeway Coordinator, and the CPM within 24-hours after posting signage along the bicycle trail.

The project owner is to notify the Bikeway Coordinator within 24-hours after any reopening from a scheduled closure of the bicycle trail.

Within 48-hours after receiving a bicycle related trail complaint, the project owner is to provide the CPM with a complaint resolution form report and resolution explanation.

BIKEWAY RESTORATION

LAND-11 The project owner shall complete restoration or repair of bicycle trail pavement (including striping) to the bikeway's preconstruction condition consistent with the schedule established for the completion of the seawall pursuant to Condition of Certification VIS-3 found in the visual resources section of the Commission Decision dated February 2, 2005.

The project owner shall contact the Los Angeles County Department of Public Works Construction Division and the CPM for a site inspection after the project owner has restored/repared the bicycle trail to its pre-construction condition.

If upon completion of the site inspection by the Los Angeles County Department of Public Works Construction Division and the CPM, the CPM notifies the project owner that additional restoration/repair is needed, within 30 days of receiving the notification the project owner shall complete the specified work.

Verification: The project owner is to notify the Los Angeles County Department of Public Works Construction Division and the CPM upon completion of the restoration/repair of the bicycle trail that it is ready for inspection.

BEACH RESTORATION

LAND-12 The project owner shall remove all evidence of the project's beach delivery area structures and equipment (e.g., beach ramp, safety/security fencing, dozers, etc.), and restore the beach surface area to its original condition or better condition, including the replacement of any sand, vegetation, or paving that was removed to permit the project's beach delivery phase where project development does not preclude it.

The project owner shall record in video format the beach delivery laydown area prior to pre-construction activity and after the restoration completed. The project owner shall submit copies of both the pre- and post-video recordings to the CPM.

The project owner shall complete surface restoration of the beach area within 60 calendar days after the start of commercial operation. The project owner shall notify the CPM within seven days after completion of surface restoration that the beach area is ready for inspection. If the CPM notifies the project owner that additional surface restoration is needed after the site inspection, within 30 days of receiving that notification the project owner shall complete the specified work.

Verification: At least 15 days prior to the start of pre-construction on the beach, the project owner is to video the beach delivery laydown area and provide a copy of it to the CPM.

The project owner is to notify the CPM within seven days after completion of the beach restoration that it is ready for inspection and provide the CPM with a video/DVD showing the restored beach area.

CALIFORNIA STATE LANDS COMMISSION LEASE

LAND-13 Prior to the start of the project's pre-construction activity on the beach, the project owner shall provide the CPM a copy of their executed lease or equivalent land use document with the California State Lands Commission permitting barge anchorage, and the storage and transfer of oversized power plant equipment (e.g., steam turbine generators, heat recovery steam generators, air-cooled condensers) to the project site.

Verification: At least 15 days prior to the start of pre-construction activity on the beach, the project owner is to provide the CPM a copy of their executed lease or equivalent land use document with the California State Lands Commission.

EMERGENCY SERVICE VEHICLE AND EQUIPMENT PASSAGE

LAND-14 The project owner shall allow the Los Angeles County Department of Beaches and Harbors, Facilities and Property Management Division, and the Los Angeles County Fire Department, Lifeguard Division, heavy equipment and emergency services vehicle passage through the project's beach delivery area, and the Marvin Braude Bikeway to respond to beach related emergencies (e.g.; oil spills, sewage spillage fouling the shoreline, beach erosion, high tides, mammal rescue), and to conduct lifesaving operations and paramedic services.

Prior to the start of pre-construction activity on the beach, if the project owner cannot provide heavy equipment/emergency services vehicle passage, the project owner may submit to the CPM for approval an alternative option that provides for the movement of heavy equipment and emergency services vehicles that has been reviewed by the Chief of Facilities and Property Management Division for the Los Angeles County Department of Beaches and Harbors and the Chief Lifeguard of the Los Angeles County Fire Department.

If the CPM determines that the heavy equipment/emergency services vehicle passage or the alternative option requires a revision, the project owner shall revise the heavy equipment/emergency services vehicle passage or alternative option and submit it to the CPM for approval.

The heavy equipment/emergency services vehicle passage or alternative option shall remain in effect until the beach ramp and fencing prohibiting passage of heavy equipment and emergency service vehicles through the project's beach delivery area are cleared from the beach.

Verification: At least 30 calendar days prior to the start of the project's pre-construction activity on the beach, the project owner is to contact the Chief of Facilities and Property Management Division for the Los Angeles County Department of Beaches and Harbors, and the Chief Lifeguard of the Los Angeles County Fire Department to formalize the heavy equipment/emergency services vehicles passage or alternative option.

At least 10 days prior to the start of pre-construction activity on the beach, the project owner is to provide to the CPM a map showing the agreed upon heavy equipment/emergency services vehicle passage or alternative option.

G. NOISE AND VIBRATION

Staff witness Shahab Khoshmashrab has reviewed the petition for potential environmental impacts and for consistency with applicable noise LORS. Based on this review, the amended project would comply with all applicable noise and vibration LORS, and would not produce significant adverse noise or vibration impacts on sensitive receptors, and would produce no noise and vibration impacts greater than those presented in the original 2005 Commission Decision. As a result, no new or modified conditions of certification would be needed. (RSA, pp 4.6-1 to 4.6-4.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Noise aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

NOISE-1: At least 15 days prior to site mobilization, the project owner shall notify all residents, property owners, and business owners within one-half mile of the site, and the City of Manhattan Beach, the City of El Segundo, and L.A. County Lifeguard Headquarters, by mail and/or other effective means, of the commencement of project construction. At the same time, the project owner shall establish and disseminate a 24- hour "hotline" telephone number for use by the public to report any undesirable noise conditions associated with the construction of the project. This telephone number shall also 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. The telephone shall be located in an area that is likely to be staffed, and, 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.

Verification: The project owner shall transmit to the CPM in the first Monthly Construction Report following site mobilization, a statement, signed by the project manager, attesting that the above notification has been performed, and describing the

method of that notification. This statement shall also attest that the telephone number has been established and posted at the site.

NOISE-2: Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints as soon as possible.

- The project owner shall establish and disseminate a 24-hour "hotline" telephone number for use by the public to report any undesirable noise conditions associated with the project. The telephone shall be located in an area that is likely to be staffed, and, 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.
- The project owner shall designate a noise monitoring officer for each construction shift, and for the daytime shift after the plant is placed into service. The noise monitoring officer shall be trained in the use of a sound level meter, and shall be empowered to halt any construction activities causing or likely to cause a violation of the Conditions of Certification herein. The noise monitoring officer shall carry at all times an operable portable electronic device (such as telephone or pager) to receive any incoming "hotline" call.
- The noise monitoring officer shall log each noise complaint on a CPM-approved complaint form and shall attempt to resolve the complaint.
- For construction noise complaints received outside of the construction hours and days allowed as described by Condition of Certification NOISE-8, the noise monitoring officer shall take immediate steps to determine whether power plant construction is causing the noise and, if so, to reduce the noise level of that activity or take other appropriate action to remedy the complaint as quickly as possible (not to exceed one hour) in order to comply with the Conditions of Certification.
- For construction noise complaints, the noise monitoring officer shall contact the complainant within the hour, if requested by the complainant, with information on the status and resolution of the complaint.
- In the event of construction noise complaints for two consecutive periods outside of which construction is specifically allowed by NOISE-8, either from a single affected residence, from multiple residences, or businesses, the project owner shall monitor noise levels at the receptor(s) for no less than the following two consecutive periods.
- The noise monitoring officer, as appropriate, shall measure site fence-line noise levels, and/or measure noise levels at the complainant's property line, to assure compliance.
- The project owner shall attempt to contact the person(s) making a plant operations noise complaint within 24 hours, and shall conduct an investigation to determine the source of noise related to the complaint.
- If the noise is related to plant operations, the project owner shall take all feasible measures to reduce the noise at its source as soon as possible.

- If the noise complaint is not resolved to the satisfaction of the complainant, including the time frame for resolution, the noise monitoring officer shall provide the Commission's toll free compliance telephone number (1-800-858-0784 unless otherwise specified by the CPM).
- Within 24 hours of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the City of El Segundo and City of Manhattan Beach, and with the CPM, documenting the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 3-day period, the project owner shall submit a progress report and a proposed mitigation schedule, subject to the approval of the CPM, to the CPM and the affected City within 5 days of receiving the complaint.
- Following resolution of the noise complaint, the project owner shall submit an updated Noise Complaint Resolution Form and a report to the CPM and the affected City 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: The project owner shall provide to the CPM, in the applicable Monthly and/or Annual Compliance Report, a listing of noise complaints received in that time period, and the status of resolution of each complaint, including all those which have not yet been resolved.

NOISE-3: Prior to site mobilization, the project owner shall submit to the CPM for review and approval a noise control program. The noise control program shall be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA and Cal-OSHA standards.

Verification: At least 30 days prior to site mobilization, the project owner shall submit to the CPM the above referenced program for review and approval. The project owner shall make the program available to OSHA upon request.

NOISE-4: A low-pressure continuous steam blow or other equivalent low-pressure process shall be employed. Prior to site mobilization, the project owner shall submit a description of this process, with expected noise levels and projected hours of execution, to the CPM, who shall review the proposal with the objective of ensuring that the resulting noise level does not exceed the nighttime ambient hourly L50 value determined in NOISE-6 plus 5 decibels at the nearest residential property line. Project owner shall strive to avoid nighttime steam blows. If nighttime low pressure steam blows are unavoidable, these low pressure steam blows shall not exceed nighttime ambient hourly L50 value determined in NOISE-6 plus 2 decibels at the nearest residential property line during the hours 6:00 p.m. to 7:30 a.m. Copies of the process description and predicted noise levels shall be provided to the Cities of Manhattan Beach and El Segundo.

Verification: At least 15 days prior to any low-pressure continuous steam blow, the project owner shall submit to the CPM drawings or other information describing the

steam blow process, including the noise levels expected and the projected time schedule for execution of the process.

NOISE-5: At least 15 days prior to the first steam blow(s), the project owner shall notify the Cities of El Segundo and Manhattan Beach, L.A. County Lifeguard Headquarters, and all residents, property owners and business owners within one mile of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner. The notification may be in the form of letters to the area residences, telephone calls, fliers and/or other effective means. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed schedule, the expected noise levels and potential hazards associated with them, the "hotline" phone number where people register complaints, and the explanation that it is a one-time operation and not a part of normal plant operations.

Verification: Within 5 days of notifying these entities, the project owner shall send a letter to the CPM confirming that there has been appropriate notification to the residents, property owners, Cities and businesses of the planned steam blow activities, including a description of the method(s) of that notification.

NOISE-6: The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that the project will not cause resultant noise levels to exceed the ambient median noise level (L50) at residential receivers by 2 decibels or more, and that the noise due to plant operations will otherwise comply with the noise standards of the El Segundo and Manhattan Beach Municipal Codes.

No new pure tone components may be introduced. No single piece of equipment shall be allowed to stand out as a source of noise. Steam relief valves shall be adequately muffled.

A. Determine the ambient noise level (L50) at Residential Receivers. Prior to site mobilization, the project owner shall prepare and submit to the City of El Segundo and City of Manhattan Beach for review and comment, and to the CPM for review and approval, a Pre-Construction Noise Survey Plan. This plan will indicate the survey procedure and methodology for establishing the ambient noise level at nearby residential receivers. At a minimum, the plan will include the following:

- The project owner will conduct a 30-day continuous community noise survey at a residential receptor (on 45th Street in Manhattan Beach), selected by the CPM in cooperation with the City of Manhattan Beach. This pre-construction survey shall be conducted during the period of June 1 to September 30. Hourly Leq, L50 and L90 values shall be measured.
- Existing ESGS Units 3 and 4 shall be operating normally during the course of the survey, and the levels of plant operation will be documented during the survey. The plan will establish a range of

acceptable (“normal”) operating conditions suitable for the purposes of these studies.

- A simultaneous control measurement will be conducted within the project boundary. The site shall be selected to ensure that the dominant noise source will be the surf, requiring a clear line of sight to the surf. A location near the southwest project site corner is preferred to minimize the potential for noise from the existing power plant to influence the surf noise measurements. Wave height and other surf conditions, and any unusual environmental conditions occurring during the survey period shall be documented.
- For each of the days of noise data collected at each receptor, the arithmetic average median noise level (L50) shall be computed for the quietest consecutive 4-hour period. The resultant average median noise levels shall then be averaged arithmetically to calculate the relationship between surf noise levels and ambient noise levels along the northern side of the El Porto Community.
- If the initial 30-day measurement data, in the judgment of the CPM in consultation with the City of Manhattan Beach, fail to demonstrate a consistent relationship of surf and ambient noise levels, the measurement will be repeated until a consistent relationship can be established.

Following approval of the Survey Plan, and prior to site mobilization, the project owner shall implement the survey and present the results in a Pre-Construction Noise Survey Report to the Cities of El Segundo and Manhattan Beach and to the CPM. The Report will include a discussion of the ambient noise level taking into consideration all relevant factors, such as plant operating conditions, surf and wind conditions.

- B. Conduct post-construction survey. As soon as feasible, within the time frame described below and after Units 5, 6 and 7 first achieve a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct short-term survey noise measurements at monitoring sites ST-1, ST-2, ST-3 and ST-12 (as described in the AFC, Section 5.12, Figure 5.12-3, as amended May 4, 2001). “In addition, the Applicant shall conduct a 30-day community noise survey at the same receptor locations used for the 30-day noise measurement cited in Section A above.”

The post-project community noise survey shall be conducted between June 1 and September 30, using the methods described in Item A. above. The postconstruction survey shall also include measurement of one-third octave band sound pressure levels at each of the above locations to ensure that no new puretone noise components have been introduced. If environmental conditions prevent completion of the post-construction community noise survey in a timely manner, then the survey shall be completed as soon as conditions allow.

Following the post-construction survey, the project owner shall present the results in a Post-Construction Noise Survey Report to the Cities of El

Segundo and Manhattan Beach and to the CPM. The Report will include a discussion of the relationships between surf and ambient noise levels.

- C. Implement Tank Removal Noise Mitigation if Required. Mitigation measures shall be implemented to reduce noise levels to a level of compliance if the results from the post-construction noise survey at the residential receptor location indicate that the ambient median noise level (L_{50}) has increased by 2 decibels or more due to facility operation, as determined by the relationship between surf and ambient noise levels obtained from the pre-construction survey. The project owner shall present the proposed mitigation measures to the Cities of El Segundo and Manhattan Beach and to the CPM.
- D. Implement Pure Tone Mitigation if Required. If a facility-related pure tone is found to be present at any of the above monitoring sites, mitigation measures shall be implemented to eliminate the pure tone. For the purpose of this condition, the State of California's Model Community Noise Control Ordinance defines a pure tone. The project owner shall present the proposed mitigation measures to the Cities of El Segundo and Manhattan Beach and to the CPM.
- E. Implement Plant Noise Mitigation if Required. If the results of noise measurements at ST-1, or ST-12 indicate that the ambient noise level has increased by more than 5 decibels due to facility operation, as compared with the baseline noise measurements conducted on July 20 and 21, 2000, the owner will implement mitigation measures to reduce the noise at those locations to comply with the Municipal Code of the City of El Segundo. The project owner shall present the proposed mitigation measures to the Cities of El Segundo and Manhattan Beach and to the CPM.

Verification:

1. Pre-Construction Survey and Determination of Ambient Noise Level.
 - a) At least 60 days prior to site mobilization, the project owner shall provide the Pre-Construction Noise Monitoring Survey Plan to the CPM for review and approval.
 - b) Within 30 days of completion of the survey, the project owner shall provide to the CPM for review and approval the results of the pre-construction noise survey.
2. Post-construction Survey. Within 45 days after completing the post-construction surveys, the project owner shall submit a summary report of the survey to the CPM. Included in the report will be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limits, and a schedule, subject to CPM approval, for implementing these measures.
3. Mitigation Implementation. If mitigation is required, then upon completion of installation of these measures, the project owner shall submit to the CPM a summary report of a new noise survey, performed as described in paragraph B and showing compliance with this condition.

NOISE-7: Within 30 days of the project first achieving a sustained output of 80 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 (Article 105) 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.

