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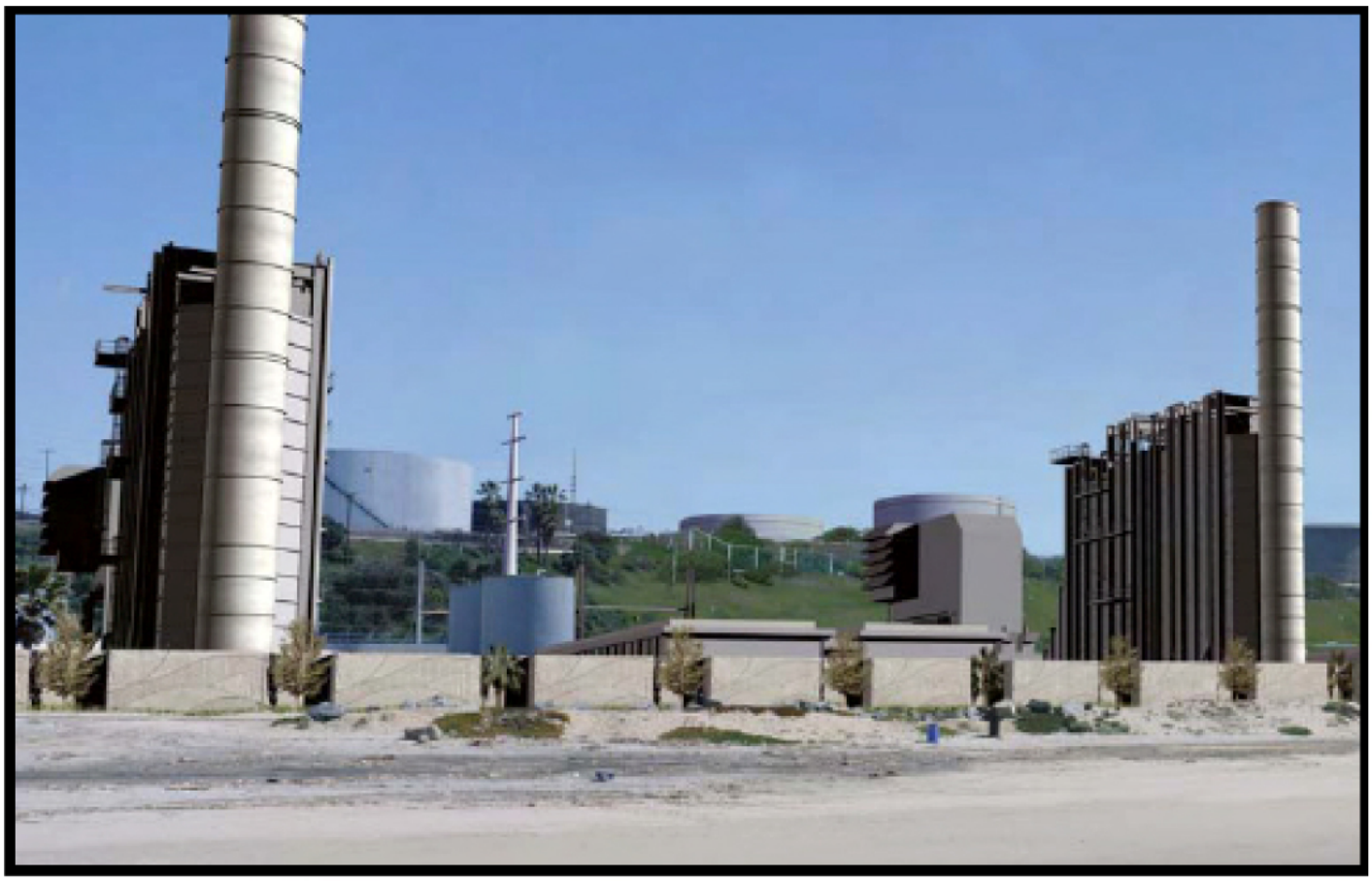
Prepared for:
El Segundo Energy Center, LLC

El Segundo Power Redevelopment Project Supplement to the Dry Cooling Amendment



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El Segundo Power Redevelopment Project Supplement to the Dry Cooling Amendment

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List of Acronyms and Abbreviations

µg/m^3	micrograms per cubic meter
ACMs	asbestos containing materials
AFC	Application for Certification
BRMIMP	Biological Resources Mitigation Implementation and Monitoring Plan
CARB	California Air Resources Board
CBC	California Building Code
CEC	California Energy Commission
CO	carbon monoxide
dBa	Decibels
EPA	U.S. Environmental Protection Agency
ERC	Emission Reduction Credit
ESEC	El Segundo Energy Center, LLC
ESGS	El Segundo Generating Station
ESPR	El Segundo Power Redevelopment
HARP	Hotspots Analysis Report Program
HMBP	Hazardous Materials Business Plan
HRA	Health Risk Assessment
kV	Kilovolt
lb	pounds
LORS	Laws, Ordinances, Regulations, and Standards
MM	Million
MW	megawatt
N/A	Not Applicable
NO_2	nitrogen dioxide
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
PDOC	Preliminary Determination of Compliance
pg	page
PM10	respirable particulate matter

List of Acronyms and Abbreviations

PM2.5	fine particulate matter
POTW	Publically Owned Treatment Works
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTA	Petition to Amend
R2C2	Rapid Response Combined Cycle
REL	reference exposure level
RMP	Risk Management Plan
RTCs	RECLAIM Trading Credits
SAR	Staff Analysis Report
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCR	selective catalytic reduction
SO_2	sulfur dioxide
SOx	sulfur oxides
TAC	toxic air contaminants
VOC	volatile organic compound

Executive Summary

Introduction

On June 18, 2007, El Segundo Power II, LLC submitted a Petition to Amend (PTA) (also known as the "Dry Cooling Amendment" [00-AFC-14C]) to the California Energy Commission (CEC) for modifications to the license for the El Segundo Power Redevelopment (ESPR) Project. The modifications proposed for the Project included the use of new state-of-the-art Rapid Response Combined Cycle (R2C2) generation technology that was not available during the siting of the approved Project. The proposed two new units would be capable of extremely fast starts – comparable to peaker units – and have the overall thermal efficiency and low emissions of combined cycle units. This configuration would significantly reduce startup emissions and would be able to deliver substantial megawatts (MW) more quickly to the grid. This new technology would eliminate the need for once-through cooling, and the intended operation of the R2C2 technology would eliminate the need for wastewater discharge to the ocean or to a publicly owned treatment works. In addition, other modifications proposed in the 2007 PTA included changes in the method and route for delivery of oversize equipment associated with the R2C2 technology; modification of the plant entrance road to allow for oversize equipment delivery and improved plant access; and the addition of a new off-site laydown area and elimination of one previously approved laydown area.

The Project, as proposed in 2007, relied on a combination of two air emission offset-related programs along with the purchase of some additional emission reduction credits (ERCs) to satisfy air quality regulations. The two offset programs were South Coast Air Quality Management District (SCAQMD) Rule 1304 Exemptions, and Rule 1309.1 Priority Reserve, as amended August 3, 2007. Rule 1304 provides an exemption from the need to provide offsets that allows the conversion of steam boilers to combined cycle gas turbines on the basis of MW output. The Rule 1304 exemption was applied to the shutdown of steam boilers in Units 1 and 2 at the facility to offset 350 MW of generating capacity for the new units. The balance of the offset requirements would have been provided via offsets obtained from the Priority Reserve and ERCs purchased from outside sources. The combination of these programs formed the complete emission offset package for the Project.

The permitting of the ESPR Project was progressing forward when a July 28, 2008 decision by the Superior Court of Los Angeles County effectively vacated Rules 1309.1 and 1315 (SCAQMD's offset tracking rule). Shortly thereafter, the SCAQMD also suspended Rule 1304 as the underlying mechanism for tracking of offsets (i.e., Rule 1315) for the "funding" of Rule 1304 was the same as for Rule 1309.1. Thus, the offset package proposed for the Project was not available, and the permit processing was halted at both the CEC and SCAQMD.

Recently, the California Legislature reinstated SCAQMD Rule 1304 by adopting Senate Bill 827, effective January 1, 2010. Rule 1309.1, as amended May 3, 2002 was also reinstated, but electrical generation facilities were excluded access by the legislation. Therefore, it is necessary to revise the emission offset package for the ESPR Project to allow permitting of the Project to resume. The Applicant[1] is proposing to expand the use of the Rule 1304(a)(2) exemption by permanently shutting down Unit 3 at the El Segundo Generating Station (ESGS), in addition to the shutdown of Units 1 and 2, as previously approved. With the

[1] On August 13, 2008, the Committee approved a name change request filed by Applicant on June 30, 2008. Applicant is henceforth El Segundo Energy Center, LLC (referred to herein as "Applicant" or "ESEC"). See Appendix A.

addition of the Unit 3 shutdown to the proposed Project, the total generating capacity of 685 MW associated with the shutdown of three existing boilers (Boilers 1, 2, and 3) exceeds the 573 MW capacity of the proposed new combined cycle gas turbine generating units. Therefore, the emissions for the new units will be fully offset by the shutdown of three existing boilers according to the provisions of Rule 1304(a)(2). This plan constitutes the new offset package for the proposed Project.

With this Supplement, ESEC is requesting that the CEC's February 2, 2005, Final Commission Decision for the ESPR Project be amended to include the modifications described in the 2007 PTA and the additional modification proposed in this Supplement, i.e., the permanent shutdown of Unit 3 at the ESGS. This document describes in detail and sets forth an environmental analysis of the additional requested modification and the potential effects on environmental resources as compared to the previous evaluation documented in the ESPR Project's Application for Certification (AFC) and the related Final Commission Decision, as well as in the 2007 PTA and associated June 2008 Staff Analysis Report (SAR) and October 2008 Addendum I SAR. As part of the evaluation set forth herein, the final Conditions of Certification were reviewed and proposed changes to affected conditions are provided.

Project Location

On February 2, 2005, the CEC, in its Final Commission Decision, certified construction of the ESPR Project on a 33-acre parcel at the site of the existing ESGS. The ESPR 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. The address is 301 Vista Del Mar, El Segundo, approximately 2 miles south of the Los Angeles International Airport. It is located less than 1/4-mile south of the Los Angeles Department of Water and Power's Scattergood Generating Station, 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 the ESGS. The City of Manhattan Beach is located immediately to the south of the Project site.

Necessity for the Proposed Modifications

The modifications proposed in the 2007 PTA are necessary for the following reasons:

1. To eliminate the impact on the aquatic environment, the Applicant proposes replacing the once-through cooling technology that was originally proposed for the ESPR Project with new dry-cooling technology;
2. To reduce air emissions from the new units, new low-emission combustion turbine equipment are proposed that significantly reduces air pollutant emissions from the combustion process compared to the boilers they are replacing; and
3. To accommodate new site configuration requirements and changes in availability of temporary construction laydown areas, an alternative equipment delivery option and a new construction laydown area are proposed.

The additional modification proposed in this Supplement is required to provide the air emission offset exemptions necessary to comply with air quality regulations, as the offsets proposed from the Priority Reserve (SCAQMD Rule 1309.1) in the offset package proposed in 2007 are currently unavailable. The need for this Supplement could not be anticipated at the time of licensing review of the AFC or of the PTA by the CEC.

Project Ownership

On August 13, 2008, the Committee approved a name change request filed by Applicant on June 30, 2008. The Applicant for the ESPR Project is El Segundo Energy Center LLC (referred to herein as "Applicant" or "ESEC"). ESEC is a wholly-owned subsidiary of NRG Energy Corporation (**Appendix A**).

Summary of Technical Areas

Table ES-1 lists all of the technical areas contained in this Supplement and indicates in which areas ESEC is requesting changes to the existing ESPR Project Decision and Conditions of Certification. The details of the proposed condition changes can be found under the appropriate headings in this Supplement.

Table ES-1 Technical Sections with New Conditions or Changes to Conditions of Certification

Technical Area	New Conditions or Changes to Conditions of Certification	Technical Area	New Conditions or Changes to Conditions of Certification
Air Quality	Yes	Traffic and Transportation	No
Biological Resources	No	Visual Resources	No
Cultural Resources	No	Waste Management	No
Hazardous Materials Management	No	Worker Safety/Fire Protection	No
Land Use	No	Facility Design	No
Noise and Vibration	No	Geology and Paleontology	No
Public Health	No	Power Plant Efficiency	No
Soil and Water Resources	No	Power Plant Reliability	No
Socioeconomic Resources	No	Transmission System Engineering	No
Transmission Line Safety and Nuisance	No		

Recommendations and Conclusions

Based on the analysis provided in this Supplement, all direct, indirect, and cumulative impacts of the ESPR Project on health, safety, and the environment will remain less than significant and the proposed modification will further reduce potential impacts in many technical areas compared to the original approved Project, and the Project as proposed in the 2007 PTA.

1.0 Introduction

El Segundo Energy Center, LLC (ESEC) is requesting that the California Energy Commission's (CEC) February 2, 2005, Final Commission Decision for the El Segundo Power Redevelopment Project (ESPR Project) be amended to include one additional modification to the current license. This Supplement describes in detail the requested modification and sets forth an environmental analysis of the potential effects on the environmental resources as compared to the previous evaluation. The previous evaluation is documented in the ESPR Project's Application for Certification (AFC), the CEC's 2005 Final Commission Decision, the 2007 Petition to Amend (PTA, or Dry Cooling Amendment), and the Staff Analysis for the 2007 PTA. As part of the evaluation set forth herein, the final Conditions of Certification were reviewed and proposed changes to affected conditions are provided.

1.1 Project History and Overview of Supplement

On December 21, 2000, El Segundo Power II LLC[2] (now ESEC and referred herein as the Applicant) filed an AFC seeking approval from the CEC to replace the existing El Segundo Generating Station (ESGS) Units 1 and 2 in the City of El Segundo with a 630-megawatt (MW) natural gas-fired, combined cycle electric generation facility. As proposed, the Project included demolition and removal of the existing Units 1 and 2 and their replacement with two combustion turbines and one steam turbine (designated Units 5, 6 and 7) in the footprint of Units 1 and 2. The Applicant proposed to use the existing steam-cycle heat rejection system, which utilized cooling water from Santa Monica Bay, for the new equipment. The existing ESGS Units 3 and 4 located adjacent to Units 1 and 2 would not have been modified by the original Project. The CEC issued its Final Commission Decision for the ESPR Project in February 2005.

On June 18, 2007, the Applicant submitted a PTA for modifications to the license for the ESPR Project. The modifications proposed for the Project included the use of new state-of-the-art Rapid Response Combined Cycle (R2C2) technology that was not available during the siting of the approved Project. The proposed new units would be capable of extremely fast starts (approximately 22 minutes) and achieve the thermal efficiency of combined cycle units. This configuration would significantly reduce startup emissions and could deliver substantial megawatts more quickly to the grid. This new technology would eliminate the need for once-through cooling for these units via the use of air-cooled condensers. The intended operation of the R2C2 technology would also eliminate the need for wastewater discharge to the ocean or to a Publicly Owned Treatment Works (POTW). In addition, other modifications proposed in 2007 included changes in the method and route for delivery of oversize equipment associated with this new technology; modification of the plant entrance road to allow for oversize equipment delivery and improved plant access; and the addition of a new off-site laydown area and elimination of one previously approved laydown area.

As proposed in 2007, the Project relied on a combination of emission offset-related programs to provide emissions offsets - the August 3, 2007, version of Rule 1309.1 Priority Reserve, Rule 1304 Exemptions, and banked offsets available through Rule 1309, Emission Reduction Credits and Short-Term Credits. Rule 1304(a)(2) provides an exemption from the need for the Applicant to provide offsets for the conversion of

[2] On August 13, 2008, the Committee approved a name change request filed by Applicant on June 30, 2008. Applicant is El Segundo Energy Center LLC (referred to herein as "Applicant" or "ESEC"). See Appendix A.

steam boilers to combined cycle systems on a MW per MW basis. The Applicant, in its 2007 PTA, proposed to shutdown Units 1 and 2 at ESGS to offset 350 MW associated with the approved Project. Because the output of the proposed combined cycle turbines would have exceeded the electrical output of the steam boilers they would replace, additional offsets were required for the additional output. The Applicant had proposed to provide the additional required offsets from the Priority Reserve along with the purchase of Emission Reduction Credits (ERCs) from outside sources. These mechanisms formed the complete emission offset package for the Project.

The South Coast Air Quality Management District (SCAQMD) deemed the ESPR Project permit application complete on June 29, 2007, and issued the draft permit for the Project on March 13, 2008. On June 12, 2008, the CEC Staff published the Staff Analysis Report (SAR) for the ESPR Project, which concluded that the Project after mitigation did not result in any significant adverse environmental impacts. The permitting of the ESPR Project was progressing when a July 28, 2008 decision by the Superior Court of Los Angeles County vacated Rule 1309.1, in part due to a deficiency in the tracking mechanism for offsets (i.e., Rule 1315), and thus stalled the Project permitting. As a consequence of the court decision, the SCAQMD also suspended Rule 1304, as the underlying mechanism (i.e., Rule 1315) for tracking of offsets for Rule 1304 was the same as for Rule 1309.1.

This Supplement is provided to revise the emission offset package described in the 2007 PTA. As a result of Senate Bill 827, the California Legislature has reinstated SCAQMD Rule 1304, effective January 1, 2010. However, because this Bill enables the use of ERC exemptions under Rule 1304 and specifically excludes power plants access to Priority Reserve under Rule 1309.1 and its amendments, the previously described offset plan would not be sufficient for the Project. It is therefore necessary to revise the emission offset package for the ESPR Project to include offsets generated by the shutdown of the Unit 3 boiler at the ESGS. With the addition of the Boiler 3 shutdown, the total generating capacity of 685 MW associated with the shutdown of the existing boilers[3] (Units 1, 2, and 3) exceeds the 573 MW capacity of the proposed new R2C2 gas turbine generating units.[4] Therefore, the emissions for the new units will be fully offset by the shutdown of the three existing boilers as allowed by Rule 1304(a)(2).

Unlike Units 1 and 2 which are being demolished, Unit 3 will be decommissioned by shutdown and closure in place until some future date. Unit 3 will be maintained cosmetically and structurally to ensure that is does not become an eyesore or a safety hazard. Natural gas supply will be permanently disconnected and hazardous materials associated with Unit 3 operations (e.g., lube oil, ammonia) will be removed and/or their supply will be permanently disconnected as applicable.

The permanent shutdown and closure in place of Unit 3 constitutes the scope of the modifications proposed in this Supplement; no other changes are proposed by this Supplement to the approved Project or the 2007 PTA.

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[3] Based on a combined generating capacity of 350 MW for El Segundo Units 1 and 2 plus 335 MW for El Segundo Unit 3.

[4] March 13, 2008, SCAQMD draft permit package for the ESPR Project, SCAQMD engineering evaluation, page 6 of 43, footnote number 3.

1.2 Consistency of Amendment with License

Section 1769(a)(1)(D) of the CEC Siting Regulations requires a discussion of the Amendment's consistency with the requisite laws, ordinances, regulations, and standards (LORS) and whether the modifications are based upon new information that changes or undermines the assumptions, rationale, findings, or other bases of the Final Commission Decision for the ESPR Project. If the Project is no longer consistent with the license, an explanation of why the modification should be permitted must be provided. The sections that follow provide an explanation of the proposed modification, rationale for the proposed modification, and a LORS compliance analysis. Proposed changes to the existing Conditions of Certification are discussed with the impacts analyses in Section 3.0, and the requested changes are provided in Appendix B.

1.3 Necessity of Proposed Change

Sections 1769(a)(1)(B) and 1769(a)(1)(C) of the CEC Siting Regulations require a discussion of the necessity for the proposed changes to the Project and whether this modification is based on information known by the petitioner during the certification proceeding.

The purpose of this Supplement is to allow ESPR licensing to proceed by providing the required air emission offsets. These offsets are provided by the proposed shutdown of Units 1, 2, and 3 under the recently reinstated SCAQMD Rule 1304.

This Supplement is based on information that was not available or foreseen by Applicant at the time of licensing before the CEC. SCAQMD Rules 1309.1 and 1304 formed the basis of the offset plan for the ESPR Project as it was proposed and licensed in the 2005 Commission Decision and proposed for modification in the 2007 PTA. Access to the required offsets under Rule 1309.1 and Rule 1304 was suspended by the SCAQMD following the July 2008 court decision. The court ruling was not known to the Applicant at the time of the licensing proceeding. Under Senate Bill 827, beginning on January 1, 2010, SCAQMD Rule 1304 was reinstated and sufficient offsets for the Project are available under Rule 1304(a)(2) through the shutdown of Unit 3 in addition to the shutdown of Units 1 and 2 as previously proposed and approved.

1.4 Cumulative Impacts

Section 3.0 addresses each environmental area affected by the proposed modification and a cumulative impact assessment is included within the discussion for each issue area. As shown in Section 3.0, the modification discussed herein will not result in significant, unmitigated cumulative impacts, and this Supplement will not change the assumptions or conclusions made in the CEC's Final Commission Decision for the ESPR Project.