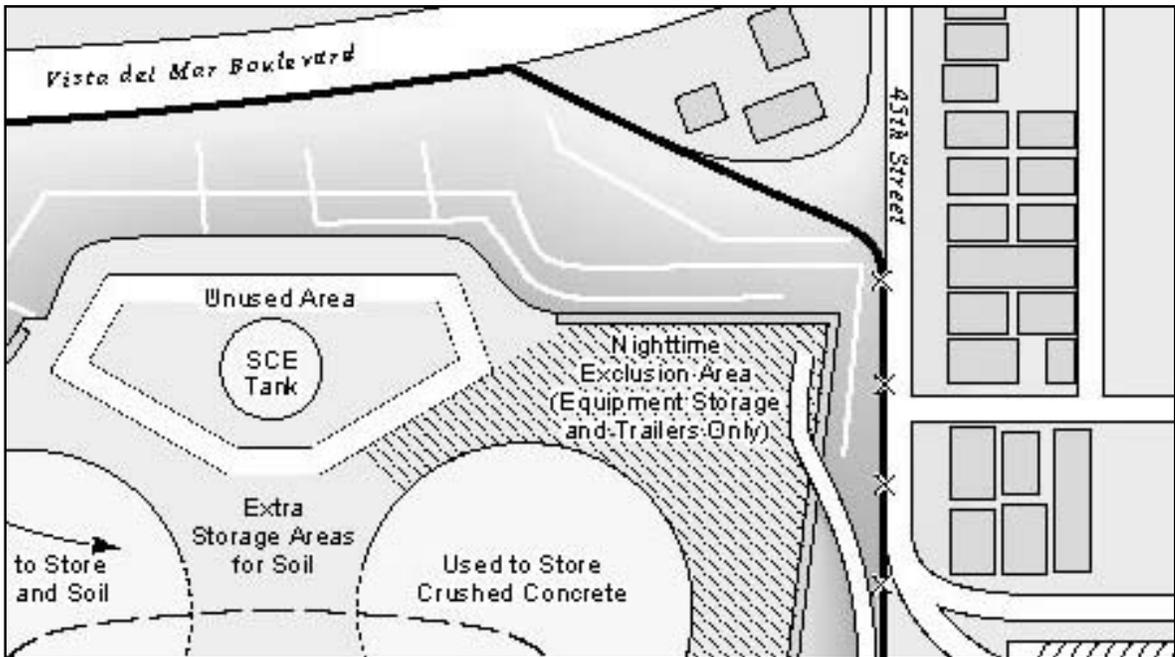
Verification: Within 30 days after completing the survey, the project owner shall submit the noise survey report, including proposed mitigation measures, to the CPM for review and approval. The project owner shall make the report available to OSHA and Cal-OSHA upon request.

NOISE-8: Heavy equipment operation and noisy construction or demolition work shall be restricted beginning at site mobilization as described below.

No pure tones are allowed outside of the hours of 7:30 A.M. to 6:00 P.M. Monday-Friday, and 9:00 A.M. to 6:00 P.M. Saturday. Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Tank Farm Area: Noise levels at any residential property line due to tank farm construction or demolition shall be limited to the average daytime hourly ambient L_{50} value plus 5 dBA, or 65 dBA L_{50} , whichever is lower for continuous noise. For intermittent noise (up to 30 minutes in one hour) the maximum noise levels shall be ambient L_{50} plus 10 dBA). Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

The use of the tank farm area is divided into four phases. For each phase the following restrictions shall be observed. Construction activity outside the hours described will not be allowed in the area south of the southern tank, which shall be termed the nighttime exclusion area, shown below:



Phase III: Construction period: Haul material into and out of the area; remove the north tank. Daytime activities will be shielded from 45th street residents by the use of the south tank as a dome and as a shield. All demolition and construction shall occur between 7:30 AM to 6:00 PM Monday - Friday and between 9:00 AM to 6:00 PM on Saturdays. No demolition or construction shall occur on Sundays or holidays.

Phase IV: Operations period: Remove the south tank, and limit the traffic on the tank farm area. During daytime only, metal cutting will be allowed from 9:00 AM to 5:00 PM Monday through Friday, except holidays. During daytime only, trucks may be used to remove tank material and to remove soil. Bulldozers, graders etc. may be used during daytime hours only to move, excavate and replace soil. All demolition and construction shall only occur between 7:30 AM and 6:00 PM Monday-Friday. No demolition or construction shall occur on Saturdays, Sundays or holidays.

Other Areas of the Project Site: The noise standards for construction and demolition occurring at the rest of the project site (with the exception of the tank farm area) shall be:

- 65 dBA hourly L_{50} at any residential receptor during the hours of 7:30 A.M. to 6:00 P.M. Monday-Friday, and 9:00 A.M. to 6:00 P.M. Saturday.
- The ambient hourly L_{50} value plus 2 dBA at any residential receptor at any other time.

Ambient noise levels shall be determined from the pre-construction survey conducted pursuant to **NOISE-6**.

Verification: The project owner shall transmit to the CPM in the first Monthly Construction Report a statement acknowledging that the above restrictions will be observed throughout the construction of the project.

NOISE-9: The project design and implementation shall ensure that site mobilization, demolition, construction, or operation of the power plant will not cause vibration at any sensitive receptor to exceed a peak particle velocity of 0.003 in/sec, or to cause vibration which is perceptible without use of instruments to any reasonable person of normal sensitivity.

The noise monitoring officer designated pursuant to Condition of Certification **NOISE-1** shall log each construction vibration complaint on a CPM-approved complaint form and attempt to resolve the complaint. For construction vibration complaints received outside of the construction hours or days allowed as described by Condition of Certification **NOISE-8**, the noise monitoring officer shall take immediate steps to determine whether power plant construction is causing the vibration and, if so, to reduce the vibration level of that activity as quickly as possible (not to exceed one hour) in order to comply with the Conditions of Certification. The noise monitoring officer, as appropriate, shall measure site fence-line vibration levels to assure compliance. If the vibration complaint is not resolved to the satisfaction of the complainant, including a time frame for resolution, the noise monitoring officer shall provide the Commission's toll free compliance telephone number (1-800-858-0784, unless otherwise specified by the CPM).

In the event of construction-related vibration complaints either from a single affected residence, from multiple residences, or businesses, the project owner shall monitor vibration at the receptor(s) for no less than the following two days of construction.

Within 24 hours of receiving a complaint for vibration, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the City of El Segundo and/or City of Manhattan Beach, and with the CPM. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 3-day period, the project owner shall submit a progress report and a proposed mitigation schedule, subject to the approval of the CPM, to the CPM and the affected City within 5 days of receiving the complaint. The project owner shall submit an updated Noise Complaint Resolution Form to the CPM and the affected City when the mitigation is finally implemented.

Verification: The project owner shall provide, in the applicable Monthly and/or Annual Compliance Report, a listing of vibration complaints received in that time period, and the status of resolution of each complaint, including all those which have not yet been resolved.

NOISE-10: The loudspeaker system shall be used only for testing and emergencies.

Verification: The project owner shall transmit to the CPM in the first Monthly Construction Report a statement acknowledging that the above restrictions will be observed throughout the construction and operation of the project.

H. PUBLIC HEALTH

Staff's witnesses, Dr. Alvin J. Greenberg, Ph.D. & Dr. Obed Odoemelum, reviewed the health risk assessment prepared by the Applicant in its Petition to Amend the ESPRP, and conducted an independent screening assessment.

They reviewed the petition for new potential issues related to public health and a new health risk assessment prepared by ESEC for the South Coast Air Quality Management District. Based on this review, the project's emissions of toxic air contaminants would pose no significant risk or hazard to the public. Therefore, no conditions of certification are proposed. (RSA, p. 4.7-1.)

FINDINGS AND CONCLUSIONS

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Public Health aspects of the proposed project do not create significant direct or cumulative environmental effects.

The 2005 Decision did not impose any conditions under this topic, and staff determined that with the continued compliance with all applicable LORS, no new conditions are needed in the area of public health.

I. SOCIOECONOMIC RESOURCES

Staff witness Amanda Stennick reviewed the petition for new potential issues related to socioeconomics and found that the proposed amendment would not cause significant direct or cumulative adverse socioeconomic impacts on schools, housing, law enforcement, emergency services, hospitals, or parks and recreation. Staff also concludes that the proposed amendment would not induce substantial growth or concentration of population, induce substantial increases in demand for public services, or displace a large number of people. Staff has proposed no new modifications to the Socioeconomic Resources Conditions of Certification. (RSA, pp 4.8-1 to 4.8-2.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Socioeconomics aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

SOCIO-1 Prior to the start of commercial operations, the project owner shall pay the City of El Segundo the following one-time fees:

- Police service mitigation fee of \$0.11 per gross square foot of building area;
- Fire service mitigation fee of \$0.14 per gross square foot of building area;
- Library service mitigation fee of \$0.03 per gross square foot of building area;
- Traffic mitigation fee for new development, in an amount to be determined by the City of El Segundo Public Works Director upon receipt of a Traffic Mitigation Fee Determination Form.

The gross square foot of building area and the amount of the one-time fees shall be determined by the City of El Segundo at the time the project owner submits the site plans.

Verification: Prior to the start of commercial operation, the project owner shall submit verification to the CPM that payment of any required public service mitigation fees have

been submitted to the City of El Segundo. The project owner shall provide proof of payment of the Traffic Mitigation Fee in the next Monthly Compliance Report following payment.

NOTE: The Applicant and the City of El Segundo have reached a side agreement for the Applicant to perform the following analysis and request the Commission's inclusion of the agreement as a Condition of Certification.

SOCIO-2 Prior to any ground disturbance activities, the project owner shall prepare a fiscal impact analysis for the project that includes analysis of the actual revenues and costs associated with the project. The revenue analysis shall include an analysis of the total property tax, franchise tax, utility user tax, sales and use tax, business license fees, building permit fees, and other revenues generated by the facility as identified in the City of El Segundo's Fiscal Impact Model. The cost analysis shall include a discussion of the cost to City services (i.e., police, fire, public works) for ongoing service to the project. The fiscal impact analysis shall compare the revenue and costs over a minimum period of five years following the start of commercial operations.

Verification: At least 30 days prior to any ground disturbance activities, the project owner shall transmit the analysis to the City of El Segundo for review and comment and to the Energy Commission Compliance Project Manager (CPM) for review and approval.

J. SOIL & WATER RESOURCES

Written testimony of Paul Marshall concludes that the proposed amendment will greatly reduce the impacts anticipated from the previously permitted project due to the elimination of once-through cooling and wastewater discharges to Santa Monica Bay. Although the site will maintain its industrial NPDES permit, the elimination of once-through cooling and industrial wastewater streams from will reduce the thermal and industrial discharges to the Santa Monica Bay by over 206 million gallons per day. The use of the new equipment technology with dry cooling will also greatly reduce or eliminate the amount of ocean, potable, and recycled water consumption that would be required for evaporative cooling approved in the 2005 Decision. These project changes are fully compliant with state LORS for the use of recycled water, use of alternative cooling technology, and the elimination of once-through cooling. (RSA, pp 4.9-1 to 4.9-23.)

Staff recommends various revisions to the Conditions of Certification to conform to the proposed changes in the project's features including the addition of Conditions of Certification **WATER RES-3 and-4** and **WATER QUALITY-7, -8, and -9**, and the addition of **WATER RES-5** and **WATER QUALITY-10**. Staff proposes deletion of **WATER RES-1 and-2** and, **WATER QUALITY-4, -5, and -6**.

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the amended project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Soil and Water Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

WATER QUALITY

WATER QUALITY-1: Deleted

WATER QUALITY-2: Deleted

WATER QUALITY-3: Deleted

WATER QUALITY-4: Deleted

WATER QUALITY-5: Deleted

WATER QUALITY-6: Deleted

WATER QUALITY-7: The project owner shall comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activity (Water Quality 99-08-DWQ). The project owner shall develop and implement a Storm Water Pollution Prevention Plan (Construction SWPPP) for the construction of the ESPRP site, laydown areas, including El Segundo Beach, and all linear facilities. The Construction SWPPP shall be reviewed and approved by the City of El Segundo (City) and be in compliance with the City's Standard Urban Stormwater Mitigation Plan (SUSMP) per the requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB) NPDES Permit No. CAS0004001 and the City's Ordinance No. 1348 and Chapter 7 of Title 5 of the municipal code.

Verification: Prior to site mobilization, demolition, and/or construction related ground disturbing activities, including those activities associated with the beach delivery and linear facilities, The project owner shall submit to the CPM a copy of the Construction SWPPP that includes the requirements of the City's SUSMP and retain a copy on-site. The project owner shall submit copies to the CPM of all correspondence between the project owner and the City, the LARWQCB, and the SWRCB regarding the City's SUSMP and the Construction SWPPP within 10 days of its receipt or submittal. This information shall include copies the Notice of Intent and Notice of Termination for the project.

WATER QUALITY-8: Prior to soil disturbing activities, the project owner shall obtain CPM approval for a site-specific Drainage, Erosion, and Sediment Control Plan (DESCP) that addresses all project elements including those activities related to delivery of equipment onto El Segundo Beach. The DESCPC shall be revised to address specific soil disturbing and soil stabilizing activities associated with pre-construction, construction, and post-construction of the ESPRP.

The DESCPC shall be consistent with the grading and drainage plan as required by condition of certification CIVIL-1 and may incorporate by reference any Storm Water Pollution Prevention Plan (SWPPP) developed in conjunction with state or municipal NPDES permits. The DESCPC shall contain elements A through I below:

- A.** Vicinity Map – A map(s) at a minimum scale 1"=100' shall be provided indicating the location of all project elements with depictions of all significant geographic features including swales, storm drains, and sensitive areas.

- B. Site Delineation** – All areas subject to soil disturbance for the ESPRP project (project site, lay down area, all linear facilities, landscaping areas, and any other project elements) shall be delineated showing boundary lines of all construction area and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.
- C. Watercourses and Critical Areas** – The DESCPC shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the ESPRP project construction, lay down, and landscape areas and all transmission and pipeline construction corridors.
- D. Drainage Map** – The DESCPC shall provide a topographic site map(s) at a minimum scale 1"=100' showing all existing, interim and proposed drainage systems and drainage area boundaries. On the map, spot elevations and contours shall be extended off-site for a minimum distance of 100 feet.
- E. Drainage Narrative** – The DESCPC shall include a narrative of the drainage measures to be taken to protect the site and downstream facilities and include the summary pages from the hydrologic analysis prepared by a professional engineer/erosion control specialist. The narrative shall state the watershed size(s) in acres used in the calculation of drainage control measures and text included that justifies their selection. The hydrologic analysis should be used to support the selection of BMPs and structural controls to divert off-site and on-site drainage around or through the ESPRP project construction and laydown areas.
- F. Clearing and Grading Plans** – The DESCPC shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections or other means. The locations of any disposal areas, fills, or other special features will also be shown. Illustrate existing and proposed topography tying in proposed contours with existing topography.
- G. Clearing and Grading Narrative** – The DESCPC shall include a table with the quantities of material excavated or filled for the site and all project elements of the ESPRP project (project site, lay down areas, transmission corridors, and pipeline corridors) to include those materials removed from the site due to demolition, whether such excavations or fill is temporary or permanent, and the amount of such material to be imported or exported. The table shall distinguish whether such excavations or fill is temporary or permanent and the amount of material to be imported or exported.
- H. Best Management Practices** – The DESCPC shall identify on a Water Pollution Control Drawing(s) (WPCD) the location of the site specific BMPs to be employed during each phase of construction (initial grading/demolition, excavation and construction, and final grading/stabilization). Treatment control BMPs used during construction should enable testing of stormwater runoff prior to discharge to the

stormwater system. BMPs shall include measures designed to prevent wind and water erosion in areas with existing soil contamination.

- I. Best Management Practices Narrative – The DESCOP shall show the location (as identified on the WPCD), timing, and maintenance schedule of all erosion and sediment control BMPs to be used prior to grading/demolition, during project excavation and construction, and final grading/stabilization (accomplished by the submittal of DESCOP revisions). Text with supporting calculation shall be included for each project specific BMP. Separate BMP implementation schedules shall be provided for each project element.

Verification: No later than 90 days prior to start of grading or excavation associated with any element of the ESPRP, the project owner shall submit a copy of the DESCOP to the City of El Segundo (City) for review and comment. No later than 60 days prior to start of grading or excavation associated with any element of the ESPRP, the project owner shall submit the DESCOP and the City's comments to the CPM for review and approval. The CPM shall consider comments received from the City on the DESCOP before issuing approval.

The DESCOP shall be revised and a revision submitted to the CPM for project excavation/construction and final grading/stabilization prior to the soil disturbing activities associated with these stages of construction. The DESCOP shall be consistent with the grading and drainage plan as required by condition of certification CIVIL-1 and relevant portions of the DESCOP shall clearly show approval by the Chief Building Official. The DESCOP shall be consistent with the Stormwater Pollution Prevention Plan (SWPPP) developed in accordance with the General Construction Permit (Water Quality Order 99-08-DWQ) and the project's Standard Urban Stormwater Mitigation Plan developed in accordance with the LARWQCB NPDES Permit No. CAS0004001 and the City's Ordinance No. 1348 and Chapter 7 of Title 5 of the municipal code.

In the monthly compliance report, the project owner shall provide a narrative describing the effectiveness of the drainage, erosion and sediment control measures; the results of monitoring and maintenance activities, including any BMP inspection reports; and the dates of any dewatering activities.

WATER QUALITY-9: The project owner shall comply with the requirements of the Individual and/or General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity. The project owner shall develop and implement a Storm Water Pollution Prevention Plan (Industrial SWPPP) for the operation of the ESPRP. The Industrial SWPPP shall be reviewed and approved by the City of El Segundo (City) and be in compliance with the City of El Segundo's (City) Standard Urban Stormwater Mitigation Plan (SUSMP) per the requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB) NPDES Permit No. CAS0004001 and the City's Ordinance No. 1348 and Chapter 7 of Title 5 of the municipal code.

Verification: The project owner shall submit to the CPM a copy of the Industrial SWPPP that includes the requirements of the City's SUSMP prior to commercial operation and retain a copy on-site. The project owner shall submit to the CPM copies of all correspondence between the project owner and the City, the LARWQCB, and the

SWRCB regarding the City's SUSMP and the Individual and/or General NPDES Permit for the Discharge of Storm Water Associated with Industrial Activity within 10 days of its receipt or submittal. The Industrial SWPPP shall include a copy of the Notice of Intent for the project.

WATER QUALITY-10: The project owner shall ensure that each barge operator develops and implements a Ballast Water Management Plan in accordance with CCR Title 2, Division 3, Chapter 1, Article 4.6, The project owner shall ensure that the ballast water holding tanks are certified clean and uncontaminated by the California State Lands Commission prior to taking on local ballast water.

Verification: No later than 90 days prior to grounding of any barge associated with the delivery of ESPRP equipment over El Segundo Beach, the project owner shall provide the State Lands Commission with a copy of the Ballast Water Management Plan that is in compliance with Title 2, Division 3, Chapter 1, Article 4.6 for review and comment. At least 60 days prior to grounding of any barge associated with the delivery of ESPRP equipment over El Segundo Beach, the project owner shall provide the CPM for review and approval, a copy of the Ballast Water Management Plan that has been reviewed by the State Lands Commission.

WATER RESOURCES

WATER RES-1: Deleted.

WATER RES-2: Deleted.

WATER RES-3: The project owner shall provide the CPM a copy of the executed and final recycled water purchase agreement (agreement) with West Basin Municipal Water District (WBMWD) for the long-term supply (30 – 35 years) of tertiary treated recycled water to the ESPRP. The agreement shall specify a minimum delivery rate of 602-gpm. The agreement shall specify all terms and costs for the delivery and use of recycled water by ESPRP. The ESPRP shall not connect to WBMWD's new 10-inch recycled water pipeline without the final agreement in place and submitted to the CPM. The project owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations.

Verification: No later than 60 days prior to the delivery of single pass reverse osmosis recycled water from the new 10-inch pipeline, the project owner shall submit two copies of the final and executed recycled water purchase agreement for the supply and on-site use of recycled water at the ESPRP. The project owner shall submit to the CPM a copy of the cross connection inspection and approval report from the Los Angeles County Health Department prior to the delivery of recycled water from the new 10-inch recycled water pipeline.

WATER RES-4: The project owner shall use potable water supplied by the City of El Segundo (City) for potable and sanitary purposes only during construction of the ESPRP. Potable water shall not be used for any construction activity that is suitable for non-potable water use. In the event of a recycled water delivery

interruption, potable water may be used as an emergency back-up supply for plant operation.

Prior to completion of the 14-inch potable water pipeline, the project owner shall provide the CPM with a copy of an executed and final Potable Water Supply Agreement (agreement) for the long-term supply (30 – 35 years) of potable water. The agreement shall specify a minimum delivery rate of 602-gpm in order to meet ESPRP's operation requirements in the event of a recycled water interruption. The project owner shall not use more than 4-AFY of potable water as an emergency backup source for ESPRP operation.

Verification: No later than 30 days prior to completion of the 14-inch potable water pipeline, the project owner shall submit to the CPM two copies of the executed and final Potable Water Supply Agreement (agreement). The project owner shall submit to the CPM any water quality monitoring reports required by the City in the annual compliance report. The project owner shall notify the CPM of any violations of the agreement terms and conditions, the actions taken or planned to bring the project back into compliance with the agreement, and the date compliance was reestablished.

WATER RES-5: The project owner shall use potable water supplied by the City of El Segundo (City) and recycled water supplied by the West Basin Municipal Water District (WBMWD) during ESPRP operation. Prior to the use of water from any source for ESPRP operation, the project owner shall install and maintain metering devices as part of the potable and recycled water supply and distribution systems. The metering devices shall be in operation for the life of the project. The project owner shall prepare an annual Water Use Summary that includes the monthly range and monthly average of daily potable and recycled water usage in gallons per day on a monthly basis and in acre-feet on an annual basis. For subsequent years, the annual Water Use Summary shall also include the yearly range and yearly average water use, by source, for the project. The annual Water Use Summary shall be submitted to the CPM as part of the annual compliance report.

Verification: At least 60 days prior to ESPRP commercial operation, the project owner shall submit to the CPM evidence that metering devices have been installed and are operational on the potable and recycled water supply and distribution systems. The project owner shall submit a Water Use Summary report to the CPM in the annual compliance report. The report shall disaggregate potable water supplied by the City and recycled water supplied by WBMWD for ESPRP industrial and landscape irrigation use. The project owner shall provide a report on the servicing, testing and calibration of the metering devices in the annual compliance report.

K. TRAFFIC AND TRANSPORTATION

Staff witness James Adams has reviewed the petition for potential environmental effects and consistency with applicable LORS, and found that the proposed amendment would not be a significant change from the original project in terms of traffic and transportation impacts. Therefore, staff is not recommending any modifications to existing Traffic and Transportation Conditions of Certification. (RSA, pp 4.10-1 to 4.10-3.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Traffic and Transportation aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

OVERWEIGHT & OVERSIZE VEHICLES

TRANS-1 The project owner shall comply with Caltrans and other relevant jurisdictions limitations on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

Verification: In the Monthly Compliance Reports, the project owner shall submit copies of any permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

ENCROACHMENT PERMITS

TRANS-2 The project owner or its contractor shall comply with Caltrans and other relevant jurisdictions limitations for encroachment into public rights-of-way and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.

Verification: In Monthly Compliance Reports, the project owner shall submit copies of permits received during the reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

LICENSED HAZARDOUS MATERIALS HAULERS

TRANS-3 The project owner shall ensure that permits and/or licenses are secured from the California Highway Patrol and Caltrans for the transport of hazardous materials.

Verification: The project owner shall include in its Monthly Compliance Reports, copies of all permits/licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances.

OFF-SITE PARKING AND STAGING PLAN

TRANS-4 During construction of the power plant and all related facilities, the project shall develop a parking and staging plan for all phases of project construction to enforce a policy that all project-related parking occurs on-site or in designated off-site parking areas.

Verification: At least 60 days prior to start of site mobilization, the project owner shall submit the plan to the City of El Segundo and other jurisdictions affected by site selection, such as the City and/or County of Los Angeles for review and comment, and to the CPM for review and approval.

TRAFFIC CONTROL PLAN

TRANS-5 The project owner shall consult with the Cities of El Segundo, Manhattan Beach and Los Angeles, and prepare and submit to the CPM for approval a construction traffic control plan and implementation program which addresses the following issues:

- Timing of heavy equipment and building materials deliveries;
- Redirecting construction traffic with a flag person;
- Signing, lighting, and traffic control device placement if required;
- Need for construction work hours and arrival/departure times outside of peak traffic periods;
- Ensure access for emergency vehicles to the project site;
- Temporary travel lane closure;
- Access to adjacent residential and commercial property during the construction of all pipelines;
- Specify construction related haul routes; and
- Identify safety procedures for exiting and entering the site access gate.

Verification: At least 30 days prior to site mobilization, the project owner shall provide to the CPM a copy of the referenced documents.

AIRCRAFT HAZARD MARKINGS

TRANS-6 The HRSG stacks shall have all the lighting and marking required by the Federal Aviation Authority (FAA) so that the stacks do not create a hazard to air navigation. The project owner shall submit to the FAA Form 7460-1, Notice of Proposed Construction or Alteration and supporting documents on how the project plans to comply with stack lighting and marking requirements imposed by the FAA.

Verification: At least 30 days prior to the start of construction, the project owner shall provide copies of the FAA Form 7460-1 with copies of the FAA response to Form 7460-1, to the CPM and the City of El Segundo Planning Department.

ROADWAY REPAIRS

TRANS-7 Following completion of project construction, the project owner shall repair any damage to the segment of Vista Del Mar and other roadways affected by construction activity along with the primary roadways identified in the traffic control plan for construction traffic to the road's pre-project construction condition.

Prior to the start of construction, the project owner shall photograph, videotape or digitally record images of Vista Del Mar and the roadways that will be affected by pipeline construction and heavy construction traffic. The project owner shall provide the Compliance Project Manager (CPM), and the Cities of El Segundo, Manhattan Beach and Los Angeles with a copy of the images for the roadway segments under their jurisdiction. Also prior to start of construction, the project owner shall notify those 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.

Verification: Within 30 days after completion of the redevelopment project, the project owner shall meet with the CPM and the Cities of El Segundo, Manhattan Beach, and Los Angeles to determine and receive approval for the actions necessary and schedule to complete the repair of identified sections of public roadways to original or as near original condition as possible. Following completion of any regional road improvements, the project owner shall provide to the CPM a letter from the Cities of El Segundo, Manhattan Beach and Los Angeles if work occurred within their jurisdictional public right of way stating their satisfaction with the road improvements.

L. VISUAL RESOURCES

Staff witness David Flores has reviewed the petition for potential environmental effects and consistency with applicable LORS, and found that the proposed amendment would not result in a significant adverse visual impact. (RSA, pp 4.12-1 to 4.12-10.)

The existing and proposed trees and shrub plantings around the project site will reduce the chiller system structure's direct visual impact and contribution to cumulative visual impact to a less than significant level. The proposed ESPRP is expected to result in less than significant water vapor plumes for both frequency and size, and the requirement for architectural screening would no longer be required under **VIS-1** and **VIS-4**. Based on this additional information, staff recommends revisions to the Conditions of Certification **VIS-1** and **VIS-4**.

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Visual Resources aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

VIS-1 Facility Visual Enhancement Plan. Before starting construction, the project owner shall complete a comprehensive visual enhancement plan that includes landscaping, painting, lighting, and other measures that result in an overall enhancement of views of the facility from areas accessible to the public. The plan shall be made available for review and comment by the Executive Director of the Coastal Commission and for review and approval by the Energy Commission. The plan shall include:

Landscaping: Where used to screen the facility, vegetation shall be selected and maintained to provide year-round screening (e.g., evergreen species). Preference shall be given to native species and/or species requiring little or no irrigation (e.g., seacliff buckwheat), or at a minimum, non-invasive species. To

help native plant species succeed where efforts are made to establish them, non-native and aggressive ice plant should be removed to prevent it from out competing native dune vegetation due to its dense character and vigorous growth. Soils shall be tested, amended as needed or replaced to ensure plant survival.

Other structural screening: Where berms, fencing, or other structural elements are selected as the primary method to screen the facility, the structures shall harmonize with the facility's setting on a public beach. If berms are used, they shall be vegetated and maintained with evergreen, native, and/or species requiring little or no irrigation. If fencing is used, it shall include a non-glare finish and be painted in a neutral color.

The Facility Visual Enhancement Plan shall include photographs showing existing conditions and simulated post-construction conditions from Key Observation Points (KOPs) around the facility (these may be the same KOPs that were used to develop the Staff Assessment). The plan shall also include anticipated costs for completing and maintaining the various visual enhancement measures and a detailed schedule for completing construction of these components.

Seawall Design Plan: Before starting construction, the project owner shall complete a plan of the seawall design for review and comment by the Executive Director of the Coastal Commission, the City of Manhattan Beach, and the City of El Segundo, and review and approval by the CPM. This plan shall include:

Final design: The seawall along the west side of the facility shall be textured and finished in a neutral color harmonious with its location adjacent to a public bike path and beach. If painted, graffiti-resistant paint shall be used.

Landscaping: Where used to enhance the seawall design, vegetation chosen shall be selected or maintained to provide year-round screening (e.g., evergreen species). Preference shall be given to native species and/or species requiring little or no irrigation.

This seawall design plan shall include photographs showing the existing conditions and simulated post-construction conditions from observation points along the bike path adjacent to the seawall, from the beach, and from other points where the seawall is highly visible. The plan shall also include anticipated costs for completing and maintaining the seawall and a schedule for construction.

Verification: At least 120 days prior to ground disturbance, the project owner shall submit the required Facility Visual Enhancement Plan and Seawall Design Plan to the Executive Director of the Coastal Commission and the Cities of Manhattan Beach and El Segundo for comment, and to the CPM for review and approval. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, the project owner shall prepare and submit to the Coastal Commission staff, the Cities, and CPM a revised submittal.

VIS-2:Perimeter screening and on-site landscaping. The project owner shall prepare and implement an approved perimeter screening and on-site landscape plan.

Trees and landscaping along the eastern edge of the project site shall be designed to balance view corridors to the ocean with screening of the facility. The landscape plan shall be provided to the CPM for review and approval, and to the Executive Director of the California Coastal Commission, the City of El Segundo and the City of Manhattan Beach for review and comment. The CPM will consider timely comments from these parties, especially those regarding the balance struck in the landscape plan between view corridor preservation and screening of project components, in determining whether to approve the plan.

The project owner shall establish a Landscape Committee to develop the final landscape plan that will be submitted to the CPM for review and approval, and other parties for review and comment. The Landscape Committee will be comprised of two voting members from the City of El Segundo, two voting members from the City of Manhattan Beach, and two members (one vote) representing the project owner. Energy Commission and Coastal Commission staff will participate on the Committee in an advisory role. The project owner shall submit to the CPM for review and approval a detailed schedule for the Landscape Committee meetings that will ensure that the final landscape plan is provided to the CPM in accordance with the timeline established in the condition.

The screening shall, at a minimum, utilize landscape opportunities on all four boundaries of the project site. Landscape screening shall include: (a) continuous tree canopies on the eastern roadside perimeter to enhance visual unity of the Vista del Mar road corridor, compatibility of the ESPR project with its coastal setting, and at least partial long-term screening of upper portions of the HRSGs; (b) tree and shrub plantings along Vista del Mar to screen views of the structures, while preserving view corridors to the Bay; (c) plantings along 45th Street to provide long-term screening of the tank farm site; and (d) tree planting on the western site perimeter to screen upper portions of Units 3 and 4 from the bike path. Landscape screening shall also include planting on the path (west) side of all new concrete walls constructed along the existing bike path. The plan shall comply with City of El Segundo Zoning codes (Title 15, Chapter 2, Sec. 15-2-14) pertaining to on-site landscaping. The final landscape plan shall reflect the agreed upon removal of existing urea tanks on the west side of the project site.