1.5 Compliance with Laws, Regulations, Ordinances and Standards

The February 2005 Commission Decision certifying the ESPR Project concluded that the Project complied with all applicable LORS. As discussed in detail in Section 3.0, the proposed modification will not affect the Project's ability to comply with all applicable LORS.

1.6 Document Organization

Section 2.0 describes the proposed modification to the Project Description and facility design and operation. The environmental analysis of the modified Project description and facility design is presented in Section 3.0. The Final Commission Decision Conditions of Certification and ESEC's proposed modifications to the associated conditions are presented along with the environmental analysis in Section 3.0. The Engineering evaluation is provided in Section 4.0. Potential effects on the public and nearby property owners are addressed in Section 5.0.

2.0 Project Description

2.1 Introduction

The Project modification proposed in this Supplement involves the permanent shutdown and closure in place of ESGS Unit 3. The Project Description presented herein describes the anticipated modifications and changes to the equipment and mechanical structures of Unit 3, and the potential impact to various facility infrastructures as a result of the shutdown.

2.2 Project Location

The Project site for this Supplement is the ESGS, located 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. The address is 301 Vista Del Mar, El Segundo, approximately 2 miles south of the Los Angeles International Airport. It is located less than 1/4-mile south of the Los Angeles Department of Water and Power's Scattergood Generating Station, and approximately 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 the ESGS. The City of Manhattan Beach is located immediately to the south of the Project site. The regional location of the ESPR Project is shown in Figure 2-1 (reproduced from the PTA).

2.3 Site Plan

A Site Layout is shown in Figure 2-2 (reproduced from the 2007 PTA). The proposed shutdown and closure in place of Unit 3 does not change the site plan for the Project as proposed in the 2007 PTA.

2.4 Proposed Project Modification

The Project modification proposed in this Supplement involves the permanent shutdown and closure in place of the ESGS Unit 3, including a 335-MW steam boiler and associated equipment. The steam-cycle heat rejection system, which utilized cooling water from Santa Monica Bay, will not be modified, as the intake and outfall structures are shared with Unit 4. Unit 4 will not be shutdown or modified in any way as a result of this Project.

There will be a net air quality benefit associated with the modification proposed in this Supplement. The permanent shutdown of the Unit 3 boiler will eliminate the criteria pollutant emissions (nitrogen oxides [NOx], sulfur oxides [SOx], carbon monoxide [CO], volatile organic compounds [VOCs], respirable particulate matter [PM10], and fine particulate matter [PM2.5]) associated with natural gas combustion, the ammonia emissions associated with ammonia slip from the selective catalytic reduction (SCR) system serving the Unit 3 boiler, and the toxic air contaminant emissions also associated with the combustion of natural gas in the boiler. Impacts to air quality are discussed in detail in Section 3.1. The Applicant intends to surrender the air permit for Unit 3 concurrent with the shutdown, prior to first fire of the first train of the new R2C2 units.

The fluid systems (e.g., oil-filled gear boxes, tanks, condensate receivers, etc.) in Unit 3 will be drained when not necessary to preserve marketability of the equipment. The natural gas supply line feeding the Unit 3 boiler will be disconnected and capped. The ammonia supply line for the SCR on Unit 3's exhaust will be decommissioned and disconnected. Utility connections to Unit 3 (e.g., water, wastewater, compressed air, and electrical power) will be maintained to the extent required to ensure worker safety and maintain the equipment and structures of Unit 3 in a safe condition, and if not required for worker safety, the piping and lines will be drained and capped. Closure in place activities associated with permanent shutdown of Unit 3 may be conducted with existing construction personnel who will be on site for the ESPR Project.

Some selected equipment and metals may be removed following Unit 3's shutdown, such as motors, pumps, catalyst beds, and transformers. Asbestos insulation will be left in place and maintained such that the asbestos would not become dislodged or airborne. Similarly, lead based paint, if any, would be left in place and the structure maintained such that the paint would not deteriorate or become dislodged. Maintenance of asbestos insulation and painted structures of Unit 3 will be conducted as routine facility maintenance coordinated with routine maintenance activities performed for Unit 4.

The permanent shutdown of Unit 3 will reduce the seawater intake required for unit cooling and associated cooling water discharge through Outfall 002; reduce the steam-cycle makeup water requirements; and reduce boiler blowdown and associated wastewater discharge through Outfall 002.

Shutdown and closure in place activities would decrease operational noise and because the structure will be closed in place, there will be no demolition activities and thus no demolition-related noise associated with the shutdown and closure of Unit 3.

External lighting on Unit 3 will largely be disconnected and no longer lit, with the exception of lighting required for emergency access, emergency egress and worker safety on Unit 3. Loudspeakers on Unit 3 will mostly be disconnected as well. An exception to the disconnection of lighting and loudspeakers on Units 3 will be for lighting or loudspeakers that are required for safe operation of Unit 4.

Finally, the Applicant intends to preserve and maintain the structure to minimize physical and aesthetic deterioration.

2.5 Schedule

The proposed schedule for PTA Decision is as follows:

- January 15 – Applicant files revised Health Risk Assessment modeling with SCAQMD
- January 15 – Applicant files request for Prevention of Significant Deterioration (PSD) Non-Applicability Determination letter with SCAQMD (also provided as Appendix C to this Supplement)
- January 19 – Applicant files Supplement to the ESPR Project with CEC
- February 20 – Applicant receives revised Determination of Compliance from SCAQMD
- April 9 – Applicant receives Addendum SAR from CEC
- May 17 – CEC Board Meeting to hear PTA ESPR Decision

2.6 Construction and Operation

As noted, the proposed modification would entail permanently shutting down Unit 3 and safely closing it in place; no demolition or other construction-related activities are anticipated to be required to facilitate this modification.

2.7 Facility Closure

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

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER 1009724013-A17
---	---	Concord	SCHAEFFER	6/18/07					

Shaw® Shaw Environmental, Inc.

EL SEGUNDO POWER II LLC
EL SEGUNDO GENERATING STATION

Figure 2-1

LOCAL SETTING

EL SEGUNDO POWER
REDEVELOPMENT PROJECT, CALIFORNIA

CALIFORNIA ENERGY COMMISSION SYSTEM ASSESSMENT & FACILITIES SITING DIVISION CARTOGRAPHY UNIT, JULY 2001
SOURCE: California Energy Commission Statewide Transmission & Power Plant Maps 2001 & USGS 7.5 Minute Quadrangles

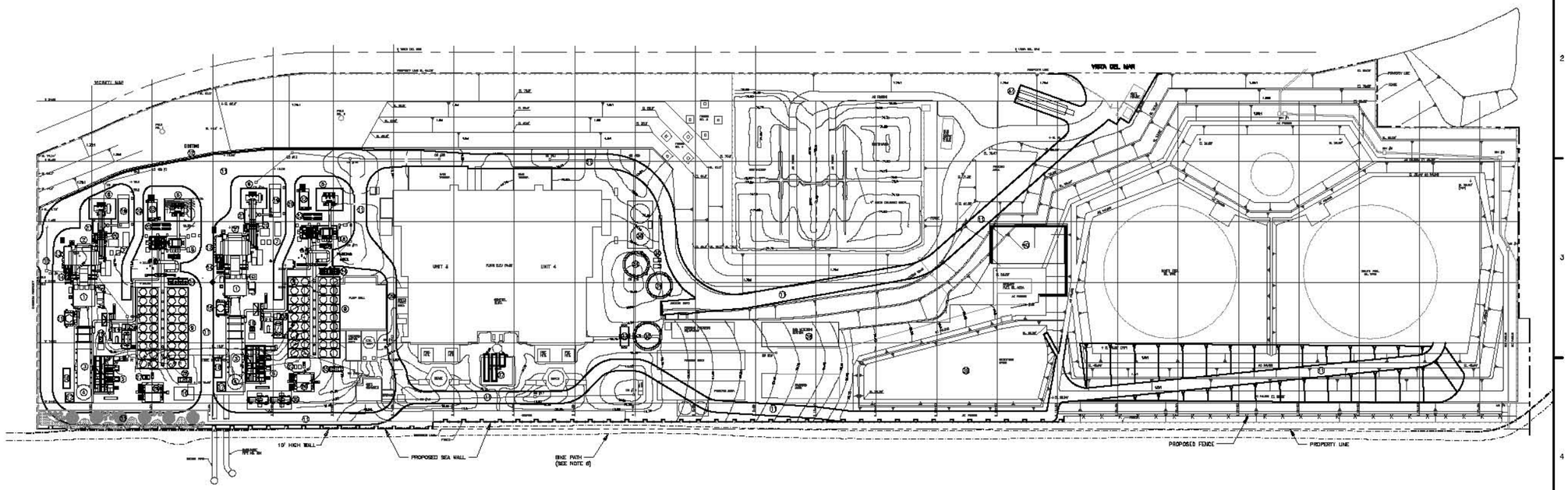

Figure 2-2

GENERAL NOTES

1. THE COORDINATES OF UNITS AND UTILITIES ARE BASED ON SITE COORDINATE SYSTEM. SITE BASE LINE N 0.00, E 0.00 CORRESPOND TO N 4,076,868.48, E 4,159,162.86 CALIFORNIA STATE COORDINATE SYSTEM ZONE 7, NORTH AMERICAN DATUM OF 1927.

2. ALL ELEVATIONS SHOWN ARE REFERENCED TO M.L.L.W. ELEVATION (0.00 FEET).

3. CONTOURS AND GRADE ELEVATIONS SHOWN ON THE PLANS INDICATE FINISH GRADE UNLESS NOTED OTHERWISE.

4. SEE DRAWING 1009725090-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

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 BLAND 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
30 DEMIN WATER FORWARDING PUMPS
31 DEMIN WATER STORAGE TANK
32 FIRE/SERVICE WATER STORAGE TANK
33 FIRE WATER PUMPS
34 RAW WATER (FIRST PASS RO) STORAGE TANK
35 GAS COMPRESSORS
36 UNIT 3 & 4 CONDENSATE STORAGE
37 RO SYSTEM EQUIPMENT (3) TRAILERS
38 GAS METERING STATION
39 RETENTION BASIN
40 ADMIN/MAINTENANCE/WAREHOUSE BLDG
41 GANTRY CRANE

23°13'

80' 40' 20' 0 80' 120'
SCALE: 1"=80'

REV	DESCRIPTION / ISSUE	DATE	APPROVED
A	PROGRESS ISSUE	11/12/08	
B	ADDITIONS ADDED TO SITE PLAN	12/12/08	N.P.
C	ADDITIONS ADDED TO SITE PLAN	12/01/09	N.P.
D	ADDITIONS ADDED TO SITE PLAN	12/12/09	N.P.

NRG Energy, Inc — Shaw Stone & Webster, Inc.

DESIGNED BY: MEC	NRG EL SEGUNDO REPOWERING PROJECT EL SEGUNDO, CA
DRAWN BY: MEC	NRG EL SEGUNDO DUAL R2C2 SITE PLAN
CHECKED BY: NP	
APPROVED BY:	DATE: 05/23/09 · SCALE: 1"= 80' · DRAWING NO. 1009725000-F-10-D · REV. NO. D

REV D
DRAWING NUMBER 1009725000-F-10-D

3.0 Environmental Analysis

Each of the 14 environmental resources topics, from Air Quality to Worker Safety, is discussed in alphabetical order below. For each topic, the section includes a discussion of compliance with LORS, an analysis of impacts from the proposed modification, potential for cumulative impacts, and any recommended changes to the conditions of certification imposed by the ESPR Project Final Commission Decision. In each topic, the modification discussed is the shutdown and closure in place of Unit 3, which is the only change proposed in this PTA Supplement.

3.1 Air Quality

This section examines whether the proposed Project modification to permanently shutdown and close in place Unit 3 would result in any new or incremental environmental impacts to air quality beyond those analyzed in the 2005 Commission Decision, the June 2008 SAR for the ESPR Dry Cooling Amendment (00-AFC-14C), or the October 2008 Addendum I SAR.

3.1.1 Introduction

The June 2008 SAR included an analysis of the air quality impacts associated with the proposed Project amendment. That analysis included discussions of the hourly, daily, and annual emissions associated with the Project amendment, air quality modeling results, and required air quality mitigation measures. With regards to those previously analyzed air quality impacts, this Supplement affects only the ERC package required for the Project amendment. Consequently, only minor changes to the SAR will be required to make the document current with this Supplement. The required changes to the SAR are discussed in Section 3.1.3 and changes recommended for the Conditions of Certification are addressed in Section 3.1.6 and provided in Appendix B.

3.1.2 LORS Compliance

The SAR (Pg 4.1-1) included a summary of the applicable air quality LORS for the amended Project and concluded that the amended Project would comply with the LORS. Other than the removal of SCAQMD Rule 1309.1 as a viable option for obtaining ERCs for the amended Project, this Supplement will have no effect on the applicable air quality LORS discussed in the SAR.

Since the issuance of the SAR, the only new air quality regulatory development that may apply to the Project is the proposed greenhouse gas “tailoring rule” that is currently being developed by the U.S. Environmental Protection Agency (EPA) (Federal Register 2009). When finalized, this rule will affect the applicability of the Federal Prevention of Significant Deterioration (PSD) and Title V regulations to new and/or modified major sources of greenhouse gas emissions. However, because this rule is still being developed and will not be finalized until at least sometime during the first half of 2010, it would be speculative to conclude whether this rule will apply to the amended Project. It should be noted that as part of this rulemaking, the EPA is considering an exemption from the rule for facilities that have either filed complete Title V permit applications and/or have been issued draft/final Title V permits. Because a complete Title V permit application was filed for the amended Project in 2007 and since the amended Project was issued a draft Title V permit in 2008, it may qualify for this exemption from the rule.

In addition to potential PSD applicability with regards to greenhouse gas emissions for new major sources and/or modified major sources, the PSD program regulates the criteria pollutants nitrogen dioxide (NO_2), CO, and sulfur dioxide (SO_2) that have been designated as being in attainment[5] of National Ambient Air Quality Standards in the SCAQMD. As part of the analysis prepared by the SCAQMD for the March 13, 2008 draft Title V permit for the 2007 amended Project (SCAQMD to EPA, March 13, 2008, engineering evaluation, page 30 of 45), the SCAQMD concluded that the 2007 amended Project did not trigger PSD review for NO_2, CO, or SO_2 air quality impacts because the net emission increase (emission increases from new units minus emission reductions for the shutdown of El Segundo Units 1 and 2) for these pollutants were below the PSD trigger levels. Due to the delay in the final permitting of the amended project, it was necessary to reexamine the PSD applicability of the amended Project with regards to NOx, CO, and SOx emissions. As discussed in the enclosed letter to the SCAQMD (Appendix C), ESEC has concluded that the ESRP Project continues to be exempt from the PSD program for these pollutants, and has requested SCAQMD concurrence with this conclusion.

3.1.3 Analysis

As discussed in Section 3.1.1, this Supplement affects only the ERC package proposed for the ESPR Project. For the Project, the ERC package covers the criteria pollutants VOC, SOx, and PM10. Because the SCAQMD is classified as an attainment area for CO, ERCs are not required under the SCAQMD permit regulations and this pollutant is not included in the ERC package for the Project. In addition, the ERC package does not include NOx because this pollutant is mitigated with RECLAIM Trading Credits (RTCs) as required by the SCAQMD RECLAIM regulations. As discussed in the SAR (Pgs 4.1-12 to -14), the 2007 amended Project relied on a combination of two emission offset related programs - SCAQMD Rule 1309.1 Priority Reserve and SCAQMD Rule 1304(a)(2) steam boiler to combined cycle gas turbine ERC exemption. The ERC exemption under SCAQMD Rule 1304 was for the shutdown of Units 1 and 2 at the ESGS. The combination of these programs, as well as the purchase of some ERCs, formed the complete emission offset package for the amended Project.

The July 28, 2008 court decision effectively suspended access to ERCs under both of the programs proposed for the amended Project (i.e., Rules 1309.1 and 1304). Consequently, permitting of the ESPR Project has been delayed until the recent passage of Senate Bill 827. As a result of Senate Bill 827, the permitting of the Project can once again move forward. However, because Senate Bill 827addresses only the use of ERC exemptions under SCAQMD Rule 1304 and does not allow electrical generation facilities access to the Priority Reserve under SCAQMD Rule 1309.1, it is necessary to revise the emission offset package for the Project to include the shutdown of Unit 3 at the ESGS. With the addition of the Unit 3 shutdown, the total generating capacity of 685 MW associated with the shutdown of the existing units[6] (Units 1, 2, and 3) exceeds the 573 MW capacity of the Project. Therefore, the emissions for the Project will be fully offset by the shutdown of the existing units under the SCAQMD Rule 1304(a)(2) steam boiler to combined cycle gas turbine offset exemption. Table 3.1-1 summarizes the air quality mitigation for the ESPR Project.

---

[5] The PSD program in the SCAQMD does not require review of pollutants such as PM10 or PM2.5 that are currently designated as being non-attainment of the applicable standards in the SCAQMD.

[6] Based on a combined generating capacity of 350 MW for El Segundo Boilers 1 and 2 plus 335 MW for El Segundo Boiler 3.

Table 3.1-1 Air Quality Mitigation Summary

Description	NOx (lb/year)	SOx (lb/day)	VOC (lb/day)	PM10 (lb/day)
ESPR Project Emissions	209,727[a] 181,910[b]	71[a] 72[b]	364[a] 328[b]	461[a] 462[b]
RECLAIM Trading Credits (RTCs)	209,727[a] 181,910[b]	N/A	N/A	N/A
Rule 1304 Exemption ERCs[c]	N/A	72	364	462
Total Credits (RTCs and ERCs)	209,727[a] 181,910[b]	72	364	462
Further Mitigation Needed	None	None	None	None

a. Combined emissions for both new units during commissioning year. For annual NOx emissions, based on SCAQMD March 19, 2008 revised Title V Facility Permit package, Appendix D. For daily SOx emissions, based on SCAQMD March 19, 2008 revised Title V Facility Permit package, Table 14, monthly SOx emissions of 2,132 lb divided by 30. For daily VOC emissions, based on SCAQMD March 19, 2008 revised Title V Facility Permit package, Table 14, monthly VOC emissions of 10,922 lb divided by 30. For daily PM10 emissions, based on SCAQMD March 19, 2008 revised Title V Facility Permit package, Table 14, monthly PM10 emissions of 13,837 lb divided by 30.

b. Combined emissions for both new units during non-commissioning year. For annual NOx emissions, based on June 2008 SAR, Air Quality Table 12. For daily SOx, VOC, and PM10 emissions, based on June 2008 SAR, Air Quality Table 12.

c. Based on SCAQMD Rule 1304(a)(2) steam boiler to combined cycle gas turbine offset exemption. Because the total generating capacity of 685 MW associated with the shutdown of the existing boilers (Units 1, 2, and 3) exceeds the 573-MW capacity of the new units, the emissions for the new units are fully offset by the shutdown of the existing boilers including the higher VOC emissions during the commissioning year.

lb = pounds

N/A = Not Applicable

Other than the effect on the ERC package for the Project, the delay in the permitting caused by the July 28, 2008 court decision also affects the background ambient concentrations used in the analysis in the SAR. The ambient air quality impact analysis included in the SAR (pgs 4.1-9 to -12) includes a listing of background ambient concentrations for the Project area. Because these background concentrations were based on data collected at nearby monitoring stations during the three-year period from 2004 to 2006, it is necessary to update these values to account for more recent data collected during the three-year period from 2006 to 2008. Table 3.1-2 summarizes these data and compares them to the maximum values listed in the SAR.

As shown by this table, the background values for 1-hour average and 3-hour average SO_2, and 1-hour NO_2 for the Project area are somewhat higher based on 2006 – 2008 data than were the values provided in the SAR. The air quality modeling was not revised for this Supplement, but the affect of the background concentrations changes can be assessed by looking at the air quality modeling results in the 2008 SAR.