Final plant selection shall be made in consultation with the Compliance Project Manager (CPM), Coastal Commission staff, and the Cities of Manhattan Beach and El Segundo. Suitable irrigation shall be installed to ensure survival and desired rate of growth. The landscape screening and irrigation system shall be monitored for a period of five years to ensure survival. During this period all dead plant material shall be replaced.

To achieve year-round screening, evergreen species shall be used. Spacing of trees shall be sufficiently dense to ensure substantial screening by the tree canopy at maturity.

Prior to the start of construction, the project owner shall submit a landscape plan to the representatives of California Exotic Pest Plant Council, The Executive Director of the California Coastal Commission and the Cities of Manhattan Beach and El Segundo for review and comment, and to the CPM for review and approval. The plan shall include, but not be limited to:

- 1) A detailed landscape, grading, and irrigation plan, at a reasonable scale, which includes a list of proposed tree, plant, and shrub species and installation sizes, and a discussion of both the suitability of the plants for the site conditions and mitigation objectives, and conformance with the specific provisions of the Coastal Commission decision, including its 1b and 2b specifying preference for native, non-invasive, and drought tolerant species. A list of potential plant species that would be both viable and non-invasive in this location shall be prepared by a qualified professional landscape architect familiar with local growing conditions, with the objective of providing the widest possible range of species from which to choose. The final planting plan shall include an all-inclusive list of plants to be used in order to ensure exclusion of potentially invasive species.
- 2) A demonstration of how the screening conditions shall be met, including:
 - a) evidence provided by a qualified landscape architect that the specified species are both viable and available;
 - b) graphic documentation on the plan and through digital photo simulations of Bay view corridors and power plant screening which would exist from Vista del Mar and the residential area east of Highland that has views of the project site_after project construction; and
 - c) a description of tall and short shrub planting zones along Vista del Mar, such that screening of the existing and proposed power plants is maximized, while the aforementioned Bay view corridors are retained.
- 3) Elevation views or visual simulations of the landscape screening at maturity, in order to show the extent of screening that the landscaping is expected to achieve from the west side of the project, from 45th Street and from Vista del Mar.
- 4) A detailed schedule for completion of the installation.
- 5) Maintenance procedures for the entire project site, including any needed irrigation and a plan for routine and regular debris removal as needed to preserve a neat and well-maintained appearance, for the life of the project.
- 6) A procedure for monitoring and replacement of all unsuccessful plantings for the life of the project.
- 7) A chart and key plan showing conformance with City of El Segundo landscape regulations.

- 8) Soil tests shall be performed on both on-site and imported soil where landscaping is to take place. Soil shall be amended on the basis of those tests if needed to ensure long-term viability of plantings.

The property owner shall meet the City of El Segundo's requirements for Vehicle Use Area (VUA) landscaping in the tank farm area by providing the required trees on the existing containment berm and other areas immediately adjacent to the portion of the tank farm area to be used for paved staging, not including the area to be striped for vehicle parking.

The Landscape Plan shall be consistent with the Landscape Concept Plan presented at Evidentiary Hearings, with modifications for VUA landscaping, revisions to depict the 45th Street landscape berm, and modifications to accord with item #2, above.

The project owner shall not implement the plan until the project owner receives written approval of the plan from the CPM.

Verification: At least 30 days prior to the first scheduled Landscape Committee meeting, the project owner shall submit the Committee schedule to the CPM for review and approval. At least 120 days prior to ground disturbance, the project owner shall submit the perimeter screening and onsite landscape plan to the Executive Director of the Coastal Commission and the Cities of Manhattan Beach and El Segundo for comment, and the CPM for review and approval. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, the project owner shall prepare and submit to the Coastal Commission staff, the Cities, and the CPM a revised submittal.

The project owner shall implement the landscape plan prior to start of commercial operation. The project owner shall notify the CPM within seven days after completing installation of the landscape plan that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous year of operation in the Annual Compliance Report.

VIS-3: Design treatment of seawall. The project owner shall construct the proposed seawall with architectural design treatment to reduce visual monotony, enhance design quality and interest, and discourage graffiti. Techniques may include pre-cast or cast-in-place texturing, split-faced concrete block, or other methods feasible to produce a textured surface.

Prior to the start of construction, the project owner shall submit a design plan for the seawall, consistent with the Landscape Concept Plan, to the Executive Director of the Coastal Commission and City of El Segundo for review and comment, and to the CPM for review and approval. The treatment plan shall include:

- 1) Specification, and 11" x 17" color elevations, of the treatment proposed for use on the seawall;

- 2) A detailed schedule for completion of construction; and
- 3) A procedure to ensure proper maintenance, including graffiti removal, for the life of the project.

Seawall construction shall not commence until the design plan has been approved by the CPM.

Verification: At least 120 days prior to start of construction, the project owner shall submit the seawall design plan to the Executive Director of the Coastal Commission and City of El Segundo for review and comment and to the CPM for review and approval.

If the CPM notifies the project owner of any revisions that are needed before the CPM will approve the plan, the project owner shall submit a revised plan to the CPM.

Not less than 30 days prior to start of commercial operation, the project owner shall notify the CPM that the seawall is ready for inspection.

The project owner shall provide a status report regarding wall maintenance in the Annual Compliance Report.

VIS-4 Deleted.

VIS-5: Structure surface painting and treatment. Prior to the start of commercial operation, the project owner shall paint or treat project structures visible to the public, such that their colors minimize visual intrusion and contrast by blending with the landscape; their surfaces do not create glare; and they are consistent with local laws, ordinances, regulations, and standards.

The project owner shall consult with representatives of the Cities of El Segundo and Manhattan Beach to determine if specific treatment or painting options that may improve the aesthetic appearance of the project are desired, and provide a report to the CPM.

Prior to the start of construction, the project owner shall submit to the Executive Director of the Coastal Commission and the Cities of El Segundo and Manhattan Beach for review and comment, and to the CPM for review and approval, a specific treatment plan whose proper implementation will satisfy these requirements. The treatment plan shall include:

- a) Specification, and 11" x 17" color simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture;
- b) A list of each major project structure, building, tank, transmission line tower and/or pole, and fencing/walls specifying the color(s) and finish proposed for each (colors must be identified by name and by vendor brand or a universal designation);
- c) Two sets of brochures and/or color chips for each proposed color;
- d) Samples of each proposed treatment and color on each material to which they would be applied that would be visible to the public;

- e) A detailed schedule for completion of the treatment; and
- f) A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated on-site, until the project owner receives notification of approval of the treatment plan by the CPM.

Verification: The project owner shall submit its proposed treatment plan at least 90 (ninety) days prior to ordering the first structures that are color treated during manufacture.

If revisions are required, the project owner shall provide the CPM with a revised plan within 30 (thirty) days of receiving notification that revisions are needed.

Prior to commercial operation, the project owner shall notify the CPM that all buildings and structures are ready for inspection.

The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

VIS-6: Project lighting. Prior to the start of commercial operation, the project owner shall design and install new permanent lighting for Units 5, 6 and 7, such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project, the vicinity, and the nighttime sky is minimized. To meet these requirements the project owner shall ensure that:

- a) Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;
- b) All lighting shall be of minimum necessary brightness consistent with worker safety;
- c) Wherever feasible and safe, lighting shall be kept off when not in use; and
- d) A lighting complaint resolution form shall be used by plant operations to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file.

Verification: At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and comment written documentation describing the lighting control measures and fixtures, hoods, shields proposed for use, and incorporate the CPM's comments in lighting equipment orders.

Prior to the first turbine roll, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If the CPM notifies the project owner that modifications to the lighting are needed to minimize impacts, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed.

The project owner shall report any lighting complaints and documentation of resolution in the Annual Compliance Report, accompanied by any lighting complaint resolution forms for that year.

VIS-7: Site lighting. Prior to demolition of existing storage tanks, the project owner shall modify Unit 3 and 4 permanent lighting, such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project, the vicinity, and the nighttime sky is minimized. To meet these requirements the project owner shall ensure that:

- a) Lighting shall be designed so exterior light fixtures are hooded, with lights directed downward or toward the area to be illuminated and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light source is shielded to prevent light trespass outside the project boundary;
- b) All lighting shall be of minimum necessary brightness consistent with worker safety;
- c) The project owner shall implement where feasible and practical modifications of circuits in order to allow turning off specific lights when not in use; and
- d) A lighting complaint resolution form shall be used by plant operations to record all lighting complaints received and document the resolution of those complaints. All records of lighting complaints shall be kept in the on-site compliance file.

Verification: At least 60 days prior to ordering of any new permanent exterior lighting for Units 3 and 4, the project owner shall submit to the CPM for review and comment written documentation describing the lighting control measures and fixtures, hoods, shields proposed for use, and incorporate the CPM's comments in lighting equipment orders.

Prior to demolition of the tanks, the project owner shall notify the CPM that the lighting modifications to Unit 3 and 4 have been completed and are ready for inspection. If the CPM notifies the project owner that modifications to the lighting are needed to minimize impacts, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed.

The project owner shall report any complaints about permanent lighting and provide documentation of resolution in the Annual Compliance Report, accompanied by any lighting complaint resolution forms for that year.

VIS-8: Construction Lighting. Prior to site mobilization, 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.
- b) All fixed position lighting shall be shielded, hooded, and directed downward to minimize backscatter to the night sky and prevent light trespass (direct lighting extending outside the boundaries of the construction area).
- c) Wherever feasible and safe, lighting shall be kept off when not in use and motion detectors shall be employed.
- d) A lighting complaint resolution form shall be maintained by plant construction management, to record all lighting complaints received and to document the resolution of that complaint.
- e) All construction-related lighting shall be completely shielded or screened so as not to be visible to residents of 45th Street in Manhattan Beach. Construction lighting in the tank farm area shall be limited to the hours of 7:30 a.m. to 6:00 p.m. Monday through Friday and 9:00 a.m. to 6:00 p.m. Saturday, except as necessary for safety or security purposes.

Verification: Within seven days after the first use of construction lighting, the project owner shall notify the City of Manhattan Beach and the CPM that the lighting is ready for inspection.

If the CPM notifies the project owner that modifications to the lighting are needed to minimize impacts, within 15 days of receiving that notification the project owner shall implement the necessary modifications and notify the CPM that the modifications have been completed.

The project owner shall report any lighting complaints and documentation of resolution in the Monthly Compliance Report, accompanied by any lighting complaint resolution forms for that month.

VIS-9: Temporary landscaping and 45th Street Berm. Temporary landscaping shall be installed prior to the start of ground disturbing activities at the site in those opportunity areas that do not create a hindrance to construction activities. Soils shall be tested, amended as needed or replaced to ensure plant survival. Temporary landscaping shall be maintained for the duration of construction, and shall be designed to the extent feasible to be retained permanently as part of the perimeter landscaping plan required in Condition of Certification **VIS-2**. Installation of the 45th Street berm shall be initiated concurrent with construction of the new tank farm access road.

Prior to start of ground disturbance, the project owner shall submit a temporary perimeter landscape plan and final berm plan to the Cities of Manhattan Beach and El Segundo and the Executive Director of the Coastal Commission for review and comment, and to the CPM for review and approval. The plans shall include, but not be limited to:

- a) A detailed landscape, grading and irrigation plan, at a reasonable scale, which includes an all-inclusive list of proposed tree, plant, and shrub species and installation sizes, and a discussion of the suitability of the plants for the site conditions and mitigation objectives. A list of potential plant species that would be viable and non-invasive in this location shall be prepared by a qualified professional landscape architect familiar with local growing conditions, with the objective of providing the widest possible range of species from which to choose. The plan shall demonstrate how the screening shall be met, including:
- b) Elevation views or visual simulations of the landscape screening at one year's growth in order to show the extent of screening that the landscaping is expected to achieve from the west side of the project, 45th Street and from Vista del Mar.
- c) A detailed schedule for completion of the installation.
- d) Maintenance procedures for the entire project site, including any needed irrigation and a plan for routine and regular debris removal as needed to preserve a neat and well-maintained appearance, for the life of the project; and
- e) A procedure for monitoring and replacement of unsuccessful plantings.

The project owner shall not implement the plan until the project owner receives written approval from the CPM.

Verification: At least 60 days prior to start of ground disturbance, the project owner shall submit the temporary perimeter landscape plan and final berm plan to representatives of California Exotic Pest Plant Council, the Executive Director of the Coastal Commission and Cities of Manhattan Beach and El Segundo for comment, and to the CPM for review and approval. If the CPM notifies the project owner that revisions of the submittal are needed before the CPM will approve the submittal, the project owner shall prepare and submit to the CPM a revised plan.

The project owner shall notify the CPM within seven days after completing installation of the 45th Street berm that the berm is ready for inspection. The project owner shall notify the CPM within seven days after completing installation of the temporary landscape screening that the planting and irrigation system are ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead vegetation, for the previous month of construction in the Monthly Compliance Report.

M. WASTE MANAGEMENT

The testimony of Staff witness Mark Hamblin indicates that the amended project will comply with applicable Waste Management LORS and will not cause significant environmental effects. As a result, no new or modified conditions of certification would be needed. (RSA, pp 4.13-1 to 4.13-2.)

FINDINGS AND CONCLUSIONS

Based on the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Waste Management aspects of the amended project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

WASTE GENERATOR IDENTIFICATION NUMBER

WASTE-1: The project owner and, if necessary, its construction contractor, shall each obtain a hazardous waste generator identification number from the Department of Toxic Substances Control prior to generating any hazardous waste.

Verification: The project owner shall notify the CPM via the monthly compliance report of its receipt and keep a copy of the identification number on file at the project site.

WASTE MANAGEMENT ENFORCEMENT ACTION

WASTE-2: Upon becoming aware 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 to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

Verification: The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.

WASTE MANAGEMENT PLAN

WASTE-3: Prior to the start of both site mobilization and project operation, the project owner shall prepare and submit to the CPM for review and approval, and to local agencies, if applicable, for review and comment, a waste management plan for all wastes generated during construction and operation of the facility, respectively. The plans shall contain, at a minimum, the following:

- A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and
- Methods of managing each waste, including storage, treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.

Verification: No less than 30 days prior to the start of site mobilization, the project owner shall submit the demolition and construction waste management plan to and to local agencies, if applicable, for review and comment, and the CPM. The operation waste management plan shall be submitted no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions within 20 days of notification by the CPM (or mutually agreed upon date). In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to planned management methods.

REGISTERED PROFESSIONAL ENGINEER/GEOLOGIST

WASTE-4: The project owner shall have a Registered Professional Engineer or Geologist, with experience in remedial investigation and feasibility studies, available for consultation during soil excavation and grading activities. The Registered Professional Engineer or Geologist shall be given full authority to oversee any earth moving activities that have the potential to disturb contaminated soil.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit the qualifications and experience of the Registered Professional Engineer or Geologist to the CPM for approval.

CONTAMINATED SOIL EXCAVATION

WASTE-5: If potentially contaminated soil is unearthed during excavation at either the proposed site or linear facilities as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the Registered Professional Engineer or Geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and file a written report to the project owner and CPM stating the recommended course of action. Depending on the nature and extent of contamination, the Registered Professional Engineer or Geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the Registered Professional Engineer or Geologist, significant remediation may be required, the project owner shall contact representatives of the Los Angeles Regional Water Quality Control Board, the Glendale Regional Office of the

California Department of Toxic Substances Control the CPM, and other local agencies, if applicable, for guidance and possible oversight.

Verification: The project owner shall submit any reports filed by the Registered Professional Engineer or Geologist to the CPM and the City of El Segundo Fire Department within 5 days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

REMEDIAL INVESTIGATION WORKPLAN

WASTE-6: Before demolition of either the fuel oil tanks or the existing generator buildings and any other building, respectively, the project owner shall prepare a Remedial Investigation Workplan (RI Workplan). This plan shall include a detailed site characterization plan with soil and groundwater sampling and analysis to determine the extent and nature of contamination existing beneath these structures. The RI Workplan shall be provided to the Glendale Regional Office of the California Department of Toxic Substances Control, the Los Angeles Regional Water Quality Control, and the City of El Segundo Fire Department, and other local agencies, if applicable, for review and comment, and to the CEC CPM for review and approval. If contaminated soil or groundwater is found to exist, the project owner shall contact representatives of the above-named agencies for further guidance and possible oversight. In no event shall the project owner proceed with site preparation or construction activities at any location on the site where hazardous waste contamination is found to be present until that location is either remediated or shown to pose an insignificant risk to humans and the environment as demonstrated to the satisfaction of the LARWQCB, DTSC, and the CPM.