Table 3.1-2 Maximum Background Concentrations 2006 – 2008 (µg/m^3)

Pollutant	Averaging Period	2006	2007	2008	Maximum	Previous Maximum[e]
NO_2[a]	1-hour	146.5	154.3	169.3	169	162
	Annual	31.9	35.7	33.9	36	38
SO_2[b]	1-hour	70.7	96.9	227.9	228	110
	3-hour	60.3	73.4	96.9	97	87
	24-hour	26.2	23.6	26.2	26	31
	Annual	5.2	7.9	7.9	8	13
CO[a]	1-hour	3,335	3,093	3,093	3,335	4,600
	8-hour	2,300	2,291	2,062	2,300	2,645
PM10[b]	24-hour	78.0	75.0[d]	61.0	78	78
	Annual	31.0	33.5	29.1	34	33
PM2.5[b]	24-hour[c]	35.0	40.7	38.9	41	46
	Annual	14.1	14.6	13.3	15	18

a. West Los Angeles VA Hospital monitoring station.

b. North Long Beach monitoring station.

c. PM2.5 24-hr average concentrations shown are 98th percentile values rather than highest values because compliance with the standard is based on 98th percentile readings.

d. Based on the maximum PM10 value listed in the SCAQMD 2007 Annual Air Quality Summary Report (http://www.aqmd.gov/smog/historicaldata.htm) for this monitoring station. While a higher value is listed in the monitoring data, it has been classified as an exceptional event due to the wildfires that occurred in October 2007.

e. Based on June 2008 SAR Air Quality Table 9.

f. Background concentration data obtained from CARB ADAM Air Quality Data Statistics (http://www.arb.ca.gov/adam/welcome.html) and EPA AirData (http://epa.gov/air/data/monvals.html?st~CA~California)

For 1-hour average SO_2, while the maximum background level is about double the previous value, when the maximum modeled Project impact of approximately 3 micrograms for cubic meter (µg/m^3) shown in the SAR (Air Quality Table 8) is added to the maximum background level, the combined value of 231 µg/m^3 remains well below the most stringent air quality standard of 655 µg/m^3. The 3-hour SO_2 value is also still well below the applicable standard, as the maximum Project impact of 1.25 µg/m^3 combined with a background of 97 µg/m^3 is only 8 percent of the 3-hour SO_2 standard of 1,300 µg/m^3.

The 1-hour NO_2 background value has increased slightly (from 162 µg/m^3 to 169 µg/m^3) based on the more recent data, When the new background value is added to the maximum Project short-term NO_2 impacts of

53.72 µg/m^3 from SAR Air Quality Table 7, the new total of 224 µg/m^3 is well below the 1-hour NO_2 standard of 338 µg/m^3. The SAR also included a cumulative analysis with results presented in Air Quality Table 9, which gave impacts from a worst-case operating scenario for the entire ESGS facility, including operation of Unit 3. This scenario resulted in a maximum impact of 152.7 µg/m^3, which when combined with the maximum background value of 169 µg/m^3 gives a total of 322 µg/m^3, which is also below the 338 µg/m^3 1-hour NO_2 standard. Therefore, since a worst-case scenario that included Unit 3, which is now proposed to be shut down, has been demonstrated to be in compliance, it can be concluded that the ESPR Project will be in compliance with these standards following the Unit 3 shutdown.

All other pollutant and averaging period background values have decreased for this more recent three-year period. Consequently, these changes to the maximum background levels will not affect any findings made in the SAR regarding air quality impacts.

Other than the issues discussed above, the modification proposed herein is not expected to have any other impacts on the air quality analyses previously performed for the amended Project.

3.1.4 Cumulative Impacts

The proposed modification will result in lower impacts to air quality due to the reduction in air pollutant emissions (from the shutdown of Unit 3) compared to the approved Project and, therefore, the proposed modification will not result in any significant adverse cumulative impacts to air quality beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR.

3.1.5 Conclusions and Recommendations

The Project modification proposed in this Supplement will result in a net benefit to air quality; specifically, a reduction in air emissions from the combustion of natural gas in the Unit 3 boiler. Implementation of the amended Conditions of Certification (see Section 3.1.6) would assure that the proposed modification will prevent adverse impacts to Air Quality and that the modified Project will comply with all of the applicable LORS.

3.1.6 Proposed Modifications to Conditions of Certification

The SAR included some proposed changes to the air quality Conditions of Certification (SAR 2008, pages 4.1-16 to -31). Many of these changes were to reflect the permit conditions in the SCAQMD's notice of intent to issue a revised Title V Facility Permit that was issued on March 19, 2008. This document serves as the equivalent of a Preliminary Determination of Compliance (PDOC). The SCAQMD never intended on issuing a Final Determination of Compliance; rather, the SCAQMD was planning on issuing a revised Facility Permit following the CEC's Decision on the PTA. As discussed in Section 3.1.3, this PTA Supplement affects only the ERC package proposed for the Project amendment. While the SCAQMD will issue a new notice of intent to issue a Title V Facility Permit (equivalent to a new PDOC) to address this change to the ERC package, because there are no SCAQMD permit conditions specific to the ERC package, the Applicant does not expect the new draft Title V Permit to have an effect on the air quality Conditions of Certification listed in the SAR. Since this Supplement does affect the ERC package proposed for the Project amendment, it will be necessary to revise the Staff's proposed ERC package that is included in the SAR (Condition of Certification AQ-C5) to reflect the new ERCs. In addition, because the ERC package no longer includes SCAQMD Rule 1309.1 Priority Reserve credits, it will be necessary to remove the Conditions of Certification related to Rule 1309.1 requirements (Conditions of Certification AQ-SC8, AQ-35, and AQ-37). The recommended changes to the air quality Conditions of Certification are shown in Appendix B.

In addition to these requested changes, on July 14, 2008, the Applicant submitted comments on the air quality Conditions of Certification in the SAR. This package requested changes to air quality Conditions of Certification AQ-C6, AQ-C7, AQ-3, AQ-4, AQ-6, AQ-7, AQ-9, AQ-11, AQ-16, AQ-17, AQ-26, AQ-30, and AQ-36. Because the July 14, 2008 package included the basis for each of these requested changes, these will not be repeated in this document. These requested changes to the air quality Conditions of Certification are shown in Appendix B.

3.1.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

EL Segundo Power II, LLC, 2000. Application for Certification for the El Segundo Power Redevelopment Project. December.

Federal Register, 2009. Volume 74, Number 206, pp. 55292-55365. October 27.

McKinsey, John, 2008. Letter to Mr. Steve Munro, CEC, “Comments on CEC Staff Analysis of Project’s Petition to Amend. July 14.

SCAQMD, 2008. Draft Facility Permit to Operate, El Segundo Power, LLC. March 13.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.2 Biological Resources

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to Biological Resources beyond those analyzed in the 2005 Commission Decision, the June 2008 SAR, or the October 2008 Addendum I SAR.

3.2.1 Introduction

Biological impacts associated with the approved Project would have potentially impacted aquatic organisms through impingement, entrainment, and thermal effects due to the once-through cooling system proposed. The Commission Decision adopted five Conditions of Certification based on these impacts which were considered sufficient to mitigate the marine impacts to acceptable levels (CEC 2005).

With the subsequent PTA, the Applicant proposed to modify the Project by using a dry-cooling design. The Staff analysis of the amendment recognized that the original Conditions of Certification were no longer necessary but that new conditions were required to address impacts to marine and terrestrial resources during the construction of the amended Project. Staff recommended 11 new Conditions of Certification to

mitigate the construction impacts associated with the beach delivery system and recommended removal of the five Conditions of Certification associated with the approved Project (CEC 2008a, b).

The Project modification proposed in this Supplement involves the permanent shutdown and closure in place of Unit 3 which will result in a reduction in the amount of seawater flow through the intake and outfall structures associated with the operation of Unit 3. Unit 4, which shares the intake and outfall structures with Unit 3, will continue to utilize cooling water from Santa Monica Bay and will operate with no modifications due to this Project.

3.2.2 LORS Compliance

Since the Project was certified, there are no new or changed Biological Resource LORS relative to the proposed changes in the Project as described in this Supplement. Therefore, the Project will be in compliance with LORS as previously determined.

3.2.3 Analysis

This analysis focuses only on the Project modification proposed in this Supplement. The proposed modification would involve the permanent shutdown and closure in place of Unit 3 as described in the Section 2.0, Project Description. The non-operational structures would be closed in place and would not be removed.

Unit 3 and Unit 4 share a common intake and outfall structure to supply and discharge seawater used for once-through cooling. Following the Unit 3 shutdown, there will be a substantial decrease in seawater intake and discharge through those structures; however, the ESGS will continue to use seawater for once-through cooling for Unit 4. The intake and outfall structure will remain in place and no changes are proposed to those facilities. The reduction in seawater flow through the common intake structure is expected to reduce impingement and entrainment mortalities of marine organisms caused by seawater intake. The reduction in seawater flow through the outfall is also expected to reduce the impact of the thermal discharge to the marine environment.

Much of the lighting and loudspeakers associated with Unit 3 will be disconnected, leaving only those required for safety. All activities associated with the shutdown will be confined to the existing site.

Special-status species identified in the AFC and considered in the previous CEC determinations would not be affected as a result of the Project modification proposed in this Supplement.

The structures associated with Unit 3 that will remain in place after shutdown could be used by birds as roost sites or possibly nest sites. Maintenance of the structure and surrounding facilities could conflict with these bird activities. The SAR includes recommendations for bird discouraging measures, in coordination with the appropriate regulatory agencies, as part of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). The preparation and implementation of a BRMIMP was included in the recommended Conditions of Certification in the SAR. The Conditions of Certification recommended in the SAR are sufficient to ensure that the permanent shutdown of Unit 3 would not adversely impact birds.

3.2.4 Cumulative Impacts

The proposed modification will result in less impact to biological resources due to the reduction in seawater use and the associated reduction in impingement and entrainment mortality, and a reduction in thermal impacts to the surrounding environment compared to the approved Project. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to biological resources beyond

those addressed in the CEC's Final Commission Decision for the ESPR Project, the June 2008 SAR, or the October 2008 Addendum I SAR.

3.2.5 Conclusions and Recommendations

The Project modification proposed in this Supplement will result in a net benefit to biological resources; specifically, a reduction in marine impacts due to impingement, entrainment, and thermal effects due to elimination of once-through cooling on Unit 3. The permanent shutdown of Unit 3 will reduce seawater flow required for cooling and will reduce the level of impingement, entrainment, and thermal effects on the Santa Monica Bay marine ecosystem. The Conditions of Certification recommended in the 2008 SAR and Addendum I SAR contain measures to ensure that the Project would not adversely impact birds; those conditions are sufficient to ensure that the permanent shutdown of Unit 3 would not adversely impact birds.

3.2.6 Proposed Modifications to Conditions of Certification

The Commission Decision adopted five Conditions of Certification based on the impacts determined for the approved Project. In the 2008 SAR, Staff recognized that the original Conditions of Certification were no longer necessary but that 11 new conditions were required to address potential adverse impacts to marine and terrestrial resources during the construction of the amended Project. In the Addendum I SAR, Staff agreed to revise condition BIO-9 in response to Applicant comments. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.2.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

EL Segundo Power II LLC, 2000. Application for Certification for the El Segundo Power Redevelopment Project. December.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.3 Cultural Resources

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to cultural resources beyond those analyzed in the 2005 Commission Decision, the June 2008 SAR or October 2008 Addendum I SAR.

3.3.1 Introduction

The proposed modification involves the permanent shutdown and closure in place of Unit 3. The decommissioning process would not involve any construction, demolition, or changes to the equipment foundation that would require any subsurface work or modifications to any buildings or structures.

3.3.2 LORS Compliance

This modification is expected to comply with the applicable LORS described in the approved Project, and the proposed modifications will not adversely impact the compliance with the individual applicable LORS.

3.3.3 Analysis

The proposed shutdown and closure in place of Unit 3 would not disturb native soils or have the potential to impact any underwater cultural resources. Closure in place of Unit 3 may require removal of some selected equipment and metals such as motors, pumps, and transformers, but this removal is not expected to require ground-disturbing activities and the equipment itself has no cultural significance. The proposed modification does not include any aspects that would affect underwater cultural resources.

3.3.4 Cumulative Impacts

The proposed modification will result in no impacts to cultural resources because no subsurface work is required and, therefore, the proposed modification will not result in any significant adverse cumulative impacts to cultural resources beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.3.5 Conclusions and Recommendations

The Project would not result in any significant adverse impacts to either known or not yet discovered cultural resources. The implementation of the approved Conditions of Certification, CUL-1 through CUL-8, would assure that the proposed modification will prevent adverse impacts to any newly discovered cultural resources and that the modified Project will comply with all of the applicable LORS.

3.3.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision and the 2008 CEC Staff SAR recommended eight Conditions of Certification. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.3.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.4 Hazardous Materials Management

The purpose of this analysis is to determine if the proposed Project Supplement to permanently shut down and close in place Unit 3 will cause a significant adverse impact as a result of the transportation, use, handling, storage, or disposal of hazardous materials.

3.4.1 Introduction

No new hazardous materials are being introduced for the purpose of this Supplement. Rather, natural gas, ammonia, and lubricating oil associated with Unit 3 operations will be capped and/or removed as described in Project Description. Asbestos containing materials (ACMs) and some lead-based paint may be encapsulated in place, but this maintenance activity will be conducted as part of routine maintenance of Unit 4. Overall, permanent shutdown and closure in place of Unit 3 is expected to reduce hazardous material usage at the facility.

3.4.2 LORS Compliance

There are no changes to LORS that are relevant to the decommissioning of Unit 3. Please refer to the 2005 Commission Decision on the ESPR Project for the list of Hazardous Materials Management LORS. The Chemical Facility Anti-Terrorism Standard (Title 6 Code of Federal Regulations part 27) was added to the list of LORS in the 2008 SAR. The Applicant has reviewed the proposed modification for potential environmental effects and consistency with applicable LORS. Based on this review, the Applicant determined that the proposed modifications would comply with applicable LORS.

3.4.3 Analysis

The following hazardous materials are expected to be encountered in the closure in place of Unit 3 and/or their use impacted by its removal from service:

- Aqueous ammonia;
- Mineral, lubricating, and fuel oils;
- ACMs; and
- Lead-based paint.

<u>Storage and Use</u>

Storage and use of hazardous materials will decrease following decommissioning activities. Condition of Certification HAZ-1 requires notification to the appropriate authorities if specified quantities of various hazardous materials are exceeded, and the likelihood of such an exceedance would decline as a result of the shutdown and closure in place of Unit 3.

The facility currently has a Hazardous Materials Business Plan (HMBP) prepared in accordance with State and Federal regulations. No new hazardous materials will be introduced for the closure in place of Unit 3. A revision to the HMBP will be conducted to reflect the changes in hazardous materials usage and/or storage associated with the closure in place of Unit 3.

The shutdown of Unit 3 is expected to reduce the ammonia consumption and reduce the number of ammonia deliveries to the ESGS compared to the approved Project, but is not expected to reduce the storage quantity. Provisions of the California Health and Safety Code, Section 25500 *et seq*., require facility owners that store or handle acutely hazardous materials in excess of threshold quantities to develop a Risk

Management Plan (RMP) and submit it to appropriate local authorities, the EPA, and the designated local Administering Agency for review and approval. The RMP must include an evaluation of the potential impacts associated with an accidental release, the likelihood of an accidental release, the magnitude of potential human exposure, any pre-existing evaluations or studies of the material, and the accident history of the material. Condition of Certification HAZ-3 requires that the RMP be updated prior to the implementation of the approved Project. The shutdown to Unit 3 would trigger the requirement to update the RMP; however, Condition HAZ-3, as written, is sufficient to ensure that the owner will update the RMP in a timely manner, and no additional Conditions of Certification or modifications to condition HAZ-3 is required.

The storage and use of mineral and lubricating oils will also decline with the shut down and closure in place of Unit 3. This reduction would reduce the hazardous material deliveries to the Project, and reduce the likelihood of a spill of these materials on site.

ACMs and lead-based paint may be encountered when conducting the Unit 3 closure in place activities described in Section 2.0, Project Description. To the extent practicable, ACMs and lead-based paint will be encapsulated in place. Trained and licensed practitioners will conduct the encapsulation, as required by applicable LORS. Encapsulation is considered an acceptable long-term management practice for these materials. If encapsulation is not practical for these materials in some areas of Unit 3, the materials would be managed according to applicable LORS. Please see Section 3.13 for the waste management practices proposed for these materials.

3.4.4 Cumulative Impacts

The proposed modification will result in lower impacts to hazardous materials due to the reduction in use of hazardous materials compared to the approved Project and, therefore, approval of this Supplement will not result in any significant adverse cumulative impacts to hazardous materials beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.4.5 Conclusions and Recommendations

The Applicant has reviewed the proposed Project modifications for any potential issues related to hazardous materials management. Based on this review, the Applicant has determined that the approved Conditions of Certification remain adequate to mitigate the risk related to the storage and use of hazardous materials at the Project site. The closure in place of Unit 3 has less than significant impacts on hazardous material management and subsequent hazardous material usage will decline. No cumulative impacts are anticipated.

3.4.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established four Conditions of Certification. The Addendum I SAR agreed with the deletion of one condition (HAZ-4). The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.4.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.5 Land Use

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to land use beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.5.1 Introduction

The proposed Project modification involves the shutdown and closure in place of Unit 3. As Unit 3 is currently permitted and in operation, it conforms with all land use requirements. The closure in place would not alter the land use of the property and would not trigger the requirement to change the zoning of the property.

3.5.2 LORS Compliance

The proposed modification will comply with all applicable Land Use LORS described in the approved Project, as well as additional LORS identified in the 2007 PTA. No additional LORS have been identified that would impact the proposed Project Supplement.

3.5.3 Analysis

As previously described, the Project site is “close to industrial, residential, commercial and open space” uses. The ESPR site is consistent with existing and planned uses as well as city zoning designations at and around the site. The recently released City of El Segundo Specific Plan, which specifies current zoning requirements for the downtown area of El Segundo (north of El Segundo Boulevard to Mariposa Avenue) did not impact the current zoning of the ESPR site.

Land uses in the vicinity of the Project site include the following:

- To the north of the ESGS are the Chevron Marine Terminal where crude oil is offloaded from an underwater pipeline and transmitted to the Chevron El Segundo Refinery; the Hyperion Wastewater Treatment Plant, the largest wastewater treatment facility in the Los Angeles metropolitan area; and the Los Angeles Department of Water and Power’s Scattergood Generating Station, which is a generating station with three generating units and a once-through cooling water system with a net capacity of 818 MW. Further to the north are residences in the City of El Segundo. Dockweiler State Beach is located to the northwest of the ESGS. Los Angeles International Airport is located approximately 2.5 miles north of the site.
- To the east are Vista Del Mar Boulevard and the Chevron El Segundo Refinery, which is the largest petroleum refinery on the West Coast.

- To the south are residences and commercial uses within the City of Manhattan Beach, including a Manhattan Beach State Park.
- To the west are the El Segundo City Beach and Santa Monica Bay (Pacific Ocean).

The ESPR site is within the City of El Segundo's designated coastal zone. The portion of the City's coastal zone consists of a narrow ribbon of land approximately 0.8-mile in length and 200 yards in width, for a total area of approximately 50 acres.

The majority of the coastal zone of El Segundo is industrially developed, including ESGS and the Chevron Marine Terminal. The remaining area includes a narrow shoreline and small retail service station. The narrow sandy beach west of the ESGS and Chevron Terminal is publicly owned by the State Lands Commission and is maintained by the County of Los Angeles. The County of Los Angeles maintains a bicycle path (South Bay Bike Trail) that runs along the narrow shoreline and connects with County bike paths in the City of Los Angeles to the north and the City of Manhattan Beach to the south. Public access to the beach is provided north of the ESGS through Dockweiler State Beach. No scenic resources are found within the Project area. The use of the existing power plant complies with Coastal Act Section 50260, which encourages use of existing coastal dependent industrial sites within the coastal zone.

The 2007 PTA documented the intended changes in 1) the position of the seawall on the northwest corner of the site; 2) the delivery of oversize equipment via barge and across the beach; 3) the use of alternative off-site laydown and parking areas; and 4) the plant entrance road.

The shutdown of Unit 3 and its closure in place will not change the land use of any portion of the ESPR site, land use plans described in the AFC or Commission Decision, nor will it alter plans previously described in the 2007 PTA.

3.5.4 Cumulative Impacts

The proposed modification will result in no impacts to land use because no changes to the basic function of the facility will occur compared to the approved Project; no zoning changes are required. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to land use beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.5.5 Conclusions and Recommendations

The proposed modification will not result in any significant incremental or cumulative adverse impacts to land use beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the June 2008 SAR and October 2008 Addendum I SAR for the 2007 Dry Cooling Amendment. The Applicant contacted the relevant agencies and was not advised of other planned actions in the short term that would cause similar interference and, therefore, it can be concluded that there will be no cumulative impacts.

3.5.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established ten Conditions of Certification; the 2008 SAR recommended the deletion of one condition and recommended five additional conditions for a total of 14 Conditions of Certification. The Addendum I SAR agreed with minor editorial changes to a few of the conditions. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.5.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.6 Noise and Vibration

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to noise and vibration beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.6.1 Introduction

As discussed in detail in Section 2.0, Project Description, this Supplement proposes one modification to the ESPR Project that necessitates evaluation of environmental impacts and potential amendments to specific Conditions of Certification, specifically the shutdown and closure in place of existing Unit 3 at the ESGS. The permanent shutdown of Unit 3 would reduce noise impacts to the public from the operation of Unit 3, including noise from periodic events such as steam blows and use of the loudspeakers within the unit. This section describes potential affects that the proposed modification may have on noise criteria established for the approved Project, and evaluates the potential impacts to nearby noise sensitive receptors as a result of the proposed modification.