Verification: At least sixty (60) days prior to commencement of fuel tank demolition or structure demolition, respectively, the project owner shall provide the RI Workplan to the Glendale Regional Office of the California Department of Toxic Substances Control, the Los Angeles Regional Water Quality Control Board, the City of El Segundo Fire Department, other agencies, if applicable, and the CEC CPM. Within thirty (30) days of completion of the sampling and analysis and prior to the initiation of any construction activities, the project owner shall provide the results of the sampling and analysis to the Glendale Regional Office of the California Department of Toxic Substances Control, the Los Angeles Regional Water Quality Control Board, the City of El Segundo Fire Department, other agencies, if applicable, and the CPM for review and guidance on possible remediation.

RUNOFF CONTAINMENT

WASTE-7 Before demolition of the fuel oil tanks, the existing generator buildings and any other building, the project owner shall ensure that the appropriate portion of the site is surrounded by a berm or other solid structures capable of containing any runoff from that portion of the site and preventing this runoff from leaving the site. In no event shall the project owner proceed with site preparation or construction activities at any location on the site where hazardous waste contamination is found to be present until that location has such containment in place to the satisfaction of the CPM.

Verification: At least thirty (30) days prior to commencement of site preparation activities, the project owner shall provide written plans on containment to the CPM for review and approval.

HAZARDOUS WASTE SURVEY

WASTE-8 Prior to modification or demolition of existing structures, the project owner shall complete and submit a survey of all Asbestos-Containing Materials (ACM) and Regulated Building Materials (RBM) that contain lead-based paint to the El Segundo Fire Department for review and comment and to the CPM for approval. After receiving approval, the project owner shall remove all ACM and RBM from the site prior to demolition.

Verification: No less than sixty (60) days prior to commencement of structure demolition, the project owner shall provide the survey to the El Segundo Fire Department for review and comment, and to the CPM for review and approval. The project owner shall inform the CPM, via the monthly compliance report, of the data when all ACM and RBM were removed from the site.

N. WORKER SAFETY AND FIRE PROTECTION

Staff witnesses Dr. Alvin Greenberg, Ph.D. & Rick Tyler have reviewed the petition for new potential issues related to worker safety/fire protection. Staff believes that more advanced worker safety methods that have evolved since the date of original licensing of this project warrant implementation of additional necessary mitigation. Based on this review, staff determined that the project, including the proposed amendment, would be able to comply with all applicable LORS if the newly proposed conditions are implemented (RSA 4.14-1 to 4.14-5).

Based on this additional information, and to ensure a safe workplace exists during the construction phase, staff recommends the addition of **WORKER SAFETY-4, WORKER SAFETY-5, and WORKER SAFETY-6.**

FINDINGS AND CONCLUSIONS

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Condition of Certification below will ensure that the amended project is designed, constructed and operated both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable LORS.
3. The Worker Safety and Fire Protection aspects of the proposed project do not create significant direct or cumulative environmental effects.

CONDITIONS OF CERTIFICATION

WORKER SAFETY-1: The project owner shall submit to the Compliance Project Manager (CPM) for approval, a copy of the Project Demolition and Construction Safety and Health Program containing the following:

- A Demolition and Construction Safety Program;
- A Demolition and Construction Personal Protective Equipment Program;
- A Demolition and Construction Exposure Monitoring Program;
- A Demolition and Construction Emergency Action Plan; and
- A Demolition and Construction Fire Protection and Prevention Plan.

The Safety Program, the Personal Protective Equipment Program, and the Exposure Monitoring Program shall be submitted to the CPM for review and comment concerning compliance of the program with all applicable Safety Orders. The Demolition and Construction Fire Protection and Prevention Plan and Emergency Action Plan shall be submitted to the City of El Segundo Fire Department for review and comment prior to submittal to the CPM.

The Demolition and Construction Fire Protection and Prevention Plan and Emergency Action Plan shall include the following:

1. Methods to maintain fire access roadways and submittal of a fire access layout plan for review by the El Segundo Fire Department and approval by the CPM.
2. Provision of a suitable replacement for the existing fire suppression water reservoir prior to demolishing the existing reservoir.
3. Provision of fire flow calculations to verify that the available water supply proposed will be adequate for emergency operations.
4. A requirement that all temporary fire mains and hydrants shall be adequately braced and tied-down to anticipate the effects of water hammer and that protection from vehicular impact is provided as necessary.

Verification: At least 30 days prior to site mobilization, the project owner shall submit to the CPM for review and approval a copy of the Project Demolition and Construction Safety and Health Program. The project owner shall provide a letter from the City of El Segundo Fire Department stating that they have reviewed and commented on the Demolition and Construction Fire Protection and Prevention Plan and Emergency Action Plan.

WORKER SAFETY-2: The project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program containing the following:

- An Operation Injury and Illness Prevention Plan;
- An Emergency Action Plan;
- Hazardous Materials Management Program;
- Operations and Maintenance Safety Program;
- Fire Protection and 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 Cal/OSHA Consultation Service, for review and comment concerning compliance of the program with all applicable Safety Orders. The Operation Fire Protection Plan and the Emergency Action Plan shall also be submitted to the City of El Segundo Fire Department for review and comment.

The Project Operations Fire Protection and Prevention Plan and Emergency Action Plan shall address:

1. Provision of remote annunciation for all fire alarm and automatic suppression devices and the placement of remote annunciation at the security station on Vista Del Mar.
2. Provision of a complete fire alarm system and automatic fire sprinklers for the new administration building and any new control buildings.
3. A secondary entrance point for Fire Department operations along the northern boundary of the property.

Verification: At least 30 days prior to the start of operation, the project owner shall submit to the CPM and the City of El Segundo Fire Department a copy of the Project Operations and Maintenance Safety & Health Program.

WORKER SAFETY-3: Before using one of the fuel oil storage tanks as a clean soils storage area, the project owner shall ensure that the integrity of the floor has not been compromised by cracks or holes, the tanks have been thoroughly cleaned, no airborne hydrocarbons are present above the method detection level of a hand-held PID hydrocarbon vapor detector, and that the earth-moving vehicles used are equipped with environmental cabs.

Verification: At least 30 days prior to the start of using the tanks as a storage area, the project owner shall submit to the CPM a report verifying the integrity of the floor, describing the results of the PID monitoring, and a statement that all earth-moving vehicles used are equipped with properly functioning environmental cabs.

WORKER SAFETY-4 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 & federal regulations related to power plant projects;
- Assure that all construction and commissioning workers and supervisors receive adequate safety training;
- Complete accident and safety-related incident investigations, emergency response reports for injuries, and inform the CPM of safety-related incidents; and
- Assure that all the plans identified in Worker Safety-1 and-2 are implemented.

Verification: At least thirty (30) days prior to the start of project 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-5 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-4, 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: 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-6 The project owner shall ensure that a portable automatic cardiac defibrillator (also know as an automatic external defibrillator or 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 thirty (30) days prior to the start of construction mobilization, the project owner shall submit to the CPM proof that a portable automatic cardiac defibrillator exists on site and a copy of the training and maintenance program for review and approval.

IV. ENGINEERING & TRANSMISSION

A. POWER PLANT EFFICIENCY

The written testimony of Staff witness, Shahab Khoshmashrab, states that Power Plant Efficiency findings and conclusions incorporated in the original 2005 Commission Decision remain valid, and no LORS apply to project efficiency. (RSA, p. 5.3-1.)

FINDINGS AND CONCLUSIONS

Based on the evidence, the Energy Commission makes the following finding:

1. The Efficiency aspects of the amended project do not create significant direct or cumulative environmental effects.

We therefore conclude that the ESPRP will not cause any significant effects on energy supplies or energy resources. No Conditions of Certification were adopted in the 2005 Decision and none are adopted in this Decision concerning the topic of Power Plant Efficiency.

B. FACILITY DESIGN

The written testimony of Staff witness, Shahab Khoshmashrab, states that the proposed project changes will not change the analysis in the 2005 Decision. However, Commission Staff has updated the conditions of compliance associated with Facility Design to assure that the new features of the project are designed, constructed and inspected in accordance with the applicable engineering LORS. Since the original Conditions of Certification were adopted, for example, the California Building Code (CBC) has been revised; references to the CBC in the Conditions should now be to the 2007 version. Those revisions have been made to the Conditions of Certification, below. (RSA, pp. 5.1.1 – 5.1.5.)

Staff recommends various revisions to the Conditions of Certification to conform to the changes in the project's physical layout, and to more closely reflect the project's future water use and storm water drainage. Conditions **GEN-1** and **GEN-2; TABLE-1** are revised. With the revised Conditions, the amended project would not cause any significant effects on Facility Design.

FINDINGS AND CONCLUSIONS

Based upon the evidence, we find as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The revised Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable engineering LORS.
3. The Facility Design aspects of the amended project do not create significant direct or cumulative environmental effects.

We therefore conclude that with the implementation of the Conditions of Certification listed below, the ESPRP is likely to be designed and constructed in conformity with applicable laws pertinent to its civil, structural, mechanical, and electrical engineering aspects.

CONDITIONS OF CERTIFICATION

GEN-1: The project owner shall design, construct and inspect the project in accordance with the 2007 edition of the California Building Standards Code (CBSC) (also known as Title 24, California Code of Regulations), which encompasses the California Building Code (CBC), California Building Standards Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable LORS in effect at the time initial design plans are submitted to the CBO for review and approval. (The CBSC in effect is that edition that has been adopted by the California Building Standards Commission and published at least 180 days previously.) All transmission facilities (lines, switchyards, switching stations, and substations) are covered by the Transmission System Engineering Conditions of Certification.

In the event that the initial engineering designs are submitted to the CBO when a successor to the 2001 CBSC is in effect, the 2001 CBSC provisions identified herein 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.

Verification: Within 30 days after receipt of the Certificate of Occupancy, the project owner shall submit to the California Energy Commission 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 [2007 CBC, Section 109 – Certificate of Occupancy].

GEN-2: Prior to submittal of the initial engineering designs for CBO review, the project owner shall furnish to the CPM and to the CBO a schedule of facility design submittals, a Master Drawing List, and a Master Specifications List. 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 when requested.

Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the Master Drawing List, and the Master Specifications List 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 **Table-1** 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.

Table-1: Major Structures and Equipment List	
Equipment	Quantity
Gas Turbine Enclosure	2
Gas Turbine Inlet Filter	2
Electrical Package	2
Lube Oil Cooler	2
Rotor Air Cooler (Fin-Fan)	2
Heat Recovery Steam Generator	2
HRSG Stack	2
Boiler Blow Down	2
Boiler Feedwater Pumps	2
Sampling Panel	2
Continuous Emissions Monitoring	2
SCR Skid	2
MV Switchgear	2
Generator Circuit Breaker	2
Auxiliary Transformer	2
Generator Transformer - Gas Turbine	2
Generator Transformer - Steam Turbine	2
Oil/Water Separator	2
Steam Turbine PCC	2
Gland Steam Condensers	2
Steam Turbine	2
ST Lube Oil Cooler	2
Steam Turbine Fin Fan Cooler	2
Condensate Polishing Fin Fan Cooler	2
Air Compressor Area	2
Balance of Plant PCC	2
Chemical Dosing Equipment	2
Deaerator / Drain Tanks / Condensate Pumps	2
Fuel Gas Conditioning/metering	1
Fuel Gas Compressors	2
Raw Water Water Tank	1
Demineralized Water Tank	1
Raw Water Forwarding Pumps	2
Electric Fire Water Pumps	1
Demineralized Water Forwarding Pumps	2
Fire Water Tank	1

GEN-3: The project owner shall make payments to the CBO for design review, plan check and construction inspection based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. These fees may be consistent with the fees listed in the 2001 CBC [Chapter 1, Section 107 and

Table 1-A, Building Permit Fees; Appendix Chapter 33, Section 3310 and Table A-33-A, Grading Plan Review Fees; and Table A-33-B, Grading Permit Fees], adjusted for inflation and other appropriate adjustments; may be based on the value of the facilities reviewed; may be based on hourly rates; or may be as otherwise agreed by the project owner and the CBO.

Verification: The project owner shall make the required payments to the CBO in accordance with the agreement between the project owner and the CBO. The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next Monthly Compliance Report indicating that the 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 a resident engineer (RE), to be in general responsible charge of the project [Building Standards Administrative Code (Cal. Code Regs., tit. 24, § 4-209, Designation of Responsibilities).] All transmission facilities (lines, switchyards, switching stations, and substations) are covered by the **Transmission System Engineering** Conditions of Certification.

The RE may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project respectively. A project may be divided into parts, provided each part is clearly defined as a distinct unit. Separate assignment of general responsible charge may be made for each designated part.

The RE shall:

1. Monitor construction progress of work requiring CBO design review and inspection to ensure compliance with LORS;
2. Ensure that construction of all the facilities subject to CBO design review and inspection conforms in every material respect to the applicable LORS, these Conditions of Certification, approved plans, and specifications;
3. Prepare documents to initiate changes in the approved drawings and specifications when directed by the project owner or as required by conditions on the project;
4. Be responsible for providing the project inspectors and testing agency(ies) with complete and up-to-date set(s) 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 as not conforming to the approved plans and specifications.

The RE shall have the authority to halt construction and to require changes or remedial work, if the work does not conform to applicable requirements.

If the RE or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the name, qualifications and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.

If the RE or the delegated engineer(s) are 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.

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) a civil engineer; B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer, who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; D) a mechanical engineer; and E) an electrical engineer. [California Business and Professions Code section 6704 et seq., and sections 6730 and 6736 requires state registration to practice as a civil engineer or structural engineer in California.] All transmission facilities (lines, switchyards, switching stations, and substations) are covered by the **Transmission System Engineering** Conditions of Certification.

The tasks performed by the civil, mechanical, electrical or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer.

The 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 [1998 CBC, Section 104.2, Powers and Duties 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. Design, or be responsible for design, stamp, and sign all plans, calculations, and specifications for proposed site work, civil works, and related facilities requiring design review and inspection by the CBO. At a minimum, these include: grading, site preparation, excavation, compaction, construction of secondary containment, foundations, erosion and sedimentation control structures, drainage facilities, underground utilities, culverts, site access roads, and sanitary sewer systems; and
2. Provide consultation to the RE during the construction phase of the project, and recommend changes in the design of the civil works facilities and changes in the construction procedures.

B: The geotechnical engineer or civil engineer, experienced and knowledgeable in the practice of soils engineering, shall:

1. Review all the engineering geology reports, and prepare final soils grading report;
2. Prepare the soils engineering reports required by the 1998 CBC, Appendix Chapter 33, Section 3309.5 – Soils Engineering Report, and Section 3309.6 – Engineering Geology Report;
3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 1998 CBC, Appendix Chapter 33, section 3317, Grading Inspections;
4. Recommend field changes to the civil engineer and RE;
5. Review the geotechnical report, field exploration report, laboratory tests, and engineering analyses detailing the nature and extent of the site soils that may be susceptible to liquefaction, rapid settlement or collapse when saturated under load; and
6. Prepare reports on foundation investigation to comply with the 1998 CBC, Chapter 18 section 1804, Foundation Investigations.

This engineer shall be authorized to halt earthwork and to require changes; if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations [1998 CBC, section 104.2.4, Stop orders].

C: The design engineer shall:

1. Be directly responsible for the design of the proposed structures and equipment supports;
2. Provide consultation to the RE during design and construction of the project;
3. Monitor construction progress to ensure compliance with LORS;

4. Evaluate and recommend necessary changes in design; and
5. Prepare and sign all major building plans, specifications and calculations.

D: 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 with all of the mechanical engineering design requirements set forth in the Energy Commission's Decision.

E: 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 a lesser number of days mutually agreed to by the project owner and the CBO) 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.

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 1998 CBC, Chapter 17, Section 1701, Special Inspections, Section, 1701.5 Type of Work (requiring special inspection), and Section 106.3.5, Inspection and observation program. All transmission facilities (lines, switchyards, switching stations, and substations) are covered by the **Transmission System Engineering** Conditions of Certification.

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 RE. All discrepancies shall be brought to the immediate attention of the RE for correction, then, if uncorrected, to the CBO and the CPM for corrective action; and

4. Submit a final signed report to the RE, CBO, and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable provisions of the applicable edition of the CBC.

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).

Verification: At least 15 days 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: The project owner shall keep the CBO informed regarding the status of engineering and construction. If any discrepancy in design and/or construction is discovered in any work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend the corrective action required. 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, the 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. When the work and the "as-built" and "as graded" plans conform to the approved final plans, the project owner shall notify the CPM regarding the CBO's final approval. The marked up "as-built" drawings for the construction of structural and architectural work shall be submitted to the CBO. Changes approved by the CBO shall be identified on the "as-built" drawings [1998 CBC, Section 108, Inspections]. The project owner shall retain one set of approved engineering plans, specifications and calculations at the project site or at

another accessible location during the operating life of the project [1998 CBC, Section 106.4.2, Retention of plans].

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 final approved engineering plans, specifications and calculations as described above, the project owner shall submit to the CPM a letter stating that the above documents have been stored and indicate the storage location of such documents.

GEN-9: Deleted. See General Conditions of Compliance.

CIVIL-1: Prior to the start of site grading, 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 report as required by the 1998 CBC [Appendix Chapter 33, Section 3309.5, Soils Engineering Report and Section 3309.6, Engineering Geology Report].

Verification: At least 15 days prior to the start of site grading (or a lesser number of days mutually agreed to by the project owner and the CBO), 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 earthworks and construction in the affected areas when the responsible geotechnical engineer or 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 [1998 CBC, Section 104.2.4, Stop orders].

Verification: The project owner shall notify the CPM, within five days, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within five days 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 1998 CBC, Chapter 1, Section 108, Inspections; Chapter 17, Section 1701.6, Continuous and Periodic Special Inspection; and Appendix Chapter 33, Section

3317, Grading Inspection. All plant site-grading operations for which a grading permit is required shall be subject to inspection by the CBO.

If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO, and the CPM. The project owner shall prepare a written report detailing all discrepancies and non-compliance items, and the proposed corrective action, and send copies to the CBO and the CPM.

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. 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 facilities, the project owner shall obtain the CBO's approval of the final "as-graded" grading plans, and final "as-built" plans for the erosion and sedimentation control facilities [1998 CBC, Section 109, Certificate of Occupancy].

Verification: Within 30 days of the completion of the erosion and sediment control mitigation and drainage facilities, the project owner shall submit to the CBO 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. The project owner shall submit a copy of this report 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 **Table 1** of Condition of Certification **GEN-2**, above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **Table 1**, above):

1. Major project structures;
2. Major foundations, equipment supports and anchorage;
3. Large field fabricated tanks;
4. Turbine/generator pedestal; and
5. Switchyard structures.

Construction of any structure or component shall not commence 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 (i.e., 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 [1998 CBC, Section 108.4, Approval Required];
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 at least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation [1998 CBC, Section 106.4.2, Retention of plans and Section 106.3.2, Submittal documents]; and
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 [1998 CBC, Section 106.3.4, Architect or Engineer of Record].

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of any increment of construction of any structure or component listed in Table 1 of Condition of Certification **GEN-2**, above, the project owner shall submit to the CBO, with a copy to the CPM, the responsible design engineer's signed statement that the final design plans, specifications and calculations conform with all of the requirements set forth in the Energy Commission's Decision.

If the CBO discovers non-conformance with the stated requirements, the project owner shall correct and resubmit the plans to the CBO within 20 days of receipt of the nonconforming submittal with a copy of the transmittal letter to the CPM.

The project owner shall submit to the CPM a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and are in conformance with the requirements set forth in the applicable LORS.

STRUC-2: The project owner shall submit to the CBO the required number of sets of the following documents related to work that has undergone CBO design review and approval:

1. Concrete cylinder strength test reports (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, and mix design designation and parameters);

2. Concrete pour sign-off sheets;
3. Bolt torque inspection reports (including location of test, date, bolt size, and recorded torques);
4. Field weld inspection reports (including type of weld, location of weld, inspection of non-destructive testing (NDT) procedure and results, welder qualifications, certifications, qualified procedure description or number (ref: AWS); and
5. Reports covering other structural activities requiring special inspections shall be in accordance with the 1998 CBC, Chapter 17, Section 1701, Special Inspections, Section 1701.5, Type of Work (requiring special inspection), Section 1702, Structural Observation and Section 1703, Nondestructive Testing.

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 to the CBO, with a copy of the transmittal letter to the CPM. The NCR shall reference the Condition(s) of Certification and the applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM.

The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action to obtain the CBO's approval.

STRUC-3: The project owner shall submit to the CBO design changes to the final plans required by the 1998 CBC, Chapter 1, Section 106.3.2, Submittal documents, and Section 106.3.3, Information on plans and specifications, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give the CBO prior notice of the intended filing.

Verification: On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes, and shall submit the required number of sets of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the Monthly Compliance Report, when the CBO has approved the revised plans.

STRUC-4: Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in Chapter 3, Table 3-E of the 1998 CBC shall, at a minimum, be designed to comply with Occupancy Category 2 of the 1998 CBC.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) 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: Prior to the start of any increment of major piping or plumbing construction, 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 Table 1, Condition of Certification GEN 2, above. Physical layout drawings and drawings not related to code compliance and life safety need not be submitted. The submittal shall also include the applicable QA/QC procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of said construction [1998 CBC, Section 106.3.2, Submittal Documents, Section 108.3, Inspection Requests, Section 108.4, Approval Required; 1998 California Plumbing Code, Section 103.5.4, Inspection Request, Section 301.1.1, Approval].

The responsible mechanical engineer shall stamp and sign all plans, drawings and calculations for the major piping and plumbing systems subject to the CBO design review and approval, and submit a signed statement to the CBO when the said proposed piping and plumbing systems have been designed, fabricated and installed in accordance with all of the applicable laws, ordinances, regulations and industry standards [Section 106.3.4, Architect or Engineer of Record], which may include, but not be limited to:

- American National Standards Institute (ANSI) B31.1 (Power Piping Code);
- ANSI B31.2 (Fuel Gas Piping Code);
- ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code);
- ANSI B31.8 (Gas Transmission and Distribution Piping Code);
- Title 24, California Code of Regulations, Part 5 (California Plumbing Code);
- Title 24, California Code of Regulations, Part 6 (California Energy Code, for building energy conservation systems and temperature control and ventilation systems);
- Title 24, California Code of Regulations, Part 2 (California Building Code); and
- Specific City/County code.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency [1998 CBC, Section 104.2.2, Deputies].

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of any increment of major piping or plumbing construction listed in Table 1, 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 the 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 the 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 said installation [1998 CBC, Section 108.3 – Inspection Requests].

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 a lesser number of days mutually agreed to by the project owner and the CBO) 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: Prior to the start of construction of any heating, ventilating, air conditioning (HVAC) or refrigeration system, the project owner shall submit to the CBO for design review and approval the design plans, specifications, calculations and quality control procedures for that 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 said 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 [1998 CBC, Section 108.7, Other Inspections; Section 106.3.4, Architect or Engineer of Record].

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) 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 electrical equipment and systems 480 volts and higher, listed below, with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, the project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations [CBC 1998, Section 106.3.2, Submittal documents]. 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 [1998 CBC, Section 108.4, Approval Required, and Section 108.3, Inspection Requests]. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in Conditions of Certification in the **Transmission System Engineering** section of this document.

A. Final plant design plans to include:

1. one-line diagrams for the 13.8 kV, 4.16 kV and 480 V systems; and
2. system grounding drawings.

B. Final plant calculations to establish:

1. short-circuit ratings of plant equipment;
2. ampacity of feeder cables;
3. voltage drop in feeder cables;
4. system grounding requirements;
5. coordination study calculations for fuses, circuit breakers and protective relay settings for the 13.8 kV, 4.16 kV and 480 V systems;
6. system grounding requirements; and
7. lighting energy calculations.

C. The following activities shall be reported to the CPM in the Monthly Compliance Report:

1. receipt or delay of major electrical equipment;
2. testing or energizing 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 a lesser number of days mutually agreed to by the project owner and the CBO) 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.

C. POWER PLANT RELIABILITY

Staff's witness, Shahab Khoshmashrab, in his written analysis, testified that the proposed changes to the ESPRP would not change any of the findings or conclusions in the 2005 Decision. (RSA, pp. 5.4-1 – 5.4-2.)

FINDINGS AND CONCLUSIONS

Based on the evidence, the Energy Commission makes the following finding:

1. The Reliability aspects of the amended project do not create significant direct or cumulative environmental effects.

The Energy Commission, therefore, concludes that the project will not have a significant effect on system reliability. No Conditions of Certification were adopted in the 2005 Decision and none are adopted in this Decision concerning the topic of Power Plant Reliability.

D. TRANSMISSION LINE SAFETY AND NUISANCE

The written testimony of Staff witness, Obed Odoemelum, Ph.D., states that the proposed changes to Transmission Line Safety and Nuisance (TLSN) for the ESPRP will comply with all applicable LORS, and the amended petition would not significantly change the project description relating to the ESPRP transmission system interconnection (RSA, p. 4.11-1).

FINDINGS AND CONCLUSIONS

Based on the evidence, the Energy Commission makes the following findings and conclusions:

1. The project as amended will continue to comply with all applicable LORS.
2. There is no impact on the original TLSN project analysis or conditions of certification. The findings and conclusions incorporated in the original Commission Decision remain valid.
3. No new or modified conditions of certification apply to TLSN.

CONDITIONS OF CERTIFICATION

TLSN-1: The project owner shall ensure that the proposed on-site replacement lines (associated with Units, 5, 6, and 7) are designed and constructed in compliance with CPUC's GO-95, GO-52, Title 8, Section 2700 Sections 2700 through 2974 of the California Code of Regulations and SCE's EMF-reduction guidelines arising from CPUC Decision 93-11-013.

Verification: Thirty days before the start of line construction, the project owner shall submit to the Commission's Compliance Project Manager (CPM) evidence of their intention to comply with the above requirements.

TLSN-2: The project owner shall ensure that a qualified individual is engaged to measure the strengths of the project-related electric and magnetic in the post-modification period. Measurements should be made at the same points along the perimeter of the SCE Switchyard, within the route of the on-site replacement lines, and the route of the existing off-site SCE lines, for which field strength values were presented by the Applicant.

Verification: The project owner shall ensure that the post-modification measurements are tabulated together with the pre-modification measurements presented by the Applicant. A copy of these measurement results shall be filed with the CPM within 60 days after completion of the measurements.

TLSN-3: Thirty days prior to the start of commercial operations, the project owner shall send written notice to all property owners and residents in the City of Manhattan Beach within 1,000 feet of transmission lines between the El Segundo Generating Station and the El Nido Substation of the possible interference impacts associated with the project and procedures for reporting complaints. The project owner shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of transmission lines and related facilities. In addition to any transmission repairs, the relevant corrective actions should include, but shall not be limited to, adjusting or modifying receivers, adjusting or repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cable.

The project owner shall maintain written records for a period of five years, of all complaints of radio or television interference attributable to operation together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution should be noted and explained. The record shall be signed by the project owner and also the complaint, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

Verification: All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.

E. TRANSMISSION SYSTEM ENGINEERING

Staff witness Mark Hesters reviewed the proposed changes to the transmission system associated with the amended ESPRP. The amended project would utilize the rapid response combined cycle technology, not available during the original licensing of the project, instead of the previously permitted advanced combined cycle technology that offers slower start time. The maximum electrical output will be reduced from 630 MW to 560 MW. (RSA, pp. 5.5-1 to 5.5-2.)

This technology would have delivered power output at full load in up to three hours for warm and hot starts and in up to six hours for cold starts. In comparison, the new technology can deliver 150 MW of power output within 10 minutes of unit startup and can achieve full load within 45 minutes for hot starts, 85 minutes for warm starts, and 125 minutes for cold starts. Therefore, the new technology would allow the project to respond more rapidly to the needs of the California electricity market. Since the project is reducing its maximum MW output, the capacity of the existing transmission lines does not need to be changed.

FINDINGS AND CONCLUSIONS

Based on the evidence, we find and conclude as follows:

1. The project as amended will continue to comply with all applicable LORS.
2. The Conditions of Certification set forth below are appropriate and will ensure that the project is designed and constructed both in accordance with applicable law and in a manner that protects environmental quality and public health and safety and to ensure compliance with all applicable engineering LORS.
3. The Transmission System Engineering aspects of the amended project do not create significant direct or cumulative environmental effects.

There is no impact on the original Transmission Systems Engineering project analysis or conditions of certification. The findings and conclusions incorporated in the original Commission Decision remain valid. No new or modified conditions of certification apply to Transmission System Engineering.

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: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) 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: Prior to the start of construction, the project owner shall assign an electrical engineer and at least one of each of the following to the project: A) a civil engineer; B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer, who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; or D) a mechanical engineer. (Business and Professions Code Sections 6704 et seq., require state registration to practice as a civil engineer or structural engineer in California.)

The tasks performed by the civil, mechanical, electrical or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The civil, geotechnical or civil and design engineer assigned in

conformance with Facility Design condition **GEN-5**, may be responsible for design and review of the TSE facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes; if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations.

The electrical engineer shall:

1. Be responsible for the electrical design of the power plant switchyard, outlet and termination facilities; and
2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) 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. (1998 CBC, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance]. The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and shall reference this condition of certification.

Verification: The project owner shall submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM within 15 days of receipt. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and 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 increment of construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report:

- a) receipt or delay of major electrical equipment;
- b) testing or energizing of major electrical equipment; and
- c) the number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications and calculations for equipment and systems of the power plant switchyard, outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer attesting to compliance with the 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, including the requirements listed below. The substitution of CPM and CBO approved “equivalent” equipment and equivalent substation configurations is acceptable. The project owner shall submit the required number of copies of the design drawings and calculations as determined by the CBO.

- a) The power plant switchyard and 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”, National Electric Code (NEC) and related industry standards.
- b) Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.
- c) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner’s standards.
- d) The project conductors shall be sized to accommodate the full output from the project.
- e) Termination facilities shall comply with applicable SCE interconnection standards.
- f) The project owner shall provide:

- i. The final Detailed Facility Study (DFS) including a description of facility upgrades, operational mitigation measures, and/or Special Protection System (SPS) sequencing and timing if applicable;
- ii. Executed Facility Interconnection Agreement; and
- iii. Verification of Cal-ISO Notice of Synchronization.

Verification: At least 60 days prior to the start of construction of transmission facilities (or a lesser number of days mutually agree to by the project owner and CBO), the project owner shall submit to the CBO for approval:

- a) Design drawings, specifications and calculations conforming with CPUC General Order 95 or NESC, Title 8, Articles 35, 36 and 37 of the “High Voltage Electric Safety Orders”, NEC, applicable interconnection standards and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems and major switchyard equipment.
- 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”⁵ and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or NESC, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the, “High Voltage Electric Safety Orders”, NEC, applicable interconnection standards, and related industry standards.
- c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements **TSE-5** a) through f) above.
- d) The DFS operational mitigation measures, SPS, and executed Facility Interconnection Agreement shall be provided concurrently to the CPM and CBO. Substitution of equipment and substation configurations shall be identified and justified by the project owner for CBO approval.

TSE-6: The project owner shall inform the CPM and CBO of any impending changes, which may not conform to the requirements **TSE-5** a) through f), and have not received CPM and CBO approval, and request approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or substation configurations shall not begin without prior written approval of the changes by the CBO and the CPM.

Verification: At least 60 days prior to the construction of transmission facilities, the project owner shall inform the CBO and the CPM of any impending changes which may not conform to requirements of **TSE-5** and request approval to implement such changes.

⁵ Worst case conditions for the foundations would include for instance, a dead-end or angle pole.

TSE-7: The project owner shall provide the following Notice to the California Independent System Operator (Cal-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 Cal-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 ISO Outage Coordination Department.