3.6.2 LORS Compliance

The proposed Project will comply with all applicable Noise LORS for the approved Project, as well as additional Noise LORS identified in the 2008 SAR. No new or additional LORS applicable to noise were identified that would be applicable to the proposed Project modification.

3.6.3 Analysis

The 2007 PTA identified a 1.5 dBA increase in the baseline sound level at the nearest residences for the approved Project, the closest of which are the 45th Street residences south of Unit 3 and the ESPR Project's southern property line in Manhattan Beach. The 1.5 dBA increase in the baseline sound level included the operational noise of Unit 3 in the existing (baseline) conditions and with the approved Project. As shown in the 2007 PTA, the 1.5 dBA increase is less than the limit of 2.0 dBA established by Condition of Certification NOISE-6 of the approved Project. Therefore, the ESPR Project as proposed in 2007 would comply with the noise criterion established by Condition of Certification NOISE-6. The 1.5 dBA increase is imperceptible to the human ear; it is widely accepted that the average healthy human ear can barely perceive changes of 3 dBA.

The proposed shutdown and closure in place of Unit 3 would eliminate the operational noise of Unit 3, and thereby reduce overall operational noise from the ESPR Project. This reduction in ESPR Project noise would result in a reduction of noise level experienced at nearby noise-sensitive receptors. In addition, the periodic noise associated with short-term events such as steam blows and loudspeaker use associated with Unit 3 would be eliminated. Finally, no demolition activities associated with the permanent shutdown of Unit 3 will be conducted and, therefore, no demolition-related noise would occur.

Therefore, the modification to the ESPR Project proposed by this Supplement would not result in a significant adverse impact.

3.6.4 Cumulative Impacts

The proposed modification will result in less impacts to noise and vibration due to the reduction in use of noise-emitting equipment such as pumps and motors. It will also result in a reduction in the periodic noise events such as steam blows. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to Noise and Vibration beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.6.5 Conclusions and Recommendations

The proposed Project modification will not result in any significant incremental or cumulative impacts to noise beyond those addressed in the CEC's 2005 Final Commission Decision for the ESPR Project and those identified in the CEC's June 2008 SAR and October 2008 Addendum I SAR of the 2007 Dry Cooling Amendment.

3.6.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision and the 2008 CEC Staff Analysis of the 2007 El Segundo Dry Cooling Amendment recommended 10 Conditions for Certification. No changes were made to the conditions in the SAR or the Addendum I SAR. The proposed shutdown and closure in place of Unit 3 does not result in any need to modify these Conditions of Certification. No additional Conditions of Certification are necessary or recommended.

3.6.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.7 Public Health

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to public health beyond those analyzed in the 2005 Commission Decision and the 2008 SAR and Addendum I SAR.

3.7.1 Introduction

The CEC's SAR included an analysis of the public health impacts associated with the proposed Project Supplement. This Supplement affects only the ERC offset package proposed for the Project's PTA and includes an updated discussion of the health risk assessment (HRA). Since the issuance of the SAR, the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) has updated the acute and chronic reference exposure levels (RELs) for six toxic air contaminants (TACs). To account for these changes to the RELs, it was necessary to re-analyze the public health impacts for the amended Project.

Re-analysis of the public health impacts using updated RELs has not changed public health impact assumptions, nor has the proposed ERC offset package. Thus, the Supplement has no effect on previously analyzed public health impacts discussed in the 2007 PTA or 2008 SAR and Addendum I SAR. No changes to the SAR or conditions are needed as discussed in Section 3.7.6.

3.7.2 LORS Compliance

The SAR (page 4.7-1) included a summary of the applicable Public Health LORS for the amended Project and concluded that the amended Project would comply with these LORS. The Supplement will have no effect on the applicable Public Health LORS discussed in the SAR. Since the issuance of the SAR, there are no new public health regulatory developments that apply to the amended Project.

3.7.3 Analysis

As discussed in Section 3.7.1, this Supplement does not affect the previously analyzed public health impacts discussed in the SAR. However, on December 19, 2008, OEHHA/CARB updated the acute and chronic RELs for six TACs. Consequently, it was necessary to re-analyze the public health impacts for the amended Project to account for this change to the RELs. The most current version of the OEHHA/CARB-developed and approved HARP for the ESPR Project was run. While the TAC emission levels and plume dispersion characteristics of the amended Project are unchanged from the previous analysis, the acute and chronic impacts did change due to the revision to the acute/chronic RELs. The results of the new HARP runs are shown in Table 3.7-1. As shown in Table 3.7-1, the revised impacts remain well below the public health significance levels. The HARP input and output files are included on the enclosed compact disc in Appendix D.

Other than the issues discussed above, this Supplement is not expected to have any impacts on the public health analyses previously performed for the amended Project. Included with the previously performed analyses are the cumulative public health impacts discussed in the SAR (pg 4.7-1).

Table 3.7-1 Acute and Chronic Health Impact Summary

Risk Parameter	Revised Impacts[a]	Previous Impacts[b]	Significance Level[c]
Maximum Acute Health Hazard Index	0.015	0.015	1.0
Maximum Chronic Health Hazard Index	0.0047	0.0024	1.0

a. Combined impacts for both new gas turbine units plus the continued operation of El Segundo existing boiler Unit 4.
b. SAR, June 2008, page 4.7-1, combined impacts for both new gas turbine units plus the continued operation of El Segundo existing boiler Units 3 and 4.
c. SAR, June 2008, page 4.7-1.

3.7.4 Cumulative Impacts

The proposed modification will result in less impact to public health due to the reduction in TAC emissions and, therefore, the proposed modification will not result in any significant adverse cumulative impacts to public health beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.7.5 Conclusions and Recommendations

The proposed modification will not result in any significant incremental or cumulative adverse impacts to public health beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the 2008 SAR for the 2007 Dry Cooling Amendment.

3.7.6 Proposed Modifications to Conditions of Compliance

The 2005 Commission Decision established no Conditions of Certification; the 2008 CEC Staff Analysis for the 2007 Dry Cooling Amendment did not recommend any conditions. The proposed shutdown and closure in place of Unit 3 does not result in the need to add conditions.

3.7.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

EL Segundo Power II LLC, 2000. Application for Certification for the El Segundo Power Redevelopment Project. December.

McKinsey, John, 2008. Letter to Mr. Steve Munro, CEC, "Comments on CEC Staff Analysis of Project's Petition to Amend. July 14.

SCAQMD, 2008. Draft Facility Permit to Operate, El Segundo Power, LLC. March 13.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.8 Socioeconomic Resources

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to socioeconomic resources beyond those analyzed in the 2005 Commission Decision or the 2008 SAR.

3.8.1 Introduction

The proposed shutdown and closure in place of Unit 3 will only result in minor changes to socioeconomic resources compared to the approved Project. For example, the approved Project would have required operations staff for the new units and Unit 3; the proposed modification would not require operations staff for Unit 3, as it will not operate. The most likely scenario for employment would be that the operations staff of Unit 3 will be retrained to operate the new R2C2 units. Thus, there will not be a real loss in employment, rather there would be fewer new jobs created. Similarly, the approved Project would have generated tax revenues from power sales from the new units only, while the proposed Supplement generated tax revenues from the new units less those tax revenues attributed to the operation of Unit 3. Furthermore, without the new offset package described in this Supplement, it can be concluded that the Project could not be built without an air permit and amended CEC license, and the jobs and tax revenues from the new units would not be realized.

3.8.2 LORS Compliance

The proposed modification will comply with all applicable Socioeconomic LORS described in the 2000 AFC, 2005 CEC Final Decision, and 2008 SAR. No additional LORS have been identified that would impact the proposed Project modification.

3.8.3 Analysis

This analysis focuses only on the Project modification proposed in this Supplement. The proposed modification would involve the permanent shutdown and closure in place of Unit 3 as described in Section 2.0, Project Description. The non-operational structures would be closed in place and would not be removed.

<u>Employment, Population and Housing</u>

Permanent shutdown and closure in place of Unit 3 will not lead to a significant increase in the short-term demand for employment. It is not anticipated that closure of Unit 3 will lead to a change in the long-term maintenance and operational employment as current Unit 3 employees will transfer to newly commissioned units when Unit 3 is shutdown. As a result, the proposed Project modification should not contribute to any significant or adverse impacts to local population or demand for housing.

<u>Public Services</u>

The proposed modification will not create a need for additional City of El Segundo services for fire and police. The approved Project will be equipped with a state-of-the-art fire suppression system; will utilize an on-site service water tank for fire needs; and will have a dedicated backup potable fire water line. The

backup potable fire water line that will be needed for the Project will be contracted and paid for by the Applicant.

Permanent shutdown of Unit 3 will not lead to any adverse impacts on the demand for medical services, educational services, or public recreational amenities as there are no significant changes anticipated in employment and, therefore, no corresponding changes in local population.

Utilities

Southern California Gas provides natural gas to the Project site. No expansion of the natural gas service to the site will be necessary as a result of the proposed modification. There will be a decrease in demand for natural gas compared to the approved Project. As natural gas is a valuable resource, this modification provides a net benefit to socioeconomic resources.

Southern California Edison (SCE) provides electricity to the site and community. No expansion of the electrical service to the site will be necessary as a result of the proposed modification. The proposed modification will reduce power generated by the ESGS compared to the approved Project.

The City of El Segundo provides water and sewer service within the City limits, and will provide potable water to the Project. Sanitary sewer discharge from the existing plant is to the sewer system operated by the City of Manhattan Beach. No expansion of water or sewer service to the site will be necessary as a result of the proposed modification. As discussed in more detail in Section 3.9, Soil and Water Resources, there will be a decrease in demand for both potable and reclaimed water compared to the approved Project. As water is a scarce and valuable resource, this modification provides a net benefit to socioeconomic resources.

Fiscal Impacts

As noted in the February 2005 Commission Decision, a Fiscal Impact Analysis is required to be completed prior to obtaining ground disturbance approval, in compliance with Condition of Certification Socioeconomics-2 (SOC-2). A summary of the five-year (or one-time revenue where applicable) estimated projected revenues for the Project as proposed in 2007 is provided below:

- Estimated Property Tax – $1.9 million (MM)
- Estimated Franchise Tax – $11.1 MM
- Estimated Utility User Tax – $23.2 MM
- Estimated Sales Tax – $3.0 MM
- Estimated Use Tax – included in sales tax
- Business License Fees (assumes $7,000 per year based on El Segundo Power fee) – $35,000
- Estimate Building Permit Fees – $0
- Other Revenues – unknown at this time

The shutdown of Unit 3 will not adversely impact the estimated financial benefits of the Project as shown above compared to the 2005 Final Commission Decision. However, anticipated loss of utility user tax and franchise tax for shutdown on Unit 3, based on 2008 and 2009, is approximately $500,000 per year.

3.8.4 Cumulative Impacts

The proposed modification will generally result in either lower impacts (or net benefits) to socioeconomic resources compared to the approved Project, or no impacts as there will be a decrease in demand for water and natural gas and no measurable change in demand for public services (police, fire). These consequences of the proposed modification will not result in any significant adverse cumulative impacts to socioeconomic resources beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR.

There will be a minor reduction in job growth, a minor reduction in tax revenues, and a net reduction in power generated by the facility compared to the approved Project. As noted, the proposed modification facilitates the installation and operation of the proposed Project; without the new offset package described in this Supplement, the Project would not be built and the jobs, tax revenues and power generated from the new units would not be realized. Therefore, the proposed modification is not expected to have a significant adverse cumulative impact to socioeconomic resource compared to the approved Project.

3.8.5 Conclusions and Recommendations

The proposed modification will not result in any significant incremental or cumulative adverse impacts to schools, housing, law enforcement, emergency services, hospitals, employment, or public services and utilities beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR.

3.8.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established two Conditions of Certification; the 2008 SAR and Addendum I SAR do not recommend additional conditions. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.8.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

El Segundo Energy Center, 2008. Fiscal Impact Analysis to Satisfy Condition of Certification SOC-3 El Segundo Power Redevelopment Project Docket No. 00-AFC-14C. September.

ESPR Project, 2000. Application for Certification. Submitted to the California Energy Commission on December 18.

3.9 Soil and Water Resources

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to soil and water resources beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.9.1 Introduction

This section analyzes potential effects on soil and water resources that could result from shutdown of Unit 3, specifically focusing on the potential for erosion and sedimentation of soil, use of water resources and degradation of surface and groundwater quality.

3.9.2 LORS Compliance

The proposed Project will comply with all applicable Soil and Water LORS described in the Commission's Decision, as well as additional LORS identified in the 2007 PTA. No additional LORS have been identified that would impact the proposed Project modification.

3.9.3 Analysis

The proposed Project modification involves the shutdown and closure in place of Unit 3. No excavation or other soil disturbance activities are anticipated. Generally, water would not be required for the decommissioning activities aside from some small amount that may be required for steam cleaning equipment or rinsing piping or equipment following the drainage of hazardous materials (e.g., ammonia). Following shutdown, Unit 3 would not require seawater for cooling, or potable or reclaimed water for steam cycle make-up.

Soil Erosion and Sedimentation

The power plant and on-site facilities are located near the beach, which is composed of sandy soil including beach sands. Very slow runoff, rapid permeability, and high susceptibility to wind erosion characterize the soil. As a result, the soil has low water capacity and chemical properties for nutrient retention.

Because Unit 3 will be closed in place, no soil excavation or disturbance to the current equipment configuration is expected. Hence, no adverse impacts are anticipated.

Water Resources

Units 3 and 4 share a common intake and outfall structure to supply and discharge seawater used for once-through cooling. Following the Unit 3 shutdown, there will be a substantial decrease in seawater intake and discharge through those structures; however, the ESGS will continue to use seawater for once-through cooling for Unit 4. The intake and outfall structure will remain in place and no changes are proposed to those facilities. The reduction in seawater flow through the common intake structure is expected to reduce impingement and entrainment mortalities of marine organisms caused by seawater intake. The reduction in seawater flow through the outfall is expected to reduce the impact of the thermal discharge.

Due to old infrastructure common to Units 3 and 4, the ESGS will need to continue use of seawater to suit operational limitations. Following the Unit 3 shutdown, the seawater intake and discharge rate is likely to be reduced by approximately 200 million gallons per day and certainly will not exceed the current volumes specified in the permit. The facility is committed to continually evaluate application of newer technology and system modifications to reduce seawater use in the future.

Steam-cycle makeup water on Unit 3 is provided by a combination of reclaimed water from West Basin Municipal Water District and potable water supplied by the City of El Segundo. The reclaimed water requirements are estimated to be reduced by 150,000 gallons per day on an average basis, and by 496,000 gallons per day during peak demand periods. The ESGS will continue to use potable water for drinking and sanitary purposes, and for fire emergencies. However, the Unit 3 shutdown will result in a net reduction in potable water consumption by approximately 88,000 gallons per day on an average basis, and 137,000 gallons per day during peak demand periods.

A comparison of the annual average and annual maximum water consumption between the current operations and following the shutdown of Unit 3 is shown in Table 3.9-1.

Table 3.9-1 Water Consumption for Unit 3

Water Source	Daily Average (gallons/day)		Daily Maximum (gallons/day)	
	Current Operation[a]	Proposed	Current Operation[a]	Proposed
Potable water from City of El Segundo	88,000	0	137,000	0
Recycled water from West Basin Municipal Water District	150,000	0	496,000	0
Seawater	200,000,000	0	200,000,000	0

a. Estimated.

Wastewater

Wastewater is expected to be generated during the permanent shutdown and in place closure processes as equipment will be purged, drained of lubricants, oils, and other liquids. Wastewater will also be generated due to miscellaneous cleaning activities. Wastewater generated during permanent closure of Unit 3 will be handled in compliance with the facility's compliance plans, including the HMBP, National Pollutant Discharge Elimination System (NPDES) permit, Spill Prevention Control and Countermeasure Plan and Condition of Certification WATER QUALITY-5. No process-related wastewater is expected to be generated from Unit 3 following the shutdown.

A variety of wastewater streams are generated during normal operations of Unit 3, including cooling water, steam-cycle blowdown, maintenance wash water, and sanitary discharge. All of these wastewater streams will be eliminated with the shutdown of Unit 3. The storm water discharge associated with Unit 3 will not be impacted in any significant way as a result of the shutdown. Estimated quantities of wastewater discharge before and after the shutdown of Unit 3 are presented in Table 3.9-2.

The storm water runoff associated with industrial activity at the ESGS is managed in accordance with the site's existing NPDES permit. The storm water runoff that is collected from outside bermed or graded storm water collection areas (uncontaminated runoff) is allowed to follow natural drainage patterns. ESGS is currently permitted for storm water treatment and discharge under an existing NPDES permit and associated operating plans. The Project owner will handle, treat, and discharge runoff from Unit 3 area in accordance with its NPDES permit. The Project owner will revise its existing Storm Water Pollution

Prevention Plan following the shutdown of Unit 3 to reflect the changes in facility operations, as required by applicable LORS.

Table 3.9-2 Unit 3 Wastewater Discharges

Waste Stream	Source	Gallons/Day[a]	
		Current Operation[b]	Proposed
Circulating Water Return	Condenser	200,000,000	0
Storm Water Oil-Water Separators Effluent	Plant and equipment drains, area precipitation runoff	3,100	3,100
Existing Retention Basin	Boiler blowdown, oil water separator effluent	80,000	0
Total Effluent to Outfall 002	Circulating water and oil-water separator effluent	200,000,000	0
Total Sanitary Effluent to City Sewer[c]	Sanitary Drain System	750	750

a. All numbers are approximate based on peak discharge conditions.

b. Estimated.

c. Assumes 0.52-gallon per minute, 24-hour day.

3.9.4 Cumulative Impacts

The proposed modification will result in less impacts to soil and water resources compared to the approved Project as there will be a decrease in reclaimed and potable water consumption, a decrease in seawater use for cooling, and a decrease in wastewater discharge. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to soil and water resources beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR or Addendum I SAR.

3.9.5 Conclusions and Recommendations

No construction, demolition or other kind of soil disturbance activities are expected due to Unit 3 shutdown; hence, no significant impact to soil is anticipated. The shutdown of Unit 3 will result in savings of valuable water resources and will not have any significant adverse impacts on water resources or water quality. There are no potential adverse cumulative impacts due to shutdown of Unit 3.

3.9.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established six Water Quality and two Water Resources Conditions of Certification, and no conditions related to Soils. In the 2008 SAR, Staff proposed the addition of Conditions of Certification WATER RES-3, -4, and -5, as well as WATER QUALITY-7, -8, -9, and -10. Staff also proposed the deletion of WATER RES-1 and -2 and WATER QUALITY-4, -5, and -6. Additional changes to the conditions were made in the Addendum I SAR. The proposed shutdown and closure in place of Unit 3 does not result in any need to modify any of these conditions, and no new conditions are recommended.

3.9.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. June.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.10 Traffic and Transportation

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to traffic and transportation beyond those analyzed in the 2005 Commission Decision or the 2008 SAR or Addendum I SAR.

3.10.1 Introduction

With respect to traffic and transportation, this Supplement proposes one modification to the ESPR Project that necessitates evaluation of potential impacts and potential amendments to specific Conditions of Certification. The proposed Project modification involved the shutdown and closure in place of Unit 3. As a consequence of this shutdown, there will be a reduction in workforce compared to the approved Project, and a reduction in material deliveries and service calls to the facility compared to the approved Project.

3.10.2 LORS Compliance

The Final Commission Decision certifying the ESPR Project found it to be in compliance with applicable LORS. As described in this Supplement, the modifications proposed are consistent with applicable LORS, and the Supplement will not alter the assumptions or conclusions made in the CEC's Final Commission Decision for the ESPR Project.

3.10.3 Analysis

The proposed shutdown and closure in place of Unit 3 would reduce the expected number of employees/workforce at the Project site. Unlike Units 1 and 2, which are to be and are being demolished, the Unit 3 structure is to a great extent integral with the Unit 4 structure and will remain in place until some future time. Unit 3 will be maintained cosmetically and structurally to ensure that is does not become an eyesore or a safety or environmental hazard. As such, no new construction activity/traffic is assumed with the proposed modification.

The reduction in workforce will result in a minor reduction in worker commute trips compared to the approved Project. The shutdown of Unit 3 will also result in a reduction in commercial vehicle traffic related to material deliveries (e.g., ammonia) and service calls (e.g., uniform laundry service, boiler maintenance contractors, waste transporters). Otherwise, there is no change from the previously noted 2008 SAR conclusions that proposed modifications do not adversely impact traffic safety, do not change any

conclusions regarding parking and operations, and do not cause a significant adverse impact to any aspects of the Project relating to construction, workforce, truck traffic or deliveries.

3.10.4 Cumulative Impacts

The proposed modification will result in less impacts to traffic and transportation as there will be a reduction in the number of worker commute trips, a reduction in service vehicle trips and a reduction in the number of material delivery trips to the facility compared to the approved Project. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to traffic and transportation beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR.

3.10.5 Conclusions and Recommendations

The minor reduction in commercial vehicle and worker commute traffic associated with the proposed modification will not cause a significant adverse impact to traffic or transportation resources either individually or cumulatively compared to the approved Project as determined in CEC's Final Commission Decision for the ESPR Project, or compared to the impacts identified in the 2008 SAR.

3.10.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision imposed seven Conditions of Certification related to Traffic and Transportation. The 2008 SAR did not recommend any changes to those conditions. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.10.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1 . October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.11 Transmission Line Safety and Nuisance

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to transmission line safety and nuisance beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.11.1 Introduction

The proposed shutdown and closure in place of Unit 3 would reduce the off-site transmission of power from the ESPR Project to SCE compared to the approved Project because the proposed modification would reduce power generated at ESGS compared to the approved Project.

3.11.2 LORS Compliance

The proposed Project will comply with all applicable Transmission Line Safety and Nuisance LORS described in the approved Project, as well as additional LORS identified in the 2008 SAR. No new or additional LORS applicable to transmission line safety and nuisance were identified that would be applicable to the proposed modification.

3.11.3 Analysis

The original Commission Decision considered the proposal that power generated from the ESPR Project would be transmitted off site to the SCE 230 kilovolts (kV) El Segundo Switchyard that is adjacent to ESGS. The transmission would be made using an existing SCE transmission line, and no new off-site transmission lines would be built in connection with the proposed Project. The only new lines would be the two on-site 230-kV overhead connections between the new replacement generating units and the SCE Switchyard. These replacement lines would be located within the same route as the connecting lines for the existing 1950s vintage Units 1 and 2, which would be replaced.

The possibility of health effects from exposure to electric and magnetic files were considered, and a Condition of Certification was established to ensure the ESPR Project would design and construct lines in compliance with the California Public Utilities Commission policies and regulations.

In the 2008 SAR, CEC Staff concluded that the modification proposed in the 2007 PTA would have no adverse impact on aviation safety, would not change any conclusions regarding radio and television interference, and would not significantly change any aspects of the Project relating to audible noise, fire hazard or electrical shock hazard compared to the approved Project. Because the modification proposed in this Supplement would reduce power transmission from the ESGS, the shutdown of Unit 3 would not adversely impact those conclusions.

3.11.4 Cumulative Impacts

The proposed modification will result in less impacts to transmission line safety and nuisance as there will be a decrease power transmission from the facility compared to the approved Project. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to transmission line safety and nuisance beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR.

3.11.5 Conclusions and Recommendations

The proposed Project modification will not result in any significant incremental or cumulative impacts to transmission line safety and nuisance beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the 2008 SAR and Addendum I SAR.

3.11.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision and the 2008 SAR recommended three Conditions of Certification related to Transmission Line Safety and Nuisance. The proposed shutdown and closure in place of Unit 3 reduces the amount of power transmitted off site. Therefore, the post-Project electric and magnetic radiation and television or radio signal interference should be reduced. However, the Applicant is not proposing changes to the existing Conditions of Certification.

3.11.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.12 Visual Resources

This section examines whether the proposed Project Supplement to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to Visual Resources beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.12.1 Introduction

The proposed shutdown and closure in place of Unit 3 would not entail demolition. Associated with the permanent shutdown and closure in place of Unit 3, the Applicant will comply with the existing Condition of Certification (VIS-7), which requires that lighting be either turned off or modified such that the lights don't impact the surrounding community. The permanent shutdown of Unit 3 will eliminate any stack discharges associated with the Unit operation, including visible plumes. The Applicant intends to maintain the Unit 3 structure (e.g., painting) to ensure that the Unit will not become an eyesore.

3.12.2 LORS Compliance

There are no changes to the Visual Resources LORS as specified in the Commission Decision for the ESPR Project, the 2007 PTA, and the 2008 SAR and Addendum I SAR. The proposed modification will not adversely impact compliance with applicable LORS.

3.12.3 Analysis

This assessment analyzes the change in visual impacts between the approved Project and the modification proposed in this Supplement. Note that the permanent shutdown of Unit 3 will not require any demolition or construction activities and, therefore, adverse impacts to visual resources are not expected due to short-term construction activities.

<u>Objectionable Appearance</u>

The site is industrial in appearance, exhibiting complex forms and lines and geometric shapes. The existing generating units and two large fuel oil storage tanks dominate the site. Within the generating station, the units are painted blue and yellow and the exhaust stacks are light gray. The immediate Project vicinity includes an industrial marine terminal for offloading oil from ships to the north and the Chevron El Segundo Refinery to the east, beaches to the west, and residences to the south.

The Project modification proposed in this Supplement is the permanent shutdown of Unit 3, which would be closed in place. As it is an existing structure and the Applicant is not proposing to modify the structure in any way as a result of the Project, the shutdown would have no adverse impact with respect to the appearance of the site.

Viewer Exposure

The power plant can be viewed from all directions. From the west, the site is visible from Santa Monica Bay and by users of the beach or bike path immediately adjacent to the site. From the North, beachgoers view the site and will have uninterrupted views of the new facility because Units 1 and 2 to be replaced are located on the north side of the site. The new units will partially obscure the view of Unit 3 from this direction. Motorists driving south on Vista Del Mar Avenue can view the upper portions of the existing facility directly above their line of sight. From the east, the only views of ESGS exist for users of Vista Del Mar as it passes adjacent to ESGS. The facility can also be seen from the Chevron El Segundo Refinery. The refinery, however, blocks further views from the East. From the south, residences at the northern edge of Manhattan Beach, particularly those along 45th Street, can see various part of the facility depending upon distance and height above sea level of the residence. Users of the beaches south of the facility can see portions of the generating units. The proposed modification would not impact viewer exposure to the ESGS.

Key Observation Points

Because the proposed modification involves the shutdown of the existing Unit 3 without its removal, there will be no impact to the visual aspects of the facility from any key observation points.

California Coastal Act Compliance

Because the proposed modification involves the shutdown and closure in place of the existing Unit 3, compliance with the California Coastal Act is unaffected.

View Blockage

View blockage describes the extent to which any previously visible landscape features are blocked from view by the Project. Blockage of higher quality landscape features by lower quality features causes adverse impacts. The shutdown of the existing Unit 3 and closure in place would not adversely impact or contribute to view blockage compared to the approved Project.

Scenic Degradation

There are no State designated scenic highways within the Project viewshed. Therefore, the proposed modification would not have a significant adverse impact to scenic resources within a State scenic highway corridor.

Lighting

Power plant lighting could cause nighttime visual impacts, unless mitigated by designing hooded or shielded lighting consistent with worker safety. With the shutdown of Unit 3, the owner expects to reduce the lighting to the minimum lighting required for worker safety and aircraft warning.

Condition of Certification VIS-7 requires that, prior to demolition of existing storage tanks (a component of the approved Project), the Project owner must modify the permanent lighting on Unit 3 (and Unit 4) 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. The options available through VIS-7 for compliance include fixture replacement, retrofitting existing fixtures and turning off the

lighting. As part of the permanent shutdown process, the owner will modify the permanent lighting in accordance with VIS-7. This condition, as written, is sufficient to ensure that following shutdown, Unit 3 can and will comply with VIS-7 and no changes to the condition are required.

Visible Plumes

The shutdown of Unit 3 will permanently eliminate plumes that occasionally emanate from the Unit 3 stack, thus providing a benefit with respect to visible plumes from the ESGS.

3.12.4 Cumulative Analysis

Cumulative impacts to visual resources would occur where Project facilities or activities (such as construction) occupy the same field of view as other built facilities or impacted landscapes. It is also possible that a cumulative impact could occur if a viewer's perception is that the general visual quality of an area is diminished by the proliferation of visible structures (or construction effects such as disturbed vegetation), even if the new structures are not within the same field of view as the existing structures. The significance of the cumulative impact would depend on the degree to which 1) the viewshed is altered; 2) visual access to scenic resources is impaired; 3) visual quality is diminished; or 4) the project's visual contrast is increased.

The permanent shutdown and closure in place of Unit 3 will be beneficial to visual resources by the reduction in visible plumes and the reduction in nighttime lighting. Otherwise, the shutdown and closure in place of Unit 3 is expected to have no adverse impact to visual resources. With either no adverse impact, or benefits to visual resources, no significant adverse cumulative impacts are expected as a result of the proposed modification.

3.12.5 Conclusions and Recommendations

The permanent shutdown of Unit 3 will provide minor visual benefits by the reduction in visible plumes and the reduction in lighting. Otherwise, the shutdown of Unit 3 is expected to have no adverse impact to visual resources. No changes to the Conditions of Certification are requested and no new conditions are required or recommended.

3.12.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established nine Conditions of Certification for the approved Project related to Visual Resources. The 2008 SAR recommended changes to one condition and deletion of one condition. In the October 2008 Addendum, Staff recommended additional changes to one condition. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions, or add new conditions.

3.12.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.13 Waste Management

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to waste management beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.13.1 Introduction

Although the Unit 3 structure will remain in place, some hazardous and non-hazardous wastes are expected to be generated during the shutdown and closure in place of Unit 3. Hazardous wastes generated are expected to include aqueous ammonia, used oil, lead-based paint, fluorescent lighting and ballasts, and possibly ACMs. Non-hazardous wastes are expected to include debris, cleaning supplies, empty containers, broken or used parts, filters, and used loudspeakers. Once Unit 3 is permanently shutdown, an overall reduction in the quantity of hazardous and non-hazardous wastes generated from the facility is expected.

3.13.2 LORS Compliance

There are no changes to the applicable LORS as a result of the proposed modification. Please refer to the 2005 Commission Decision on the ESPR Project for the list of Waste Management LORS.

Permanent shutdown of Unit 3 will produce relatively small volumes of hazardous and non-hazardous wastes, which can be managed under existing spill control and waste management plans. The Applicant concludes that Unit 3 can be decommissioned in full compliance with existing LORS and without modification of the Conditions of Certification.

3.13.3 Analysis

The Applicant has reviewed the proposed modification for potential environmental impacts and consistency with applicable LORS. The facility currently operates under a Waste Management Plan, which provides for recycling to the extent practicable.

<u>Unit 3 Permanent Shutdown and Closure in Place</u>

Although it will be removed from service, Unit 3 will be maintained cosmetically and structurally. The following specific activities may result in generation of wastes:

- Piping will be drained and capped. Pipe contents (e.g., aqueous ammonia, lubricating fluids) will be recycled or disposed of as hazardous waste. Draining will be conducted in accordance with Best Management Practices for preventing and containing spills. Although the volume of this material has not been determined, it will not exceed the capabilities of existing waste management facilities such as containment structures or waste storage areas.
- Machinery will be partially drained in a manner consistent with preserving its marketability. Lubricating oil recovered from machinery will be recycled as used oil. Associated filters will also be recycled or disposed. Used oil and used oil filters are routinely disposed as a part of facility operations and procedures are detailed in the facility's waste management plans and procedures.

- External lighting on Unit 3 will be disconnected with the exception of lighting required for safe access to and egress from Unit 3, and for the safe operation of Unit 4. Some lighting bulbs and fixtures may contain mercury, and the lighting ballasts may contain polychlorinated biphenyls. Personnel trained in the evaluation of hazardous wastes will assess the external lighting units removed from the facility, and waste materials will be disposed or recycled appropriately.
- Most loudspeakers on Unit 3 will be disconnected. These speakers will be evaluated, but will likely be disposed as non-hazardous waste or recycled as scrap metal. The volume of this material is insignificant relative to the facility's overall waste volume.
- ACMs and lead-based paint are known to exist at the facility, and while the Applicant plans to leave these materials undisturbed and/or encapsulate in place, some quantity of these materials may be removed, if they cannot be safely left in place.
- Additional equipment such as motors, pumps, and transformers may be removed from Unit 3. Preference will be given to the sale or recycling of this equipment. Should it need to be disposed, it will be evaluated for its hazardous material/waste content and disposed appropriately.

Completion of a survey of ACMs and lead-based paint is required by Condition of Certification WASTE-8. ACMs and some lead-based paint will be encapsulated in place. When necessary, a trained and licensed subcontractor will perform the work. Since the goal of this action is containment in place, the volume of waste produced, if any, is likely to be small and would not require modification of the Conditions of Certification.

Continuing Operations

The shutdown and closure in place of Unit 3 will reduce the volume of hazardous and non-hazardous wastes produced by the facility compared to the approved Project. Operational hazardous and non-hazardous wastes include lubricating oil and filters, maintenance-related trash and debris, empty containers, broken or used parts, used packaging materials, and used air filters. The volume of each of these wastes is expected to decline compared to the approved Project. These reductions are also expected to reduce the cumulative effects of the Project.

Disposal Capacity

Hazardous and non-hazardous waste from shutdown activities would be disposed of at Class I, II, or III landfills, depending on the waste type. The ESPR AFC identifies three non-hazardous waste disposal facilities in the area. The landfills are located in Corona, California (permitted disposal of 4,000 tons/day until 2050), Simi Valley, California (4,000 tons/day from 2020 to 2050) and Orange County, California (8,500 tons/day through 2024). There are three Class I landfills permitted to accept hazardous waste. These are Buttonwillow (Safety Kleen, Kern County, California), Kettleman Hills (Chemical Waste Management, Kings County, California), and Laidlaw (Imperial County, California). There is in excess of 22 million cubic yards of remaining hazardous waste capacity in these landfills. There is more than adequate disposal capacity for both hazardous and non-hazardous wastes expected from the activities related to the shutdown of Unit 3. Ultimately, the shutdown of Unit 3 decreases the facility's demand for regional waste disposal capacity.

3.13.4 Cumulative Impacts

The proposed modification will result in less impacts to Waste Management due to a reduction in waste volumes generated compared to the approved Project and, therefore, the proposed modification will not result in any significant adverse cumulative impacts to Waste Management beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.13.5 Conclusions and Recommendations

Based on this review, the Applicant has determined that the proposed supplement is consistent with Waste Management LORS and no new or modified conditions of certification would be needed. The Applicant concludes that the proposed modification would not cause a significant adverse direct or cumulative impact on Waste Management.

3.13.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established eight Conditions of Certification for the approved Project. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions, and no new conditions are required or recommended.

3.13.7 References

California Integrated Waste Management Board, 2009. California Integrated Waste Management Board (CIWMB), Solid Waste Information System (SWIS), accessed via website at http://www.ciwmb.ca.gov/SWIS/Default.htm. December.

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

3.14 Worker Safety and Fire Protection

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to worker safety and fire protection beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

3.14.1 Introduction

The permanent shutdown and closure in place of Unit 3 would result in the removal of certain hazardous substances from the unit, including ammonia and natural gas, reduce continuous noise from equipment such as pumps and motors, and will reduce episodic noise associated with activities such as steam blows and loudspeaker use. The Applicant intends to maintain the lighting and communication system (loudspeakers) necessary for worker safety, and intends to erect barriers and partitions to prevent unauthorized access to Unit 3 following shutdown. The existing fire sprinkler system will remain in place and will be maintained in good working order following shutdown of Unit 3.

3.14.2 LORS Compliance

This modification is expected to comply with the applicable LORS identified for the approved Project, and the proposed modification will not affect the compliance with the applicable Worker Safety and Fire Protection LORS.

3.14.3 Analysis

The 2005 Commissions' Decision divides the worker safety analysis into three topic areas: Fire Protection, Noise, and Safety and Injury Prevention. These topic areas will each be discussed in this section as they relate to the proposed shutdown and closure in place of Unit 3.

Fire Protection

The facility's existing fire water distribution system will remain unchanged and no additional fire hazards are associated with the shutdown and closure in place of Unit 3. There will be an overall decrease in the fire hazard for the facility since the natural gas supply to Unit 3 will be disconnected and capped. There are no adverse fire protection impacts posed by the proposed modification.

Noise

The proposed shutdown of Unit 3 is expected to result in decreased noise levels for worker exposure to steam blows, loudspeaker use, pumps and motors. Therefore, there are no adverse noise impacts to Worker Safety posed by the proposed modification.

Safety and Injury Prevention

The proposed shutdown and closure in place of Unit 3 has the potential to impact worker safety. In order to prevent worker safety issues, several decommissioning activities are part of the proposed Project. The fluid systems in Unit 3 will be drained when not necessary to preserve marketability of the equipment. The natural gas supply line feeding the Unit 3 boiler will be disconnected and capped. The ammonia supply line for the SCR on Unit 3's exhaust will be decommissioned and disconnected. The asbestos insulation will be left in place and maintained (e.g., encapsulated) such that the asbestos would not become dislodged or airborne. Similarly, if lead-based paint is found, it would be left in place and the structure maintained such that the lead paint would not deteriorate or become dislodged from the unit. External lighting required for safe operation of Unit 4, as well as lighting required for emergency access, emergency egress and worker safety will remain functional on Unit 3.

In order to be in continued compliance with the Conditions of Certification WORKER-SAFETY-2, the Project Operations and Maintenance Safety and Health Program will be updated to reflect the proposed changes and submitted to the Compliance Project Manager and the city of El Segundo Fire Department. The condition, as worded, is sufficient to ensure compliance and no changes are recommended.

3.14.4 Cumulative Impacts

The proposed modification will result in less impacts to Worker Safety as there will be a decrease is worker exposure to hazardous materials, flammable materials and noise compared to the approved Project. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to worker safety beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

3.14.5 Conclusions and Recommendations

The proposed Project is not expected to result in any significant adverse impacts to worker health and safety beyond those addressed in the CEC's Final Commission Decision or the SAR. The implementation of the approved Conditions of Certification, WORKER SAFETY-1 through WORKER SAFETY-6, will prevent any additional risks associated with worker safety and would assure that the proposed modification will comply with all of the applicable LORS.

3.14.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision established three Conditions of Certification and the 2008 SAR recommended three additional conditions. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

3.14.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

4.0 Engineering Analysis

4.1 Facility Design

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to facility design beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

4.1.1 Introduction

The original Commission Decision for the ESPR Project described the facility design analysis as encompassing the civil, structural, mechanical and electrical engineering aspects of the Project, and verifying that the Project has been described in sufficient detail to provide reasonable assurance that it can be designed and constructed 1) in accordance with all applicable laws and regulations, 2) in a manner that protects environmental quality and assures public health and safety, and 3) examines whether any special design features should be considered to deal with conditions unique to the site. The CEC's design review and construction inspection process is designed to ensure compliance with the California Building Code (CBC) in effect at the time of construction. The proposed modification will permanently shut down and close in place Unit 3. The shutdown of Unit 3 would not require any modification to the proposed new generating units and would require minor modifications to the services and utilities that are shared with Unit 4 so that Unit 4 can operate independently.

4.1.2 LORS Compliance

The proposed modification will comply with all applicable facility design LORS identified for the approved Project, as well as additional LORS identified in the SAR. No new or additional LORS applicable to facility design were identified that would be applicable to the proposed modification.

4.1.3 Analysis

The proposed shutdown and closure in place of Unit 3 would not affect facility design conditions associated with construction or operation of new equipment. Closure in place of Unit 3 would require development of plans to address such issues as removal of any hazardous materials or hazardous wastes, establishing access restrictions and physical barriers for safety purposes, and continuing maintenance of equipment that could deteriorate. However, these are issues that are separate and distinct from the Conditions of Certification related to the facility design of a new power plant unit, and are addressed in the appropriate sections of this Supplement, e.g., Waste Management.

4.1.4 Cumulative Impacts

The proposed modification will result in no impact to facility design compared to the approved Project because the modification does not impact the design standards applied to new equipment. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to facility design beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

4.1.5 Conclusions and Recommendations

The proposed shutdown and closure in place of Unit 3 would not affect facility design conditions associated with construction of new equipment. The proposed Project modification will not result in any significant incremental or cumulative impacts to facility design beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or those identified in the SAR.

4.1.6 Proposed Modifications to Conditions of Certification

The Commission Decision included eight general construction conditions, three engineering geology conditions, four civil engineering conditions, four structural engineering conditions, three mechanical engineering conditions and one electrical engineering condition. The principal change to the facility design conditions presented in the 2008 SAR was the removal of equipment that would no longer be constructed from Condition GEN-2. As these conditions relate to facility design criteria and construction processes, the proposed modification does not require any additional changes to the existing Conditions of Certification, and no new conditions are required or recommended.

4.1.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

4.2 Geology and Paleontology

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to geology and paleontology beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

4.2.1 Introduction

The proposed modification involves the permanent shutdown and closure in place of Unit 3. The decommissioning process would not involve any construction, demolition, or changes to the equipment foundation that would require subsurface work.

4.2.2 LORS Compliance

There is one LORS that has been updated since Project certification. The CBC was updated in 2007. This update represents a minor change to Condition of Certification GEO-1 of the approved Project in the form of having to design and construct the Project to follow the 2007 CBC guidelines and not the CBC guidelines for 2001, as stated in the condition.