Verification: The project owner shall provide copies of the Cal-ISO letter to the CPM when it is sent to the Cal-ISO one week prior to initial synchronization with the grid. The project owner shall contact the Cal-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 Cal-ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.

TSE-8: 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, and these conditions shall be provided concurrently.
- 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 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".
- c) A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.

VI. GENERAL CONDITIONS INCLUDING COMPLIANCE MONITORING AND CLOSURE PLAN

Prepared by: Joseph Douglas, Compliance Project Manager

INTRODUCTION

The project's General Compliance Conditions of Certification, including Compliance Monitoring and Closure Plan (Compliance Plan) have been established as required by Public Resources Code section 25532. The plan provides a means for assuring that the facility is constructed, operated, and closed in compliance with public health and safety, environmental, and other applicable regulations, guidelines, and conditions adopted or established by the California Energy Commission and specified in the written decision on the Application for Certification or otherwise required by law.

The Compliance Plan is composed of elements that:

- set forth the duties and responsibilities of the Compliance Project Manager (CPM), the project owner, delegate agencies, and others;
- set forth the requirements for handling confidential records and maintaining the compliance record;
- state procedures for settling disputes and making post-certification changes;
- state the requirements for periodic compliance reports and other administrative procedures that are necessary to verify the compliance status for all Energy Commission approved conditions of certification;
- establish requirements for facility closure plans; and
- specify conditions of certification for each technical area containing the measures required to mitigate any and all potential adverse project impacts associated with construction, operation and closure below a level of significance. Each specific condition of certification also includes a verification provision that describes the method of assuring that the condition has been satisfied.

DEFINITIONS

The following terms and definitions are used to establish when Conditions of Certification are implemented.

PRE-CONSTRUCTION SITE MOBILIZATION

Site mobilization is limited preconstruction activities at the site to allow for the installation of fencing, construction trailers, construction trailer utilities, and construction trailer parking at the site. Limited ground disturbance, grading, and trenching associated with the above mentioned pre-construction activities is considered part of site mobilization. Walking, driving or parking a passenger vehicle, pickup truck and/or light vehicles is allowable during site mobilization.

CONSTRUCTION

Onsite work to install permanent equipment or structures for any facility.

GROUND DISTURBANCE

Construction-related ground disturbance refers to activities that result in the removal of top soil or vegetation at the site beyond site mobilization needs, and for access roads and linear facilities.

GRADING, BORING, AND TRENCHING

Construction-related grading, boring, and trenching refers to activities that result in subsurface soil work at the site and for access roads and linear facilities, e.g., alteration of the topographical features such as leveling, removal of hills or high spots, moving of soil from one area to another, and removal of soil.

Notwithstanding the definitions of ground disturbance, grading, boring, and trenching above, construction does **not** include the following:

1. the installation of environmental monitoring equipment;
2. a soil or geological investigation;
3. a topographical survey;
4. any other study or investigation to determine the environmental acceptability or feasibility of the use of the site for any particular facility; and
5. any work to provide access to the site for any of the purposes specified in "Construction" 1, 2, 3, or 4 above.

START OF COMMERCIAL OPERATION

For compliance monitoring purposes, "commercial operation" begins after the completion of start-up and commissioning, when the power plant has reached reliable steady-state production of electricity at the rated capacity. At the start of commercial operation, plant control is usually transferred from the construction manager to the plant operations manager.

COMPLIANCE PROJECT MANAGER RESPONSIBILITIES

The Compliance Project Manager (CPM) shall oversee the compliance monitoring and is responsible for:

1. ensuring that the design, construction, operation, and closure of the project facilities are in compliance with the terms and conditions of the Energy Commission Decision;
2. resolving complaints;
3. processing post-certification changes to the conditions of certification, project description (petition to amend), and ownership or operational control (petition for change of ownership) (See instructions for filing petitions);
4. documenting and tracking compliance filings; and

5. ensuring that compliance files are maintained and accessible.

The CPM is the contact person for the Energy Commission and will consult with appropriate responsible agencies, Energy Commission, and staff when handling disputes, complaints, and amendments.

All project compliance submittals are submitted to the CPM for processing. Where a submittal required by a condition of certification requires CPM approval, the approval will involve all appropriate Energy Commission staff and management. All submittals must include searchable electronic versions (pdf or MS Word files).

PRE-CONSTRUCTION AND PRE-OPERATION COMPLIANCE MEETING

The CPM usually schedules pre-construction and pre-operation compliance meetings prior to the projected start-dates of construction, plant operation, or both. The purpose of these meetings is to assemble both the Energy Commission's and project owner's technical staff to review the status of all pre-construction or pre-operation requirements contained in the Energy Commission's conditions of certification. This is to confirm that all applicable conditions of certification have been met, or if they have not been met, to ensure that the proper action is taken. In addition, these meetings ensure, to the extent possible, that Energy Commission conditions will not delay the construction and operation of the plant due to oversight and to preclude any last minute, unforeseen issues from arising. Pre-construction meetings held during the certification process must be publicly noticed unless they are confined to administrative issues and processes.

ENERGY COMMISSION RECORD

The Energy Commission shall maintain the following documents and information as a public record, in either the Compliance file or Dockets file, for the life of the project (or other period as required):

1. all documents demonstrating compliance with any legal requirements relating to the construction and operation of the facility;
2. all monthly and annual compliance reports filed by the project owner;
3. all complaints of noncompliance filed with the Energy Commission; and
4. all petitions for project or condition of certification changes and the resulting staff or Energy Commission action.

PROJECT OWNER RESPONSIBILITIES

The project owner is responsible for ensuring that the compliance conditions of certification and all other conditions of certification that appear in the Commission Decision are satisfied. The compliance conditions regarding post-certification changes specify measures that the project owner must take when requesting changes in the project design, conditions of certification, or ownership. Failure to comply with any of the conditions of certification or the compliance conditions may result in reopening of the case and revocation of Energy Commission certification; an administrative fine; or other action as appropriate. A summary of the Compliance Conditions of Certification is included as **Compliance Table 1** at the conclusion of this section.

COMPLIANCE CONDITIONS OF CERTIFICATION

Unrestricted Access (COMPLIANCE-1)

The CPM, responsible Energy Commission staff, and delegated agencies or consultants shall be guaranteed and granted unrestricted access to the power plant site, related facilities, project-related staff, and the records maintained on-site for the purpose of conducting audits, surveys, inspections, or general site visits. Although the CPM will normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced visits at any time.

Compliance Record (COMPLIANCE-2)

The project owner shall maintain project files on-site or at an alternative site approved by the CPM for the life of the project, unless a lesser period of time is specified by the conditions of certification. The files shall contain copies of all “as-built” drawings, documents submitted as verification for conditions, and other project-related documents.

Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files maintained pursuant to this condition.

Compliance Verification Submittals (COMPLIANCE-3)

Each condition of certification is followed by a means of verification. The verification describes the Energy Commission’s procedure(s) to ensure post-certification compliance with adopted conditions. The verification procedures, unlike the conditions, may be modified as necessary by the CPM.

Verification of compliance with the conditions of certification can be accomplished by the following:

1. monthly and/or annual compliance reports, filed by the project owner or authorized agent, reporting on work done and providing pertinent documentation, as required by the specific conditions of certification;
2. appropriate letters from delegate agencies verifying compliance;
3. energy Commission staff audits of project records; and/or
4. energy Commission staff inspections of work, or other evidence that the requirements are satisfied.

Verification lead times associated with start of construction may require the project owner to file submittals during the certification process, particularly if construction is planned to commence shortly after certification.

A cover letter from the project owner or authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. **The cover letter subject line shall identify the project by AFC number, the appropriate condition(s) of certification by condition number(s), and a brief description of the subject of the submittal.** The project owner shall also identify those submittals **not** required by a condition of certification with a statement such as: “This submittal is for information only

and is not required by a specific condition of certification.” When submitting supplementary or corrected information, the project owner shall reference the date of the previous submittal and CEC submittal number.

The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed by the project owner or an agent of the project owner.

All hardcopy submittals shall be addressed as follows:

**Joseph Douglas, CPM
(00-AFC-14C)
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814**

Those submittals shall be accompanied by a searchable electronic copy, on a CD or by e-mail, as agreed upon by the CPM.

If the project owner desires Energy Commission staff action by a specific date, that request shall be made in the submittal cover letter and shall include a detailed explanation of the effects on the project if that date is not met.

Pre-Construction Matrix and Tasks Prior to Start of Construction (COMPLIANCE-4)

Prior to commencing construction, a compliance matrix addressing only those conditions that must be fulfilled before the start of construction shall be submitted by the project owner to the CPM. This matrix will be included with the project owner’s first compliance submittal or prior to the first pre-construction meeting, whichever comes first. It will be submitted in the same format as the compliance matrix described below.

Construction shall not commence until the pre-construction matrix is submitted, all pre-construction conditions have been complied with, and the CPM has issued a letter to the project owner authorizing construction. Various lead times for submittal of compliance verification documents to the CPM for conditions of certification are established to allow sufficient staff time to review and comment and, if necessary, allow the project owner to revise the submittal in a timely manner. This will ensure that project construction may proceed according to schedule.

Failure to submit compliance documents within the specified lead-time may result in delays in authorization to commence various stages of project development.

If the project owner anticipates commencing project construction as soon as the project is certified, it may be necessary for the project owner to file compliance submittals prior to project certification. Compliance submittals should be completed in advance where the necessary lead time for a required compliance event extends beyond the date anticipated for start of construction. The project owner must understand that the submittal of compliance documents prior to project certification is at the owner’s own risk. Any approval by Energy Commission staff is subject to change, based upon the Commission Decision.

Compliance Reporting

There are two different compliance reports that the project owner must submit to assist the CPM in tracking activities and monitoring compliance with the terms and conditions of the Energy Commission Decision. During construction, the project owner or authorized agent will submit Monthly Compliance Reports. During operation, an Annual Compliance Report must be submitted. These reports, and the requirement for an accompanying compliance matrix, are described below. The majority of the conditions of certification require that compliance submittals be submitted to the CPM in the monthly or annual compliance reports.

Compliance Matrix (COMPLIANCE-5)

A compliance matrix shall be submitted by the project owner to the CPM along with each monthly and annual compliance report. The compliance matrix is intended to provide the CPM with the current status of all conditions of certification in a spreadsheet format. The compliance matrix must identify:

1. the technical area;
2. the condition number;
3. a brief description of the verification action or submittal required by the condition;
4. the date the submittal is required (e.g., 60 days prior to construction, after final inspection, etc.);
5. the expected or actual submittal date;
6. the date a submittal or action was approved by the Chief Building Official (CBO), CPM, or delegate agency, if applicable;
7. the compliance status of each condition, e.g., “not started,” “in progress” or “completed” (include the date); and
8. if the condition was amended, the date of the amendment.

Satisfied conditions shall be placed at the end of the matrix.

Monthly Compliance Report (COMPLIANCE-6)

The first Monthly Compliance Report is due one month following the Energy Commission business meeting date upon which the project was approved, unless otherwise agreed to by the CPM. The first Monthly Compliance Report shall include the AFC number and an initial list of dates for each of the events identified on the **Key Events List**. **The Key Events List form is found at the end of these General Conditions.**

During pre-construction and construction of the project, the project owner or authorized agent shall submit an original and an electronic searchable version of the Monthly Compliance Report within 10 working days after the end of each reporting month. Monthly Compliance Reports shall be clearly identified for the month being reported. The reports shall contain, at a minimum:

1. a summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;
2. documents required by specific conditions to be submitted along with the Monthly Compliance Report. Each of these items must be identified in the transmittal letter, as well as the conditions they satisfy and submitted as attachments to the Monthly Compliance Report;
3. an initial, and thereafter updated, compliance matrix showing the status of all conditions of certification;
4. a list of conditions that have been satisfied during the reporting period, and a description or reference to the actions that satisfied the condition;
5. a list of any submittal deadlines that were missed, accompanied by an explanation and an estimate of when the information will be provided;
6. a cumulative listing of any approved changes to conditions of certification;
7. a listing of any filings submitted to, or permits issued by, other governmental agencies during the month;
8. a projection of project compliance activities scheduled during the next two months. The project owner shall notify the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification;
9. a listing of the month's additions to the on-site compliance file; and
10. a listing of complaints, notices of violation, official warnings, and citations received during the month, a description of the resolution of the resolved actions, and the status of any unresolved actions.

All sections, exhibits, or addendums shall be separated by tabbed dividers or as acceptable by the CPM.

Annual Compliance Report (COMPLIANCE-7)

After construction is complete, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports. The reports are for each year of commercial operation and are due to the CPM each year at a date agreed to by the CPM. Annual Compliance Reports shall be submitted over the life of the project, unless otherwise specified by the CPM. Each Annual Compliance Report shall include the AFC number, identify the reporting period, and shall contain the following:

1. an updated compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after they have been reported as completed);
2. a summary of the current project operating status and an explanation of any significant changes to facility operations during the year;
3. documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter

with the condition it satisfies, and submitted as attachments to the Annual Compliance Report;

4. a cumulative listing of all post-certification changes approved by the Energy Commission or cleared by the CPM;
5. an explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;
6. a listing of filings submitted to, or permits issued by, other governmental agencies during the year;
7. a projection of project compliance activities scheduled during the next year;
8. a listing of the year's additions to the on-site compliance file;
9. an evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date (see Compliance Conditions for Facility Closure addressed later in this section); and
10. a listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved matters, and the status of any unresolved matters.

Confidential Information (COMPLIANCE-8)

Any information that the project owner deems confidential shall be submitted to the Energy Commission's Executive Director with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505(a). Any information that is determined to be confidential shall be kept confidential as provided for in Title 20, California Code of Regulations, section 2501, et. seq.

Annual Energy Facility Compliance Fee (COMPLIANCE-9)

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annual compliance fee, which is adjusted annually. Current Compliance fee information is available on the Energy Commission's website http://www.energy.ca.gov/siting/filing_fees.html. You may also contact the CPM for the current fee information. The initial payment is due on the date of the Business Meeting at which the Energy Commission adopts the final decision. All subsequent payments are due by July 1 of each year in which the facility retains its certification. The payment instrument shall be made payable to the California Energy Commission and mailed to: Accounting Office MS-02, California Energy Commission, 1516 9th St., Sacramento, CA 95814.

Reporting of Complaints, Notices, and Citations (COMPLIANCE-10)

Prior to the start of construction, the project owner must send a letter to property owners living within one mile of the project notifying them of a telephone number to contact project representatives with questions, complaints, or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering with a date and time stamp recording. All recorded complaints shall be responded to within 24 hours. The telephone number shall be posted at the project site and made easily visible to

passersby during construction and operation. The telephone number shall be provided to the CPM who will post it on the Energy Commission's web page at http://www.energy.ca.gov/sitingcases/power_plants_contacts.html.

Any changes to the telephone number shall be submitted immediately to the CPM, who will update the web page.

In addition to the monthly and annual compliance reporting requirements described above, the project owner shall report and provide copies to the CPM of all complaint forms, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and citations within 10 days of receipt. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the **NOISE** conditions of certification. All other complaints shall be recorded on the complaint form (Attachment A).

FACILITY CLOSURE

At some point in the future, the project will cease operation and close down. At that time, it will be necessary to ensure that the closure occurs in such a way that public health and safety and the environment are protected from adverse impacts. Although the project setting for this project does not appear, at this time, to present any special or unusual closure problems, it is impossible to foresee what the situation will be in 30 years or more when the project ceases operation. Therefore, provisions must be made that provide the flexibility to deal with the specific situation and project setting that exist at the time of closure. Laws, Ordinances, Regulations, and Standards (LORS) pertaining to facility closure are identified in the sections dealing with each technical area. Facility closure will be consistent with LORS in effect at the time of closure.

There are at least three circumstances in which a facility closure can take place: planned closure, unplanned temporary closure, and unplanned permanent closure.

CLOSURE DEFINITIONS

Planned Closure

A planned closure occurs when the facility is closed in an anticipated, orderly manner, at the end of its useful economic or mechanical life, or due to gradual obsolescence.

Unplanned Temporary Closure

An unplanned temporary closure occurs when the facility is closed suddenly and/or unexpectedly, on a short-term basis, due to unforeseen circumstances such as a natural disaster or an emergency.

Unplanned Permanent Closure

An unplanned permanent closure occurs if the project owner closes the facility suddenly and/or unexpectedly, on a permanent basis. This includes unplanned closure where the owner implements the on-site contingency plan. It can also include unplanned closure where the project owner fails to implement the contingency plan, and the project is essentially abandoned.

COMPLIANCE CONDITIONS FOR FACILITY CLOSURE

Planned Closure (COMPLIANCE-11)

In order to ensure that a planned facility closure does not create adverse impacts, a closure process that provides for careful consideration of available options and applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of closure will be undertaken. To ensure adequate review of a planned project closure, the project owner shall submit a proposed facility closure plan to the Energy Commission for review and approval at least 12 months (or other period of time agreed to by the CPM) prior to the commencement of closure activities. The project owner shall file 120 copies (or other number of copies agreed upon by the CPM) of a proposed facility closure plan with the Energy Commission.

The plan shall:

1. identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site;
2. identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;
3. identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and
4. address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

Prior to submittal of the proposed facility closure plan, a meeting shall be held between the project owner and the Energy Commission CPM for the purpose of discussing the specific contents of the plan.

In the event that there are significant issues associated with the proposed facility closure plan's approval, or if the desires of local officials or interested parties are inconsistent with the plan, the CPM shall hold one or more workshops and/or the Energy Commission may hold public hearings as part of its approval procedure.

As necessary, prior to or during the closure plan process, the project owner shall take appropriate steps to eliminate any immediate threats to public health and safety and the environment, but shall not commence any other closure activities until the Energy Commission approves the facility closure plan.

Unplanned Temporary Closure/On-Site Contingency Plan (COMPLIANCE-12)

In order to ensure that public health and safety and the environment are protected in the event of an unplanned temporary facility closure, it is essential to have an on-site contingency plan in place. The on-site contingency plan will help to ensure that all necessary steps to mitigate public health and safety impacts and environmental impacts are taken in a timely manner.

The project owner shall submit an on-site contingency plan for CPM review and approval. The plan shall be submitted no less than 60 days (or other time agreed to by the CPM) prior to commencement of commercial operation. The approved plan must be in place prior to commercial operation of the facility and shall be kept at the site at all times.

The project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM.

The on-site contingency plan shall provide for taking immediate steps to secure the facility from trespassing or encroachment. In addition, for closures of more than 90 days, unless other arrangements are agreed to by the CPM, the plan shall provide for removal of hazardous materials and hazardous wastes, draining of all chemicals from storage tanks and other equipment, and the safe shutdown of all equipment. (Also see specific conditions of certification for the technical areas of **Hazardous Materials Management and Waste Management**)

In addition, consistent with requirements under unplanned permanent closure addressed below, the nature and extent of insurance coverage, and major equipment warranties must also be included in the on-site contingency plan. In addition, the status of the insurance coverage and major equipment warranties must be updated in the annual compliance reports.

In the event of an unplanned temporary closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the circumstances and expected duration of the closure.

If the CPM determines that an unplanned temporary closure is likely to be permanent, or for a duration of more than 12 months, a closure plan consistent with the requirements for a planned closure shall be developed and submitted to the CPM within 90 days of the CPM's determination (or other period of time agreed to by the CPM).

Unplanned Permanent Closure/On-Site Contingency Plan (COMPLIANCE-13)

The on-site contingency plan required for unplanned temporary closure shall also cover unplanned permanent facility closure. All of the requirements specified for unplanned temporary closure shall also apply to unplanned permanent closure.

In addition, the on-site contingency plan shall address how the project owner will ensure that all required closure steps will be successfully undertaken in the event of abandonment.

In the event of an unplanned permanent closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail within 24 hours and

shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the status of all closure activities.

A closure plan, consistent with the requirements for a planned closure, shall be developed and submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.

Post Certification Changes to the Energy Commission Decision: Amendments, Ownership Changes, Staff Approved Project Modifications and Verification Changes (COMPLIANCE-14)

The project owner must petition the Energy Commission pursuant to Title 20, California Code of Regulations, section 1769, in order to modify the project (including linear facilities) design, operation or performance requirements, and to transfer ownership or operational control of the facility. **It is the responsibility of the project owner to contact the CPM to determine if a proposed project change should be considered a project modification pursuant to section 1769.** Implementation of a project modification without first securing Energy Commission, or Energy Commission staff approval, may result in enforcement action that could result in civil penalties in accordance with section 25534 of the Public Resources Code.

A petition is required for **amendments** and for **staff approved project modifications** as specified below. Both shall be filed as a "Petition to Amend." Staff will determine if the change is significant or insignificant. For verification changes, a letter from the project owner is sufficient. In all cases, the petition or letter requesting a change should be submitted to the CPM, who will file it with the Energy Commission's Dockets Unit in accordance with Title 20, California Code of Regulations, section 1209.

The criteria that determine which type of approval and the process that applies are explained below. They reflect the provisions of Section 1769 at the time this condition was drafted. If the Commission's rules regarding amendments are amended, the rules in effect at the time an amendment is requested shall apply.

Amendment

The project owner shall petition the Energy Commission, pursuant to Title 20, California Code of Regulations, Section 1769(a), when proposing modifications to the project (including linear facilities) design, operation, or performance requirements. If a proposed modification results in deletion or change of a condition of certification, or makes changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards the petition will be processed as a formal amendment to the final decision, which requires public notice and review of the Energy Commission staff analysis and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the requirements of Section 1769(a). Upon request, the CPM will provide a sample petition to use as a template.

Change of Ownership

Change of ownership or operational control also requires that the project owner file a petition pursuant to section 1769 (b). This process requires public notice and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the

requirements of Section 1769(b). Upon request, the CPM will provide a sample petition to use as a template.

Staff Approved Project Modification

Modifications that do not result in deletions or changes to conditions of certification, that are compliant with laws, ordinances, regulations and standards and will not have significant environmental impacts may be authorized by the CPM as a staff approved project modification pursuant to section 1769(a) (2). Once staff files an intention to approve the proposed project modifications, any person may file an objection to staff's determination within 14 days of service on the grounds that the modification does not meet the criteria of section 1769 (a)(2). If a person objects to staff's determination, the petition must be processed as a formal amendment to the decision and must be approved by the full commission at a noticed business meeting or hearing.

Verification Change

A verification may be modified by the CPM without requesting an amendment to the decision if the change does not conflict with the conditions of certification and provides an effective alternate means of verification.

CBO DELEGATION AND AGENCY COOPERATION

In performing construction and operation monitoring of the project, Energy Commission staff acts as, and has the authority of, the Chief Building Official (CBO). Energy Commission staff may delegate CBO responsibility to either an independent third party contractor or the local building official. Energy Commission staff retains CBO authority when selecting a delegate CBO, including enforcing and interpreting state and local codes, and use of discretion, as necessary, in implementing the various codes and standards.

Energy Commission staff may also seek the cooperation of state, regional, and local agencies that have an interest in environmental protection when conducting project monitoring.

ENFORCEMENT

The Energy Commission's legal authority to enforce the terms and conditions of its Decision is specified in Public Resources Code sections 25534 and 25900. The Energy Commission may amend or revoke the certification for any facility, and may impose a civil penalty for any significant failure to comply with the terms or conditions of the Energy Commission Decision. The specific action and amount of any fines the Energy Commission may impose would take into account the specific circumstances of the incident(s). This would include such factors as the previous compliance history, whether the cause of the incident involves willful disregard of LORS, oversight, unforeseeable events, and other factors the Energy Commission may consider.

NONCOMPLIANCE COMPLAINT PROCEDURES

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a complaint will be subject to review by the Energy Commission pursuant to Title 20, California Code of Regulations, section 1237, but in many

instances the noncompliance can be resolved by using the informal dispute resolution process. Both the informal and formal complaint procedure, as described in current State law and regulations, are described below. They shall be followed unless superseded by future law or regulations.

Informal Dispute Resolution Process

The following procedure is designed to informally resolve disputes concerning the interpretation of compliance with the requirements of this compliance plan. The project owner, the Energy Commission, or any other party, including members of the public, may initiate an informal dispute resolution process. Disputes may pertain to actions or decisions made by any party, including the Energy Commission's delegate agents.

This process may precede the more formal complaint and investigation procedure specified in Title 20, California Code of Regulations, section 1237, but is not intended to be a substitute for, or prerequisite to it. This informal procedure may not be used to change the terms and conditions of certification as approved by the Energy Commission, although the agreed upon resolution may result in a project owner, or in some cases the Energy Commission staff, proposing an amendment.

The process encourages all parties involved in a dispute to discuss the matter and to reach an agreement resolving the dispute. If a dispute cannot be resolved, then the matter must be brought before the full Energy Commission for consideration via the complaint and investigation procedure.

Request for Informal Investigation

Any individual, group, or agency may request the Energy Commission to conduct an informal investigation of alleged noncompliance with the Energy Commission's terms and conditions of certification. All requests for informal investigations shall be made to the designated CPM.

Upon receipt of a request for an informal investigation, the CPM shall promptly notify the project owner of the allegation by telephone and letter. All known and relevant information of the alleged noncompliance shall be provided to the project owner and to the Energy Commission staff. The CPM will evaluate the request and the information to determine if further investigation is necessary. If the CPM finds that further investigation is necessary, the project owner will be asked to promptly investigate the matter. Within seven working days of the CPM's request, provide a written report to the CPM of the results of the investigation, including corrective measures proposed or undertaken. Depending on the urgency of the noncompliance matter, the CPM may conduct a site visit and/or request the project owner to also provide an initial verbal report, within 48 hours.

Request for Informal Meeting

In the event that either the party requesting an investigation or the Energy Commission staff is not satisfied with the project owner's report, investigation of the event, or corrective measures proposed or undertaken, either party may submit a written request to the CPM for a meeting with the project owner. Such request shall be made within 14 days of the project owner's filing of its written report. Upon receipt of such a request, the CPM shall:

1. immediately schedule a meeting with the requesting party and the project owner, to be held at a mutually convenient time and place;
2. secure the attendance of appropriate Energy Commission staff and staff of any other agencies with expertise in the subject area of concern, as necessary;
3. conduct such meeting in an informal and objective manner so as to encourage the voluntary settlement of the dispute in a fair and equitable manner;
4. After the conclusion of such a meeting, promptly prepare and distribute copies to all in attendance and to the project file, a summary memorandum that fairly and accurately identifies the positions of all parties and any understandings reached. If an agreement has not been reached, the CPM shall inform the complainant of the formal complaint process and requirements provided under Title 20, California Code of Regulations, section 1230, et. seq.

Formal Dispute Resolution Procedure-Complaints and Investigations

Any person may file a complaint with the Energy Commission's Dockets Unit alleging noncompliance with a Commission decision adopted pursuant to Public Resources Code section 25500. Requirements for complaint filings and a description of how complaints are processed are in Title 20, California Code of Regulations, section 1237.

KEY EVENTS LIST

PROJECT: _____

DOCKET #: _____

COMPLIANCE PROJECT MANAGER: _____

EVENT DESCRIPTION	DATE
Certification Date	
Obtain Site Control	
Online Date	
POWER PLANT SITE ACTIVITIES	
Start Site Mobilization	
Start Ground Disturbance	
Start Grading	
Start Construction	
Begin Pouring Major Foundation Concrete	
Begin Installation of Major Equipment	
Completion of Installation of Major Equipment	
First Combustion of Gas Turbine	
Obtain Building Occupation Permit	
Start Commercial Operation	
Complete All Construction	
TRANSMISSION LINE ACTIVITIES	
Start T/L Construction	
Synchronization with Grid and Interconnection	
Complete T/L Construction	
FUEL SUPPLY LINE ACTIVITIES	
Start Gas Pipeline Construction and Interconnection	
Complete Gas Pipeline Construction	
WATER SUPPLY LINE ACTIVITIES	
Start Water Supply Line Construction	
Complete Water Supply Line Construction	

COMPLIANCE TABLE 1
SUMMARY of COMPLIANCE CONDITIONS OF CERTIFICATION

CONDITION NUMBER	SUBJECT	DESCRIPTION
COMPLIANCE-1	Unrestricted Access	The project owner shall grant Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.
COMPLIANCE-2	Compliance Record	The project owner shall maintain project files on-site. Energy Commission staff and delegate agencies shall be given unrestricted access to the files.
COMPLIANCE-3	Compliance Verification Submittals	The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed or the project owner or his agent.
COMPLIANCE-4	Pre-construction Matrix and Tasks Prior to Start of Construction	<p>Construction shall not commence until the all of the following activities/submittals have been completed:</p> <ul style="list-style-type: none"> • property owners living within one mile of the project have been notified of a telephone number to contact for questions, complaints or concerns, • a pre-construction matrix has been submitted identifying only those conditions that must be fulfilled before the start of construction, • all pre-construction conditions have been complied with, • the CPM has issued a letter to the project owner authorizing construction.
COMPLIANCE-5	Compliance Matrix	The project owner shall submit a compliance matrix (in a spreadsheet format) with each monthly and annual compliance report which includes the status of all compliance conditions of certification.
COMPLIANCE-6	Monthly Compliance Report including a Key Events List	During construction, the project owner shall submit Monthly Compliance Reports (MCRs) which include specific information. The first MCR is due the month following the Energy Commission business meeting date on which the project was approved and shall include an initial list of dates for each of the events identified on the Key Events List.
COMPLIANCE-7	Annual Compliance Reports	After construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports.

CONDITION NUMBER	SUBJECT	DESCRIPTION
COMPLIANCE-8	Confidential Information	Any information the project owner deems confidential shall be submitted to the Energy Commission's Executive Director with a request for confidentiality.
COMPLIANCE-9	Annual fees	Payment of Annual Energy Facility Compliance Fee
COMPLIANCE-10	Reporting of Complaints, Notices and Citations	Within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.
COMPLIANCE-11	Planned Facility Closure	The project owner shall submit a closure plan to the CPM at least 12 months prior to commencement of a planned closure.
COMPLIANCE-12	Unplanned Temporary Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COMPLIANCE-13	Unplanned Permanent Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned permanent closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.
COMPLIANCE-14	Post-certification changes to the Decision	The project owner must petition the Energy Commission to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.

**ATTACHMENT A
COMPLAINT REPORT/RESOLUTION FORM**

COMPLAINT LOG NUMBER: _____ DOCKET NUMBER: _____

PROJECT NAME: _____

COMPLAINANT INFORMATION

NAME: _____	PHONE NUMBER: _____
ADDRESS: _____	

COMPLAINT

DATE COMPLAINT RECEIVED: _____	TIME COMPLAINT RECEIVED: _____
COMPLAINT RECEIVED BY: _____	<input type="checkbox"/> TELEPHONE <input type="checkbox"/> IN WRITING (COPY ATTACHED)
DATE OF FIRST OCCURRENCE: _____	
DESCRIPTION OF COMPLAINT (INCLUDING DATES, FREQUENCY, AND DURATION): _____ _____ _____	
FINDINGS OF INVESTIGATION BY PLANT PERSONNEL: _____ _____ _____	
DOES COMPLAINT RELATE TO VIOLATION OF A CEC REQUIREMENT?	<input type="checkbox"/> YES <input type="checkbox"/> NO
DATE COMPLAINANT CONTACTED TO DISCUSS FINDINGS: _____	
DESCRIPTION OF CORECTIVE MEASURES TAKEN OR OTHER COMPLAINT RESOLUTION: _____ _____ _____	
DOES COMPLAINANT AGREE WITH PROPOSED RESOLUTION?	<input type="checkbox"/> YES <input type="checkbox"/> NO
IF NOT, EXPLAIN: _____ _____ _____	

CORRECTIVE ACTION

IF CORRECTIVE ACTION NECESSARY, DATE COMPLETED: _____
DATE FIRST LETTER SENT TO COMPLAINANT (COPY ATTACHED): _____
DATE FINAL LETTER SENT TO COMPLAINANT (COPY ATTACHED): _____
OTHER RELEVANT INFORMATION: _____ _____ _____

"This information is certified to be correct."

PLANT MANAGER SIGNATURE: _____ DATE: _____

(ATTACH ADDITIONAL PAGES AND ALL SUPPORTING DOCUMENTATION, AS REQUIRED)