The Applicant has reviewed the 2007 PTA for potential environmental effects and consistency with applicable LORS. Based on that review, the Applicant determined that the Project, including the modification proposed in this Supplement, would comply with all applicable LORS.

4.2.3 Analysis

As noted, the decommissioning process would not involve any construction, demolition, or changes to the equipment foundation that would require subsurface work. In the absence of subsurface work, there would be no potential for adverse impacts to the structure due to the site geology, and no adverse impact due to geologic hazards such as landslides, mudslides, or soil erosion. The closure in place does not adversely impact the potential for earthquakes to occur or the potential for damage to existing structures from earthquakes. Further, in the absence of subsurface work, there would be no potential for adverse impacts to paleontological resources.

Most of the California coast has the potential for a tsunami (tidal wave) generated from an earthquake, submarine landslide, or distant volcanic eruption. The 1964 Alaskan earthquake generated tidal waves in Crescent City, California, and even caused minor damage to docked boats as far south as Los Angeles. The probability of a tsunami striking the coast is not something that can be reasonably anticipated or mitigated during the Project.

4.2.4 Cumulative Impacts

The proposed modification will result in no impact to geology or paleontology as no subsurface work is required and, therefore, the proposed modification will not result in any significant adverse cumulative impacts to Geology and Paleontology beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

4.2.5 Conclusions and Recommendations

The proposed shutdown and closure in place of Unit 3 would not adversely impact geology or paleontology. The proposed Project modification will not result in any significant incremental or cumulative impacts to geology or paleontology beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or those identified in the SAR and Addendum I SAR.

4.2.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision and the 2008 SAR recommended six Conditions of Certification related to geology and seven related to paleontology. The proposed shutdown and closure in place of Unit 3 does not result in the need to modify any of these conditions. No additional conditions are necessary or recommended.

Although there are no changes proposed to the Conditions of Certification, it is important to note that for condition GEO-1, the most current version of the CBC should be used. Currently, the most recent version of the CBC that is available is the 2007 edition.

4.2.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

4.3 Power Plant Efficiency

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to power plant efficiency beyond those analyzed in the 2005 Commission Decision or the 2008 SAR.

4.3.1 Introduction

The Commission Decision for the ESPR Project considered the Project's energy requirements and energy use efficiency; its effects on local and regional energy supplies and energy resources; its requirements for additional energy supply capacity; its compliance with existing energy standards; and any alternatives that could reduce wasteful, inefficient and unnecessary consumption of energy. The shutdown and closure in place of Unit 3 facilitates the replacement of older, less efficient generating units (i.e., Units 1, 2 and 3 of the ESGS) with two more efficient combined cycle gas turbines. While total power output of the facility will decrease compared to the approved Project, the overall efficiency will increase on a MW output per heat input basis.

4.3.2 LORS Compliance

The proposed Project will comply with all applicable Power Plant Efficiency LORS identified for the approved Project and in the SAR. No new or additional LORS applicable to power plant efficiency were identified that would be applicable to the proposed modification.

4.3.3 Analysis

The proposed shutdown and closure in place of Unit 3 would not affect power plant efficiency ratings associated with construction or operation of new equipment. The power previously generated by Unit 3 would most probably need to be generated elsewhere, but it is not possible to evaluate whether another facility would provide this replacement power at a higher or lower efficiency level. The amount of natural gas consumed at the ESGS will decrease as a result of the ESPR Project, but if the same amount of power were generated at another gas-fired facility in the region, the total natural gas demand would not change significantly.

4.3.1 Cumulative Impacts

The proposed modification will result in no impact to Power Plant Efficiency compared to the approved Project because the modification does not impact the efficiency standards applied to new equipment. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to power plant efficiency beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

4.3.2 Conclusions and Recommendations

The proposed shutdown and closure in place of Unit 3 would not affect power plant efficiency ratings associated with construction or operation of new equipment. The proposed Project modification will not result in any significant incremental or cumulative impacts to power plant efficiency beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the SAR.

4.3.3 Proposed Modifications to Conditions of Certification

The Commission Decision for the ESPR Project and the CEC Staff Analysis of the 2007 Dry Cooling Amendment SAR proposed no Conditions of Certification for efficiency, and the proposed shutdown and closure in place of Unit 3 does not require the addition of any new conditions related to power plant efficiency.

4.3.4 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

4.4 Power Plant Reliability

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to power plant reliability beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

4.4.1 Introduction

The original Commission Decision considered the ESPR Project's ability to have the Project available to provide power on demand, to maintain the facility, to have sufficient natural gas and water available, and to deal with natural disasters such as earthquakes. The SAR concluded that the use of dry cooling and R2C2 technology would improve the Project's reliability by reducing water demand and by increasing the facility's ability to respond to rapid changes in electrical demand. The shutdown and closure in place of Unit 3 facilitates the replacement of Units 1, 2 and 3 with the new combined cycle gas turbines.

4.4.2 LORS Compliance

There are currently no LORS applicable to power plant reliability.

4.4.3 Analysis

The proposed shutdown and closure in place of Unit 3 would not affect power plant reliability associated with construction or operation of new equipment. The power previously generated by Unit 3 would most

probably need to be generated elsewhere, but it is not possible to evaluate whether another facility would provide this replacement power at a higher or lower level of reliability.

4.4.4 Cumulative Impacts

The proposed modification will result in no impact to power plant reliability compared to the approved Project because the modification does not impact the reliability of the new equipment. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to power plant reliability beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

4.4.5 Conclusions and Recommendations

The proposed shutdown and closure in place of Unit 3 would not affect power plant reliability associated with construction or operation of new equipment. The proposed Project change will not result in any significant incremental or cumulative impacts to power plant reliability beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the SAR.

4.4.6 Proposed Modifications to Conditions of Certification

The Commission Decision for the ESPR Project and the SAR proposed no Conditions of Certification for power plant reliability, and the proposed shutdown and closure in place of Unit 3 does not require the addition of any condition related to power plant reliability.

4.4.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

4.5 Transmission System Engineering

This section examines whether the proposed Project modification to permanently shut down and close in place Unit 3 would result in any new or incremental environmental impacts to transmission system engineering beyond those analyzed in the 2005 Commission Decision or the 2008 SAR and Addendum I SAR.

4.5.1 Introduction

The original Commission Decision considered a power flow study for the ESPR Project by SCE, which indicates that under stressed conditions, an extensive number of existing line overloads would be slightly increased due to the Project. In addition, the study stated that a limited number of heavily loaded facilities would reach overload conditions with the addition of the approved Project. The study proposed four

mitigation alternatives for the identified overloads, and Applicant committed to Alternative 3, which uses Special Protection Systems and replaces equipment such as save traps and circuit breakers that are within the fence line of the existing ESGS facility. No new or modified transmission facilities beyond the Project's interconnection with the existing transmission system would be required. The permanent shutdown and closure in place of Unit 3 would potentially reduce the power supplied by the ESGS compared to the approved Project.

4.5.2 LORS Compliance

The proposed Project will comply with all applicable Transmission System Engineering LORS described in the approved Project, as well as additional LORS identified in the SAR. No new or additional LORS applicable to transmission system engineering were identified that would be applicable to the proposed modification.

4.5.3 Analysis

The proposed shutdown and closure in place of Unit 3 would reduce the off-site transmission of power from the ESPR Project to SCE. It would reduce the potential for transmission lines to overload under emergency or outage conditions, which the CEC stated would require mitigation; however, the degree to which mitigation could be reduced has not been evaluated.

4.5.4 Cumulative Impacts

The proposed modification will result in less impact to transmission system engineering compared to the approved Project because the modification reduces power transmission from the facility. Therefore, the proposed modification will not result in any significant adverse cumulative impacts to transmission system engineering beyond those addressed in the CEC's Final Commission Decision for the ESPR Project or the 2008 SAR and Addendum I SAR.

4.5.5 Conclusions and Recommendations

The proposed shutdown and closure in place of Unit 3 reduces the amount of power transmitted off site, and the resultant load on the existing electric grid. The proposed Project modification will not result in any significant incremental or cumulative impacts to transmission system engineering beyond those addressed in the CEC's Final Commission Decision for the ESPR Project and those identified in the SAR.

4.5.6 Proposed Modifications to Conditions of Certification

The 2005 Commission Decision and the 2008 SAR recommended eight Conditions of Certification. As these conditions relate to design criteria and processes, no changes to the existing Conditions of Certification are necessary as a result of the proposed modification.

4.5.7 References

California Energy Commission, 2005. Commission Decision, El Segundo Power Redevelopment Project, Application for Certification (00-AFC-14), Los Angeles County, CEC-800-2005-001-CMF. February.

California Energy Commission, 2008a. Staff Analysis Addendum I, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006-AD1. October.

California Energy Commission, 2008b. Staff Analysis, El Segundo Power Redevelopment Project, Dry Cooling Amendment (00-AFC-14), Los Angeles County, CEC-700-2008-006. June.

Shaw Environmental, Inc. 2007. Petition to Amend Final Commission Decisions for the El Segundo Power Redevelopment Project, CEC-800-2005-001-CMF. June.

5.0 Potential Affects on the Public and Property Owners

Consistent with the requirements of the CEC Siting Regulations Section 1769 (a)(1)(G), this section addresses the proposed Supplement's effects on the public.

5.1 Potential Effects on the Public

Impacts to the public are anticipated to be substantially lower than those analyzed during the previous license proceedings for the Project. The permanent shutdown and closure in place of Unit 3 facilitates the implementation of the Project as it was proposed in the 2007 PTA. In that Petition, the Applicant proposed use of the R2C2 power block design, which would eliminate the need for the previously approved once-through cooling, substantially reducing the amount of seawater intake and wastewater discharged back into the environment. The use of reclaimed and irrigation-quality water as the water source for proposed plant design eliminates the facility's reliance on potable water resources.

The shutdown of Unit 3 would result in a decrease in air emissions of both criteria pollutants and TAC, which would provide a direct benefit to local air quality and public health. The permanent shutdown of Unit 3 further reduces the Project's reliance on seawater for cooling, reduces the Project's consumption of both potable and reclaimed water, and further reduces the quantity of wastewater discharged to the ocean through Outfall 002. The permanent shutdown of Unit 3 would reduce noise impacts to the public, including noise from periodic events such as steam blows and use of the loudspeakers within Unit 3. The shutdown of Unit 3 would reduce the visual impacts from nighttime illumination, as many of the lights on the unit will be permanently shut off, and will eliminate visible plumes. The shutdown of Unit 3 would also reduce the quantity of hazardous and non-hazardous waste generated by the ESGS, and reduce hazardous material use at the facility and hazardous material shipments to the facility. All of these changes would provide benefits to the public. No significant adverse impacts, or adverse cumulative impacts were identified for the proposed modification.

5.2 List of Property Owners

A list of property owners was submitted with the 2007 PTA; as this submittal is a Supplement to that Petition, a new list of property owners is not provided.

5.3 Potential Effects on Property Owners

Consistent with the CEC Siting Regulations Section 1769(a)(1)(I), this section addresses potential effects of the proposed Supplement on nearby property owners, the public, and parties in the application proceeding.

The proposed modification is expected to result in an environmental benefit due to the elimination of once-through cooling in Unit 3, reductions in air emissions, potable and reclaimed water consumption, reductions in wastewater discharge, noise impacts, visual impacts, hazardous material use and waste generation. Therefore, impacts to property owners are expected to be lower than those analyzed during the license proceeding for the approved Project, and lower than evaluated for the Project as proposed in

the 2007 PTA. The proposed modification will not result in any significant adverse unmitigated environmental impacts either individually or cumulatively.

Appendix A

Name Change to El Segundo Energy Center, LLC, Approval

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June 30, 2008

VIA HAND DELIVERY AND EMAIL

Mr. Steve Munro
Compliance Project Manager
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814

CALIF ENERGY COMMISSION
00-AFC-14C
JUN 30 2008
RECEIVED IN DOCKETS

Re: El Segundo Power Redevelopment Project (00-AFC-14C)
Petition to Amend to Change Name of Owning Entity

Dear Mr. Munro:

Please find enclosed herein El Segundo Power II LLC's Petition to Amend ("Petition") the February 2005 Final Decision on the El Segundo Power Redevelopment Project ("ESPR") to change the owning entity of ESPR from El Segundo Power II LLC ("ESP II") to El Segundo Energy Center LLC ("ESEC"). ESEC, a Delaware LLC, was created to facilitate the transfer of ownership and all related rights to facilitate financing of the project. As is described in the enclosed Petition, ESEC has the same ownership interest in the project and structure as has ESP II. Thus, the requested change does not seek approval of any new ownership interests in ESPR.

Moreover, while ESPR awaits approval of another Petition to Amend (the "First PTA"), which seeks several project modifications, the instant Petition will have no affect on the information or data provided in support of the First PTA. Further, as is supported by Exhibit B to this Petition, ESEC agrees to comply with all Conditions of Certification set forth in the February 2005 ESPR Final Decision, as well as any and all new or modified Conditions of Certification set forth in the pending approval of the First PTA.

As approval of the requested change is necessary to facilitate financing, the Petitioner respectfully requests expedited review and approval of this administrative change. Preferably, ESP II hopes this administrative change can be approved at the July 30, 2008 California Energy Commission Business Meeting.

Oregon Washington
California Utah Idaho Colorado Minnesota

Should you have any questions or concerns regarding this Petition, please do not hesitate to contact me directly at (916) 447-0700.

Respectfully submitted,

John A. McKinsey

JAM:kjh
Enclosures
cc: Mr. Keith Richards, El Segundo Energy Center LLC
Mr. George Piantka, El Segundo Energy Center LLC
Mr. David Lloyd, NRG West
Mr. Michael Tierney, NRG West

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	**Docket No. 00-AFC-14C**
	)	
	)	**PETITION TO AMEND TO CHANGE**
EL SEGUNDO POWER	)	**NAME OF OWNING ENTITY FROM**
REDEVELOPMENT PROJECT	)	**EL SEGUNDO POWER II LLC TO**
	)	**EL SEGUNDO ENERGY CENTER LLC**
EL SEGUNDO POWER II LLC	)	
	)	

I. INTRODUCTION

This Petition seeks to amend the Final Decision issued by the California Energy Commission ("CEC") for the El Segundo Power Redevelopment Project ("ESPR"), 00-AFC-14 to recognize a transfer of ownership of the Project Owner of ESPR. Petitioner requests review and approval of this administrative change as the transfer of ownership, and all rights related thereto, is necessary to facilitate the financing of ESPR.

II. SUMMARY AND ANALYSIS OF PROPOSED CHANGE

Effective February 26, 2008, El Segundo Energy Center LLC ("ESEC") a Delaware LLC, was created to facilitate the transfer of ownership and all related rights from El Segundo Power II LLC ("ESP II") to ESEC.[1] ESEC is an indirect, wholly owned subsidiary of NRG Energy, Inc. ESEC has the same ownership interest in the project and structure as has ESP II; hence, there would be no difference in the actual operations of or responsibilities at ESPR. Thus this change, while technically a transfer of ownership, does not seek approval of any new ownership interests in ESPR; rather, such change requests recognition of a new entity that would replace the existing entity, ESP II.

ESPR currently has another Petition to Amend the Final Decision (the "First PTA") pending review before the CEC. The First PTA requested several project modifications and was submitted for CEC review on June 19, 2007. The instant Petition will have no affect on the information or data provided in support of the First PTA.

[1] Attached as Exhibit A to this Petition are copies of the Certificate of Formation of ESEC and a Certificate of Good Standing for ESEC, each issued by the Secretary of State of the State of Delaware.

III. INFORMATION REQUIRED PURSUANT TO SECTION 1769(A)(1) OF TITLE 20 OF THE CALIFORNIA CODE OF REGULATIONS

A. Complete description of the proposed modifications (including new language for any conditions that will be affected) - Section 1769(a)(1)(A)

The proposed modification is to simply change the owning entity from El Segundo Power II LLC, a Delaware LLC, to El Segundo Energy Center LLC, also a Delaware LLC. No changes to any conditions of certification are required to implement this change. Currently, most conditions use the term "project owner" to identify the project owner. It is already understood that ESEC would assume the role of project owner. While it is possible to change the conditions of certification to read "ESEC" rather than "project owner," such would be an unnecessary burden for this type of administrative change.

B. Necessity for the proposed modification - Section 1769(a)(1)(B)

This change is needed so as to allow the transfer of ownership of ESPR from ESP II to ESEC in an effort to facilitate financing of the Project. The financing of the project will mark a key step toward the development of sorely needed electric generating capacity in California, in particular the Southern California region. The ownership change is also needed sooner than the decision on the First PTA.

C. If the modification is based upon information that was known by the petitioner during the certification proceeding, an explanation why the issue was not raised at that time - Section 1769(a)(1)(C)

This change is not sought based on information that was known to the Petitioner at the time of the certification proceeding.

D. If the modification is based on new information that changes or undermines the assumptions, rationale, findings, or other bases of the final decision, an explanation of why the change should be permitted - Section 1769(a)(1)(D)

The need for the change in ESPR's project owner is, in part, founded upon the project's financing needs. In addition, ESPR has engaged in a recently executed Power Purchase Agreement. However, no additional or new information set forth herein undermines any assumptions, rationales, findings, or other bases of neither the Final Decision nor any other information prepared in support of the First PTA.

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E. An analysis of the impacts the modification may have on the environment and proposed measures to mitigate any significant adverse impacts - Section 1769(a)(1)(E)

Changing the entity that owns ESPR will have no effect on the environment. For that reason, no measures are required to mitigate potential environmental effects.

F. Impacts of the modification on the facility's ability to comply with applicable laws, ordinances, regulations, and standards - Section 1769(a)(1)(F)

There will be no impact of the ability of the facility to comply with any laws, ordinances, regulations or standards. ESEC is a properly created and registered entity (see Exhibit A). ESEC is also an indirectly, wholly owned subsidiary of NRG Energy Inc. and the change will not result in a change in personnel managing this project.

G. How the changes will affect the public - Section 1769(a)(1)(G)

There will be no effect on the public resulting from changing the owning entity.

H. Property owners potentially affected by the changes - Section 1769(a)(1)(H)

No property owners will be affected by this change. The name of the project, its address, representatives, and status are not affected by this change.

I. Potential effect on nearby property owners, the public, and the parties in the application proceedings - Section 1769(a)(1)(J)

There will be no affect on parties to the original application proceeding. The Final Decision issued in the original application proceeding was more than three years ago and this type of change is not expected to affect any parties.

///
///

V. CONCLUSION

Because changing the owning entity of ESPR is a minor, administrative change, and because all information required by Title 20 of the California Code of Regulations, section 1769, is provided, ESP II respectfully requests the CEC to approve this Petition. Because this change is needed quickly to facilitate financing of ESPR, which was recently awarded a power purchase agreement, ESP II respectfully requests this Petition be approved expeditiously.

Dated: June 26, 2008

STOEL RIVES, LLP

By: _____
John A. McKinsey
Attorneys for El Segundo Power II LLC and
El Segundo Power Energy Center LLC

EXHIBIT A

CERTIFICATE OF FORMATION AND CERTIFICATE OF GOOD STANDING
EL SEGUNDO ENERGY CENTER LLC

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "EL SEGUNDO ENERGY CENTER LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE TWENTY-SIXTH DAY OF FEBRUARY, A.D. 2008.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE NOT BEEN ASSESSED TO DATE.

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

4510138 8300

AUTHENTICATION: 6408287

080228145

DATE: 02-26-08

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 04:12 PM 02/26/2008
FILED 04:12 PM 02/26/2008
SRV 080228145 - 4510138 FILE

CERTIFICATE OF FORMATION
OF
EL SEGUNDO ENERGY CENTER LLC

1. Name: The name of the limited liability company is El Segundo Energy Center LLC.

2. Registered Office: The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

3. Organizer: The name and address of the sole organizer of the limited liability company is Lynne Przychodzki, NRG Energy, Inc., 211 Carnegie Center, Princeton, NJ 08540.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Formation of El Segundo Energy Center LLC this 26th day of February, 2008.

Lynne Przychodzki
Authorized Person

Delaware

The First State

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "EL SEGUNDO ENERGY CENTER LLC", FILED IN THIS OFFICE ON THE TWENTY-SIXTH DAY OF FEBRUARY, A.D. 2008, AT 4:12 O'CLOCK P.M.

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

4510138 8100

AUTHENTICATION: 6408286

080228145

DATE: 02-26-08

You may verify this certificate online at corp.delaware.gov/authver.shtml

EXHIBIT B

DECLARATION OF KEITH RICHARDS IN SUPPORT OF PETITION TO AMEND TO CHANGE NAME OF OWNING ENTITY FROM EL SEGUNDO POWER II LLC TO EL SEGUNDO ENERGY CENTER LLC

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	**Docket No. 00-AFC-14C**
	)	
	)	**DECLARATION OF KEITH RICHARDS IN**
EL SEGUNDO POWER	)	**SUPPORT OF PETITION TO AMEND TO**
REDEVELOPMENT PROJECT	)	**CHANGE NAME OF OWNING ENTITY**
	)	**FROM EL SEGUNDO POWER II LLC TO**
EL SEGUNDO POWER II LLC	)	**EL SEGUNDO ENERGY CENTER LLC**
	)	

I, Keith Richards, declare:

1. I am the Vice President of El Segundo Energy Center LLC ("ESEC"), an indirect, wholly owned subsidiary of NRG Energy, Inc. I have personal knowledge of the matters set forth herein and could competently testify thereto if called as a witness to this proceeding.

2. In or about February 2005, El Segundo Power II LLC ("ESP II") received from the California Energy Commission a Final Decision approving the El Segundo Power Redevelopment Project's ("ESPR") Application for Certification.

3. Subsequently, on or about June 19, 2007, ESP II filed a Petition to Amend the Final Decision ("First PTA"), which requested several project modifications to ESPR.

4. ESP II requests the Commission to approve the instant Petition to change owning entity of ESPR from El Segundo Power II LLC to El Segundo Energy Center LLC, as quickly as possible.

5. Approval of the requested change is necessary to allow the transfer of ESPR from ESP II to ESEC. This, in turn, will facilitate financing of the project, which is needed prior to the decision on the First PTA.

6. The instant Petition will have no effect on the information or data provided in support of the First PTA. Further, the instant Petition requests no changes to any Conditions of Certification.

7. ESEC agrees to comply with all Conditions of Certification set forth in the February 2005 ESPR Final Decision as well as any and all new or modified Conditions of Certification set forth in the pending approval on the First PTA.

This declaration is made under penalty of perjury under the laws of the State of California and is executed at Carlsbad, California on the date set out below.

DATED: June 27, 2008

Keith A Richards

KEITH RICHARDS, VICE PRESIDENT
EL SEGUNDO ENERGY CENTER LLC

MCT

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

DOCKET
00-AFC-14C
DATE AUG 13 2008
RECD. AUG 26 2008

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	Docket No. 00-AFC-14C
	)	
	)	Order No. 08-813-7
EL SEGUNDO	)	ORDER APPROVING Transfer of
POWER REDEVELOPMENT PROJECT	)	Ownership to El Segundo Energy Center,
	)	LLC

El Segundo Power II, LLC, has submitted a petition to amend the Energy Commission Decision in order to transfer ownership and operational control of the El Segundo Power Redevelopment Project to El Segundo Energy Center, LLC. The project owner has provided a declaration, under penalty of perjury, that El Segundo Energy Center, LLC agrees to comply with the conditions of certification in the Energy Commission's Decision for the El Segundo Power Redevelopment Project.

STAFF RECOMMENDATION

Staff has reviewed the petition and finds that it complies with the requirements of Title 20 of the California Code of Regulations, Section 1769(b), and recommends approval of the ownership change.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts the staff's recommendation and approves the transfer ownership and operational control of the El Segundo Power Redevelopment Project to El Segundo Energy Center, LLC.

IT IS SO ORDERED.

Date: August 13, 2008

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

JACKALYNE PFANNENSTIEL, Chairman

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

NOTICE OF RECEIPT

PETITION TO CHANGE OWNERSHIP of the
EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C)

On June 30, 2008, the California Energy Commission received a petition from the project owner, El Segundo Power II LLC, a wholly-owned subsidiary of NRG Energy, requesting approval to transfer the ownership and operational control of the El Segundo Power Redevelopment Project (ESPRP), to El Segundo Energy Center LLC, also a wholly-owned subsidiary of NRG Energy.

The project was certified on February 2, 2005, and is expected to begin construction on September 1, 2008. The facility is located in the City of El Segundo in Los Angeles County. ESP II submitted an amendment petition dated June 15, 2007, requesting several changes to the project design and conditions of certification. The Dry Cooling amendment petition is subject to a separate and unrelated proceeding and public review process and would be unaffected by the requested ownership change. The major changes proposed for the project are:

- Change from once-through ocean water cooling to a dry cooling system;
- Change the project capacity from 630 to 560 megawatts;
- Change the turbines to a Siemens rapid response, combined cycle system to allow much shorter startup durations;
- Allow for possible barge and beach delivery of major project components.

More information on the proposed facility changes can be found on the Energy Commission website at:
http://www.energy.ca.gov/sitingcases/elsegundo_amendment/documents/index.html.

ENERGY COMMISSION REVIEW PROCEDURES

A statement describing the change of owner and operator, signed under penalty of perjury by a representative of the proposed new owner/operator of the project, was submitted to the Energy Commission staff for review and approval as required by Title 20, California Code of Regulations, section 1769(b). The statement affirms that the new owner agrees to be bound by the requirements of the Energy Commission's Decision, as amended, for the Project and understands the obligations imposed by the Conditions of Certification. Based on the information provided, staff intends to recommend that the proposed change be approved by the Energy Commission at the August 13, 2008 business meeting.

The petition to change owner/operator is available on the Energy Commission's website at: http://www.energy.ca.gov/sitingcases/elsegundo/compliance/index.html . The order (if approved) will also be posted on the website. If you would like to receive a hard copy of the petition or the Energy Commission's Order if this change is approved, please complete the enclosed Information Request Form and return it to the address shown.

If you have any comments or questions, please contact Steve Munro, Compliance Project Manager, by telephone at (916) 654-3936, or by fax at (916) 654-3882, or via e-mail at: smunro@energy.state.ca.us within 14 days from the date of this notice.

For more information on how to participate in this proceeding, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489, or toll free in California at (800) 822-6228, or by e-mail at pao@energy.state.ca.us. If you require special accommodations, please contact Lourdes Quiroz at (916) 654-5146. News media inquiries should be directed to Assistant Director, Claudia Chandler, at (916) 654-4989, or by e-mail at mediaoffice@energy.state.ca.us.

Date: 7/15/08

EILEEN ALLEN, Manager
Siting and Compliance Office
Energy Facilities Siting Division

Enclosure: Information Request Form

Mail List #7046

STATE OF CALIFORNIA **CALIFORNIA ENERGY COMMISSION**

Privacy Policy: You will receive only the information requested, and the Energy Commission will make no additional use of your personal information.

INFORMATION REQUEST FORM

COMPLETE & MAIL TO: CALIFORNIA ENERGY COMMISSION
COMPLIANCE UNIT
ATTN: Steve Munro
1516 NINTH STREET, MS-2000
SACRAMENTO, CA 95814

OR FAX TO: (916) 654-3882

_____
NAME AND/OR TITLE (AS IT IS TO APPEAR ON MAIL LABEL)

_____
ORGANIZATION (IF APPLICABLE)

_____
STREET ADDRESS OR P.O. BOX

_____
CITY STATE ZIP CODE

PETITION FOR APPROVAL OF OWNERSHIP CHANGE

PLEASE CIRCLE THE DOCUMENTS YOU WOULD LIKE TO RECEIVE:

- PETITION TO CHANGE OWNERSHIP
- ENERGY COMMISSION ORDER

PROJECT: EL SEGUNDO POWER REDEVEOPMENT PROJECT
DOCKET NO: 00-AFC-14C
MAIL LIST NO: 7046

Appendix B

Proposed Modifications to Air Quality Conditions of Certification

PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

Staff has proposed modification to the Air Quality Conditions of Certification as shown below. (Note: deleted text is in ~~strikethrough~~, new text is **bold and underlined**)

AQ-05 ***Prior to turbine first fire, t~~T~~***he 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*** ~~commit specific emission reduction credits certificates for the ESPRP to offset the project emissions as provided for in **Table AQ-05-1**. The project owner shall not use of any ERCs to be surrendered in the **Table AQ-05-1** for purposes other than offsetting the ESPRP.~~

~~6.0 TABLE AQ-05-1 – Emission Offset Requirements~~

~~Certificate Number~~	~~Amount (lbs/day)~~	~~Pollutant~~
~~AQ003331~~	~~47~~	~~SO2~~
~~AQ003332~~	~~13~~	~~SO2~~
~~AQ003333~~	~~17~~	~~SO2~~
~~AQ003334~~	~~75~~	~~SO2~~
~~AQ003336~~	~~19~~	~~SO2~~
~~AQ003463~~	~~1~~	~~SO2~~
~~AQ003464~~	~~1~~	~~SO2~~
~~AQ004450~~	~~10~~	~~SO2~~
~~AQ004498~~	~~10~~	~~SO2~~
~~**AQ006561**~~	~~**9**~~	~~**SO2**~~
~~Total of Certificates Identified~~	~~**45**~~ ~~193~~	~~SO2~~
~~Total to be surrendered~~	~~**34**~~ ~~43~~	~~SO2~~
~~District Exempted Emission Offsets~~	~~**44**~~ ~~29~~	~~SO2~~
~~**Total surrendered & exempted emissions**~~	~~**78**~~ ~~**72**~~	~~**SO2**~~
~~AQ003327~~	~~70~~	~~VOC~~
~~AQ004580~~	~~20~~	~~VOC~~
~~AQ003722~~	~~95~~	~~VOC~~
~~AQ006559~~	~~6~~	~~VOC~~
~~AQ004686~~	~~25~~	~~VOC~~
~~Total of Certificates Identified~~	~~**146**~~ ~~185~~	~~VOC~~

~~Total to be surrendered~~	~~**146**~~ ~~140~~	~~VOC~~
~~**District Exempted Emission Offsets**~~	~~**222**~~	~~**VOC**~~
~~Total surrendered **& exempted** emissions~~	~~**368**~~ ~~140~~	~~**VOC**~~
~~AQ003352~~	~~6~~	~~PM10~~
~~AQ003462~~	~~2~~	~~**PM10**~~
~~AQ003550~~	~~2~~	~~**PM10**~~
~~AQ003568~~	~~3~~	~~**PM10**~~
~~AQ004145~~	~~1~~	~~PM10~~
~~AQ004322~~	~~5~~	~~PM10~~
~~AQ004323~~	~~3~~	~~PM10~~
~~AQ004326~~	~~2~~	~~PM10~~
~~Total of Certificates Identified~~	~~24~~	~~PM10~~
~~Total to be surrendered~~	~~24~~	~~PM10~~
~~1304 Exempted Emission Offsets~~	~~**282**~~ ~~173~~	~~PM10~~
~~Priority Reserve Purchased~~	~~**192**~~ ~~291~~	~~PM10~~
~~Priority Reserve from District~~	~~58~~	~~PM10~~
~~**Total surrendered & exempted emissions (less 20% redirected)**~~	~~**462**~~ ~~**546**~~	~~**PM10**~~

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 ~~*ERCs, Priority Reserve Credits and*~~ 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 II diesel engines or better***, unless certified by the onsite environmental compliance manager that tugboats equipped with Tier II diesel engines are not available. For purposes of this condition, "not available" means that proper size tugboats equipped with Tier II diesel engines are not in existence at the Ports of Los Angeles/Long Beach 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 II diesel engine.

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***, void the catalyst warranty, damage the oxidation catalyst, or diminish the operational life of the oxidation catalyst***.

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-SC8 The project owner/operator shall perform the following requirements prior to construction ground disturbance.*~~

~~*Demonstrate Compliance with Rule 1309.1 Section d(12) by either:*~~

~~*1. Providing a letter from the Executive Officer of the South Coast Air Quality Management District stating that the project capacity is within the first 2,700 MW of capacity requested pursuant to Rule 1309.1 Section d (12).*~~

~~*Or*~~

~~*2. Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the AQMD Rule 1309.1 section d(12). This letter must be on the Governing Board letter head and signed by all members of the Governing Board.*~~

~~*Demonstrate Compliance with Rule 1309.1 Section d(14) by either*~~

~~*1. Providing non-confidential evidence that the project owner/operator has entered into a long term power production agreement contract as required by AQMD Rule 1309.1 with Southern California Edison Company, San Diego Gas and Electric Company or the State of California.*~~

~~*Or*~~

~~*2. Providing a letter from the Governing Board of the South Coast Air Quality Management District granting a specific waiver to the long term contract requirement of AQMD Rule 1309.1 section d(14). This letter must be on the Governing Board letter head and signed by all members of the Governing Board.*~~

~~*Verification: All evidence submitted in compliance with Condition AQ-SC8 must be submitted 30 days prior to construction ground disturbance.*~~

~~**Conditions of Certification AQ-1 through AQ-27, below, pertain to the following equipment:**~~

~~1,896 MMBTU/HR Gas Turbine (ID No. D46) (A/N 378766) No. 5 GE Model 7241FA with Dry Low NOx combustors and steam injection for power augmentation connected directly to a 170 MW (nominal) Electric Generator (ID No. B47) and a Heat Recovery Steam Generator (ID No. B49) with 600 MMBTU/HR Duct Burners (ID No. D48) connected in common with Gas Turbine No. 7 to a 288 MW (nominal) steam turbine (ID No. B50). Selective Catalytic Reduction (ID No. C52) (A/N 378771) with 4379 cubic feet of total volume 3 feet height, 44 feet long, 41 feet wide with an ammonia injection grid (ID No. B53) and a CO oxidation catalyst (ID No. C51) with 1000 cubic feet of total volume connected to an exhaust stack (ID No. S54) (A/N 378771) No 5.~~

~~1,896 MMBTU/HR Gas Turbine (ID No. D55) (A/N 378767) No. 7 GE Model 7241 FA with Dry Low NOx combustors and steam injection for power augmentation connected directly to a 179 MW (nominal) Electric Generator (ID No. B56) and a Heat Recovery Steam Generator (ID No. B58) with 600 MMBTU/HR Duct Burners (ID No. D57) connected in common with Gas Turbine No. 5 to a 288 MW (nominal) steam turbine (ID No. B59). Selective Catalytic Reduction (ID No. C61) (A/N 378773) with 4379 cubic feet of total volume 3 feet height, 44 feet long, 41 feet wide with a ammonia injection grid (ID No. B62) and a CO oxidation catalyst (ID No. C60) with 1000 cubic feet of total volume connected to an exhaust stack (ID No. S63) (A/N 378773) No 7.~~

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.

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*** **8** ~~5~~ and ***7*** **9** ~~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.

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 combine cycle turbines ***5*** **8** ~~5~~ and ***7*** **9** ~~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.

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
NH3 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 at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx 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 NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

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 60 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 7 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 45 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*** **8** ~~5~~ and ***7*** **9** ~~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	~~Approved District & CPM Method~~ **AQMD Laboratory Method ~~301-~~ *307*-91**	~~1 hour~~ **NA**	~~Outlet of SCR serving this equipment~~ **Fuel Sample**
~~ROG~~ ***VOC*** Emissions	~~Approved~~ District Method **25.3**	1 hour	Outlet of SCR serving this equipment
PM10 Emissions	~~Approved~~ District ~~& CPM~~ Method **5**	**4 hours**	Outlet of SCR serving this equipment
NH3 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 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 and steam 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 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 with and without duct firing, when this equipment is operating at **maximum, average and minimum load**. ~~loads of 100, 75 and 50 percent of maximum load.~~

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 AQMD method 25.3, nor does it mean that it may be used in lieu of AQMD 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.

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

Verification: The project owner shall submit the proposed protocol for the initial source tests 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*** **8** ~~5~~ and ***7*** **9** ~~7~~.

Pollutants to be Tested	Required Test Method	Averaging Time	Test Location
SOx Emissions	~~Approved District & CPM Method~~ **AQMD Laboratory Method ~~301~~-*307*-91**	~~1 hour~~ **NA**	~~Outlet of SCR serving this equipment~~ **Fuel Sample**
VOC ~~ROG~~ Emissions	~~Approved~~ District Method **25.3**	1 hour	Outlet of SCR serving this equipment
PM Emissions	~~Approved~~ District ~~& CPM~~ 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 AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer for approval 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.

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 AQMD method 25.3, nor does it mean that it may be used in lieu of AQMD 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.

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

Verification: The project owner shall submit the proposed protocol for the source tests ***60*** ~~45~~ ~~60~~ 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 7 days prior to the proposed source test date and time. The project owner shall submit source test results no later than 45 days following the source test date to both the District and CPM.

AQ-9 The project owner shall submit to the Commission, Quarterly Operational Reports that include the fuel use associated with each gas turbine train ~~(both gas turbine and duct burner~~), 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, ***combustor tuning,*** 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 one hour and **15.44** ~~18.27~~ lbs/hour.
CO:	**2** ~~4~~- ppm at 15% oxygen on a dry basis averaged over 1 hour and **9.40** ~~11.12~~ lbs/hr.
SOx (measured as SO_2):	**1.47** ~~1.76~~ lbs/hr
VOC:	**5.37** ~~6.37~~ lbs/hr
PM10:	~~**9.49**~~ ***9.50*** ~~15.0~~ lbs/hr
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-10 ~~The operator shall vent the combined cycle turbine units 5 and 7, as well as their associated duct burners to the CO oxidation and SCR control whenever this equipment is in operation.~~

~~**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).~~ **Deleted**

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

Contaminant	Emissions Limit
~~CO~~	~~20,566 LBS IN ANY 1 MONTH~~
PM10	**6,935** ~~20,336~~ LBS IN ANY 1 MONTH
VOC	**4,930** ~~7,588~~ LBS IN ANY 1 MONTH
SOx	**1,065** ~~2,342~~ LBS IN ANY 1 MONTH

The operator shall calculate the emission limit(s) by using monthly fuel use data and the following emission factors: PM10 **4.66** ~~6.26~~ lbs/MMscf, VOC **2.93** ~~2.39~~ lbs/MMscf, and SOx 0.72 lbs/mmscf. Written records of startups shall be maintained and made available to the District.

~~The operator shall calculate the emission limit(s) for CO, during the commissioning period using fuel use data and the following emissions factors: 501 lbs/MMscf during the full speed no load tests and the part load tests when the turbine is operating at or below 60 per cent load, and 14 lbs/MMscf during the foll load tests when the turbine is operating above 50 per cent load.~~

~~The operator shall calculate the emission limit(s) for CO, after the commissioning period and prior to the CO CEMS certification, using fuel use data and the following emission factors: 100 lbs per startup and 4.55 lbs/MMscf for all other operations.~~

~~The operator shall calculate the emission limit(s) for CO, after the CO CEMS certification, based on readings from the certified CEMS. In the event the CO CEMS is not operating or the emissions exceed the valid upper range of~~

~~the analyzer, the emissions shall be calculated in accordance with the approved CEMS plan.~~

For the purposes of this condition, the limit(s) shall be based on the ~~total combined~~ emissions from ***each individual*** combined cycle gas turbine No. ***5*** **8** ~~5~~ and No. ***7*** **9** ~~7~~.

Verification: The project owner shall submit the monthly fuel use data and emission calculations to the CPM in the Quarterly Operation Reports (**AQ-9**).

AQ-12 The operator shall keep records, in a manner approved by the District, for natural gas fuel use during the commissioning period. **The owner/operator shall install and maintain a flow meter to accurately indicate the fuel usage of the turbines. The owner/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 ~~The operator may, at his discretion, choose not to use ammonia injection if the following requirement is met:~~

- ~~The inlet exhaust temperature to the SCR is 450 degrees F or less, not to exceed 3 hours during a cold startup, 2 hours during a warm startup, and 1 hour during a hot startup.~~

~~**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).~~ **Deleted**

AQ-16 The 2.0 ppm NOx emission limit(s) shall not apply during turbine commissioning**,** ***combustor tuning*** **, shutdown** and startup periods. **The commissioning period shall not exceed 415** ***operating*** **hours.** Startup time shall not exceed ~~3 hours per day~~ **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.** ~~The commissioning period shall not exceed 33 operating days from the date of initial start-up. The operator shall provide the AQMD with written notification of the start-up date. No more than one turbine shall be in start-up mode at any one time.~~ Written records of commissioning***, combustor tuning*** **, shutdowns** and start-ups shall be maintained and made available upon request from AQMD.

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** ~~4~~ PPM CO emission limit(s) shall not apply during turbine commissioning**,** ***combustor tuning*****, shutdown** and startup periods. **The commissioning period shall not exceed 415** ***operating*** **hours.** Startup time shall not exceed ~~3 hours per day~~ **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.** ~~The commissioning period shall not exceed 33 operating days from the date of initial start-up. The operator shall provide the AQMD with written notification of the start-up date. No more than one turbine shall be in start-up mode~~

~~at any one time.~~ Written records of commissioning***, combustor tuning*, shutdowns** and start-ups shall be maintained and made available upon request from AQMD.

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** ~~109~~ LBS/MMCF NOx emission limit(s) shall only apply during the turbine commissioning period ~~during the full speed no load tests and the part load tests when the turbine is operating at or below 60% load~~ to report RECLAIM emissions. The commissioning period shall not exceed 12 months from the point of 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** ~~33.9~~ LBS/MMCF NOx emission limit(s) shall only apply during the turbine commissioning period ~~during the full load tests when the turbine operating above 60% load to report RECLAIM emissions. This emission limit shall also apply during the interim reporting period~~ to report RECLAIM emissions. The interim reporting period shall not exceed 12 months from ~~the initial startup date~~ **the point of 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 80 lbs/hour NOx emission limit(s) shall only apply during turbine startups. Only one turbine shall be in startup mode at any one time. Startups shall not exceed 3 hours per day per turbine.~~ **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-9**.

AQ-21 ~~The 102 LBS/MMCF NOx emission limit(s) shall only apply to report RECLAIM emissions during the interim period for the duct burner. The interim reporting period shall not exceed 12 months from the initial start up date.~~

~~**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).~~ **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**
~~Condition no. **AQ-24**~~

Verification: See verifications for **AQ-2, and 3**~~, and **-24**~~.

AQ-24 The 2.0 PPMV NOx emission limit(s) are 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-9**.

AQ-25 The **2** ~~4~~ PPMV CO emission limit(s) are 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-9**.

AQ-26 The 5 PPMV NH3 emissions limit(s) are averaged over 60 minutes at ~~3~~ ***15*** percent 02, dry.

~~**District Requirement**~~

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

Where:

a = NH_3 injection rate lb/hr / 17(lb/lbmol),

b = dry exhaust flow rate (scf/hr) / 385.5 (scf/lbmol),

c = change in measured NOx across the SCR (ppmvd at 15% 02)

***The operator shall use the above described method or another alternative method approved by the Executive Officer.* The above described ammonia slip calculation procedure shall not be used for compliance determination or emission information determination without corroborative data using an approved reference method for the determination of ammonia for the District.**

~~**Energy Commission Requirement**~~

~~**NH3 (ppmv @ 15% O2) = ((a-b*(c/1E6))*1E6/b)*d.**~~

~~**Where:**~~

~~**a = NH_3 injection rate(lb/hr)/17(lb/lbmol),**~~

~~**b = dry exhaust gas flow rate (lb/hr)/(29(lb/lbmol), or**~~

~~**b = dry exhaust flow rate (scf/hr) / 385.5 (scf/lbmol),**~~

~~**c = change in measured NOx concentration ppmv corrected to 15% O2 across catalyst, and**~~

~~**d = correction factor.**~~

~~The correction factor shall be derived through compliance testing by comparing the measured and calculated ammonia slip. The correction factor shall be reviewed and approved by the CPM on at least an annual basis. The correction factor may rely on previous compliance source test results or other comparable analysis as the CPM finds the situation warrants. The above described ammonia slip calculation procedure shall be used for Energy Commission compliance determination for the ammonia slip limit as prescribed in Condition of Certification AQ-9 and reported to the CPM on a quarterly basis as prescribed in Condition of Certification AQ-9.~~

~~An exceedance of the ammonia slip limit as demonstrated by the above Energy Commission formula shall not in and of itself constitute a violation of the limit. An exceedance of the ammonia slip limit shall not exceed 6 hours in duration. In the event of an exceedance of the ammonia slip limit exceeding 6 hours duration, the project owner shall notify the CPM within 72 hours of the occurrence. This notification must include, but is not limited to: the date and time of the exceedance, duration of the exceedance, estimated emissions as a result of the exceedance, the suspected cause of the exceedance and the corrective action taken or planned. Exceedances of the ammonia limit that are less than or equal to 6 hours in duration shall be noted in a specific section within the Quarterly Report (AQ-9). This section shall include, but is not limited to: the date and time of the exceedance, duration of the exceedance, and the estimated emissions as a result of the exceedance. Exceedances shall be deemed chronic if they total more than 10% of the operation for any single HRSG exhaust stack. Chronic exceedances must be investigated and redressed in a timely manner and in conjunction with the CPM though the cooperative development of a compliance plan. The compliance plan shall be developed to bring the project back into compliance first and foremost and shall secondly endeavor to do so in a feasible and timely manner, but shall not be limited in scope.~~

~~The owner/operator shall maintain compliance with the ammonia slip limit, redress exceedances of the ammonia slip limit in a timely manner, and avoid chronic exceedances of the ammonia slip limit. Exceedances shall be deemed a violation of the ammonia slip limit if they are not properly redressed as prescribed herein.~~

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

Verification: The project owner shall include ammonia slip concentrations averaged on an hourly basis ~~calculated via both protocols provided~~ as part of the Quarterly Operational Report required in Condition of Certification AQ-9. The project owner shall submit all calibration results performed to the CPM within 60 days of the calibration date. ~~The project owner shall submit to the CPM for approval a proposed correction factor to be used in the Energy Commission formula at least once a year but not to exceed 180 days following the completion of the annual ammonia compliance source test. 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-9) 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.**~~

~~**Verification:** The project owner shall cubmit CEMS records and all calculations demonstrating compliance with this condition as part of the Quarterly Operational Report required in **AQ-9**.~~

AQ-27 This equipment shall not be operated unless the operator demonstrates to the 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 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.**

To comply with this condition, the project owner shall hold for each turbine train a minimum of 104,864 lbs/year of NOx RTCs for the first year of operation and 90,953 lbs/year there after.

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-9**).

~~Condition of Certification AQ-28, below, pertains to the following equipment:~~

~~Internal combustion engine, emergency fire pump, diesel Clarke, Model JDFP 06WA, turbocharged, aftercooled, 265 BHP A/N 378769 (ID. No. D45).~~

AQ-28 ~~The operator shall limit the operating time to no more than 199 hours in any one year.~~

- ~~To comply with this condition, the operator shall install and maintain a non resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.~~
- ~~The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.~~
- ~~The records shall include, date of operation, the elapsed time in hours, and the reason for operation. Records shall be kept and maintained on file for a minimum of 5 years and made available to AQMD upon request.~~

~~**Verification:** The project owner shall submit the recorded data specified in this condition on an annual basis as part of the fourth Quarter Operation Report (see AQ-8).~~ **Deleted**

~~**Conditions of Certification** AQ-29**, 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. A/N 379904 (ID. No. D30)**~~

AQ-29 ~~The operator shall install and maintain a pressure relief valve 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.~~ **Deleted**

AQ-30 **The 2.0 PPM ROG emission limit(s) shall not apply during turbine commissioning, *combustor tuning*, shutdown and startup 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, *combustor tuning*, shutdowns and start-ups shall be maintained and made available upon request from AQMD.**

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-31 **The 2.0 ppmv VOC emission limit is average over 60 minutes at 15 percent 02, 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-9.

AQ-32 The project owner may at no time purposefully exceed either the mass or concentration emission limits except set forth in Conditions of Certification AQ-9, -11, -16, -17, -24, -25, -30, or -31.

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-9.

AQ-33 **The project owner/operator shall not use natural gas containing H_2S greater than 0.25 rains per 100scf. 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 AQMD Method 307-91 for total sulfur calculated as H_2S.**

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-9.

AQ-34 **The owner/operator shall limit the fuel usage for each turbine to no more than 1,500 million cubic feet in any one 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-9.

~~**AQ-35** The project owner shall conduct one source test over the lifetime of the project for NOx and PM10 on each gas turbine exhaust stack in accordance with the following requirements:~~

- ~~**The project owner shall submit a source test protocol to the AQMD and the CPM 45 days prior to the proposed source test date for**~~

~~approval. The protocol shall include the proposed operating conditions of the gas turbine, the correction and degradation factors and documentation of their validity, the identity of the testing lab, a statement from the lab certifying that it meets the criteria of AQMD Rule 304, and a description of all sampling and analytical procedures.~~

- ~~The initial source test shall be conducted no later than 180 days following the date of first fire.~~

- ~~The AQMD and CPM shall be notified at least 10 days prior to the date and time of the source test.~~

- ~~The source test shall be conducted with the gas turbine operating under maximum load.~~

- ~~The test shall be conducted in accordance with AQMD approved test protocol. The source test shall be conducted for the pollutants listed using the methods, averaging times, and test locations indicated and as approved by the CPM:~~

~~Pollutant~~	~~Method~~	~~Averaging Time~~	~~Test Location~~
~~NOx~~	~~AQMD Method 100.1~~	~~1 hour~~	~~Outlet of SCR serving this equipment~~
~~PM10~~	~~District Method 5~~	~~4 hours~~	~~Outlet of SCR serving this equipment~~

- ~~The source test results shall be submitted to the AQMD and the CPM no later than 60 days after the source test was conducted.~~

- ~~The test results shall demonstrate compliance with the following emission limits as required by AQMD Rule 1309.1:~~

- ~~PM10 emission rates shall not exceed 0.060 lb/MW-hr.~~

- ~~NOx emission rates shall not exceed 0.080 lb/MW-hr.~~

- ~~If the actual measurement is within the accuracy of the devices used for electrical power measurement, the result will be acceptable.~~

- ~~The lb/MW-hr emission rate of each electrical generating unit for each pollutant (NOx and PM10) shall be determined by dividing (a) the lb/hr emission rate measured at the location and in accordance with the test method specified above, by (b) the adjusted gross electrical output of each electrical generating unit.~~

- ~~The adjusted gross electrical output of each electrical generating unit shall be determined by making the following adjustments to the measured gross electrical output:~~

- ~~**Apply the manufacturer's standard correction factors to calculate gross electrical output at ISO conditions.**~~

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

~~**Verification: The project owner shall submit the proposed protocol for the initial source tests at least 45 days prior to the proposed source test date to both the AQMD 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 AQMD and CPM. The project owner shall notify the AQMD and CPM no later than 10 days prior to the proposed initial source test date and time.**~~

AQ-36 **For the purpose of ~~the following~~ *C~~c~~ondition of Certification AQ-4*, continuous record shall be defined as measuring at least once every month and shall be calculated base upon the average of the continuous monitoring for that 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-9.

~~**AQ-37** **The owner/operator shall upon completion of construction, operate and maintain this equipment according to the following specifications. Each turbine shall be fully and legally operational within three (3) years of the issuance of the Permit to Construct.**~~

~~**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-38 **The owner/operator shall keep records, in a manner approved by the District, for the following paramenter 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 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-9.

Appendix C

PSD Non-Applicability Determination Request Letter

El Segundo Energy Center LLC
1817 Aston Avenue, Suite 104
Carlsbad, CA 92008
Phone: 760.710.2156
Fax: 760.710.2158

January 14, 2010

Mr. John Yee
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765

Subject: PSD Non-Applicability Determination Request
Proposed El Segundo Power Redevelopment Project
Facility - El Segundo Power, LLC (ID #115663)

Dear Mr. Yee:

El Segundo Energy Center LLC (ESEC) herein seeks confirmation from the South Coast Air Quality Management District (SCAQMD) that the proposed El Segundo Power Redevelopment (ESPR) project will not trigger Prevention of Significant Deterioration (PSD) review. As discussed in the following paragraphs, ESEC believes that the proposed ESPR project does not trigger PSD review because the net emission increase for the ESPR project is below PSD threshold levels.

Background

On June 21, 2007, El Segundo Power, LLC submitted a permit application package to the SCAQMD for the installation of two new Siemens 501FD3 natural-gas fired combined cycle gas turbine power generating units at the existing El Segundo Generating Station. The proposed new units will be capable of extremely fast starts (approximately 22 minutes) and still be combined cycle units. This has the benefit of significantly reduced startup emissions and can deliver faster megawatts to the grid. The installation of the two new gas turbine units would replace two existing boilers at the El Segundo Generating Station (Units 1 and 2).

The SCAQMD deemed the ESPR project permit application complete on June 29, 2007, and issued the draft Title V permit for the project on March 13, 2008. For purposes of compliance with California state environmental laws, the California Energy Commission (CEC) is the lead agency for environmental review of the ESPR project pursuant to the Warren Alquist

Act.[1] On June 12, 2008, CEC staff published the Staff Analysis for the ESPR project, which concluded that the project after mitigation did not result in any significant environmental impacts. The permitting of the ESPR project was progressing forward when a July 28, 2008 court decision effectively suspended the permitting of this project (as well as many other projects in the SCAQMD).

PSD Applicability

Pursuant to the recently adopted Senate Bill 827, commencing on January 1, 2010, the SCAQMD is able to process permits for projects that rely on the Emission Reduction Credit (ERC) exemptions under Rule 1304, such as the proposed ESPR project. As a result of Senate Bill 827, on December 4, 2009, ESEC submitted a request to the SCAQMD to continue processing the permit application package for the ESPR project. The December 4, 2009 request included the shutdown of a third existing boiler at the El Segundo Generating Station (Unit 3).

Due to the delay in the permitting effort for the ESPR project, it is necessary to revisit PSD applicability for the project. As part of the March 13, 2008 draft Title V permit package for the ESPR project, the SCAQMD determined that the proposed ESPR project would not trigger PSD review because the net emission increase for the project (emission increases for new units minus emission reductions for shutdown of existing Units 1 and 2) was below PSD threshold levels.[2] It should be noted that under the July 2007 PSD delegation agreement between the EPA and SCAQMD, the SCAQMD is allowed to make PSD determinations and issue PSD permits using the existing SCAQMD regulations.[3] Consequently, for PSD applicability review, ESEC relied on existing SCAQMD regulations, including the SCAQMD PSD regulation (SCAQMD Regulation XVII).

For purposes of PSD applicability, the proposed ESPR project is a modification to an existing major facility. Consequently, to determine if PSD is triggered by the ESPR project, it is necessary to determine whether the modification is considered a "major modification" under the SCAQMD PSD regulations. A project is a major modification subject to PSD review if there is a facility-wide net emission increase of an attainment pollutant above a PSD significance level. Under the SCAQMD PSD regulation, the net emission increase at a facility is determined by examining all emission increases and decreases that occurred at the facility beginning on October 5, 1979, to the present; or beginning on the date the SCAQMD is classified as attainment for a particular pollutant to the present, whichever time period is

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[1] The CEC's power plant site certification program (Pub. Res. Code §§ 25500 et seq.) is a certified state regulatory program, considered to be functionally equivalent to the California Environmental Quality Act (CEQA) requirements, and hence power projects certified by the CEC are exempt from preparing a separate environmental impact report. (14 Cal. Code Reg. § 15252(j); see Pub. Res. Code § 21080.5.) For purposes of CEQA, the CEC is the lead agency for all power plant projects that are certified by the CEC pursuant to the Warren Alquist Act. (Pub. Res. Code § 25519(c).)

[2] SCAQMD Draft Title V permit package, March 13, 2008, engineering evaluation, page 30 of 43.

[3] U.S. EPA – South Coast Air Quality Management District Agreement for Partial Delegation of Authority to Issue and Modify Prevention of Significant Deterioration Permits Subject to 40 CFR 52.21, July 25, 2007.

less.[4] For SO_2, the SCAQMD has been classified as an attainment area since October 5, 1979, so this is the start date for accumulative facility-wide emission increases and decreases for SOx. For NO_2 and CO, the SCAQMD was classified as an attainment area on July 24, 1998,[5] and May 11, 2007,[6] respectively, so these are the start dates for accumulative facility-wide emission increases and decreases for these two pollutants. The SCAQMD is a federal non-attainment area for ozone (*i.e.*, VOC), PM10, and PM2.5. Consequently, these pollutants are not included in the PSD applicability analysis for the ESPR project.

As discussed above, the ESPR project includes the shutdown of existing El Segundo Generating Station Units 1, 2, and 3. Units 1 and 2 were shut down at the end of 2002 and Unit 3 will be shut down prior to the startup of the new gas turbine units. With a shutdown date at the end of 2002, the SOx and NOx emission reductions associated with the shutdown of Units 1 and 2 can be used as part of the facility-wide net emission increase calculation for PSD applicability purposes. However, because the shutdown of Units 1 and 2 occurred prior to the CO attainment date of May 11, 2007, the CO emission reductions cannot be included in this analysis. Since the shutdown of Unit 3 will occur in the future, the SOx, NOx, and CO emission reductions for this shutdown can be included in the net emission increase calculations. To determine the emission reductions for equipment shutdowns, under SCAQMD Rule 1706(c)(1)(B) emission reductions are based on the actual average annual emissions during the two-year period prior to an application for a shutdown. For Units 1 and 2, these average annual emission reductions are shown in the March 13, 2008 draft Title V permit package.[7] For Unit 3, because the shutdown of this unit will occur in the future, we examined the actual emissions for this unit during the period from 2007 to 2009 to estimate the emission reductions for the shutdown of the unit. The detailed emission calculations for Unit 3 for 2007, 2008 and 2009 are enclosed as Attachment A.

In the following table, the potential to emit for the new gas turbine units associated with the proposed ESPR project is included with the emission decreases associated with the shutdown of El Segundo Generating Station Units 1, 2, and 3. As shown in Table 1, the facility-wide net emission increase for the proposed ESPR project is below the PSD significance levels for NOx, CO, and SOx. Therefore, the proposed ESPR project is not considered a major modification under the PSD regulations, and the project does not trigger PSD review.

[4] SCAQMD Rule 1706.a.2 (as amended 01/06/1989).
[5] Federal Register Notice 63 FR 39747.
[6] Federal Register Notice 72 FR 26718.
[7] SCAQMD Draft Title V permit package, March 13, 2008, engineering evaluation, page 30 of 43, Table 29.

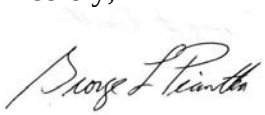
Table 1
Net Emission Increase for PSD Purposes
ESPR Project

Pollutant	Potential to Emit for New Equipment[a] (tons/year)	Emission Reductions for Shutdown of Units 1 and 2[b] (tons/year)	Emission Reductions for Shutdown of Unit 3[c] (tons/year)	Net Emission Increase (tons/year)	PSD Significance Levels[d] (tons/year)
NOx	96.4	-396.2	-7.4	-307.2	40
CO	175.2	N/A	-79.0	96.2	100
SOx	8.0	-1.8	-0.6	5.6	40

Notes:
[a] Based on SCAQMD Draft Title V permit package, March 13, 2008, engineering evaluation, Appendix C.
[b] Based on SCAQMD Draft Title V permit package, March 13, 2008, engineering evaluation, page 30 of 43, Table 29.
[c] Detailed emission reductions calculations for Unit 3 enclosed as Attachment A.
[d] SCAQMD Rule 1702(s).

If you have any questions or need any additional information, please do not hesitate to call me at (760) 710-2156 or Tom Andrews at 916-444-6666. We are also submitting a supplemental petition to amend to the CEC at this time. Therefore, we request your attention to this matter such that no delay will occur in the finalization of the ESPR project.

Sincerely,



George L. Piantka, PE
Director, Environmental Business
NRG Energy, West Region

Attachment A – Actual Emissions for El Segundo Generating Station Unit 3 (2007-2009)

cc: Ken Coats, SCAQMD
Gerry Bemis, CEC
Joe Douglas, CEC
CEC Docket Unit (00-AFC-14C)
John McKinsey, Stoel
Tom Andrews, Sierra Research
Russ Kingsley, AECOM

ATTACHMENT A

ACTUAL EMISSIONS FOR EL SEGUNDO GENERATING STATION UNIT 3 (2007 – 2009)

Baseline Emissions - Unit 3 (Period from 01/01/07 to 12/31/07)
El Segundo Generating Station

Unit	Annual Fuel Use (mmscf/yr)	CO Emission Factor(1) (lbs/mmscf)	SOx Emission Factor(1) (lbs/mmscf)	CO Emissions (lbs/yr)	SOx Emissions (lbs/yr)
Unit 3	2,995	84	0.6	251,615	1,797

Notes:
(1) From 2002-2003 SCAQMD general instruction book for annual emissions reporting (Appendix A, Table 1 - natural gas boilers).

Baseline Emissions - Unit 3 (Period from 01/01/08 to 12/30/08)
El Segundo Generating Station

Unit	Annual Fuel Use (mmscf/yr)	CO Emission Factor(1) (lbs/mmscf)	SOx Emission Factor(1) (lbs/mmscf)	CO Emissions (lbs/yr)	SOx Emissions (lbs/yr)
Unit 3	900	84	0.6	75,637	540

Notes:
(1) From 2002-2003 SCAQMD general instruction book for annual emissions reporting (Appendix A, Table 1 - natural gas boilers).

Baseline Emissions - Unit 3 (Period from 01/01/09 to 12/31/09)
El Segundo Generating Station

Unit	Annual Fuel Use (mmscf/yr)	CO Emission Factor(1) (lbs/mmscf)	SOx Emission Factor(1) (lbs/mmscf)	CO Emissions (lbs/yr)	SOx Emissions (lbs/yr)
Unit 3	1,749	84	0.6	146,885	1,049

Notes:

(1) From 2002-2003 SCAQMD general instruction book for annual emissions reporting (Appendix A, Table 1 - natural gas boilers).

El Segundo Generating Station - Unit 3

Period	CO Emissions (lbs/year)	SOx Emissions (lbs/year)	NOx Emissions* (lbs/year)
1/07 to 12/07	251,615	1,797	21,791
1/08 to 12/08	75,637	540	8,248
1/09 to 12/09	146,885	1,049	14,226
Average (lbs/year) =	158,046	1,129	14,755
Average (tons/year) =	79.0	0.6	7.4

Notes:
* Based on RECLAIM NOx reporting for Unit 3.

Appendix D

Revised HARP Modeling Results