February 14, 2002

Mr. Robert L. Therkelsen
Deputy Director
Systems Assessment & Facilities Siting
California Energy Commission
1516 9th Street
Sacramento, CA 95814-5512

Subject: El Segundo Power Redevelopment Project (00-AFC-14)

Dear Mr. Therkelsen:

The South Coast Air Quality Management District (AQMD) has completed our analysis of the subject project and our Final Determination of Compliance (FDOC) is attached for your review.

The FDOC contains AQMD's second addendum to the original permit to construct evaluation, and section H of the final draft Title V and AQMD RECLAIM permit (both dated February 12, 2002). The second addendum includes the following information: a summary of the public notification process, responses to comments received during the EPA and public review period, and a description of the changes to the equipment description and permit conditions that occurred since the Preliminary Determination of Compliance was sent to you last year (i.e., October 17, 2001). Section H contains the permit to construct the subject project.

Please be advised that the FDOC does not constitute a final Title V permit. The final permit will be issued pending the Commission Decision on the project and after all necessary offsets are provided in the form of either Emission Reduction Credit (ERC) certificates or credits from the AQMD's Priority Reserve. Although the applicant does not currently hold enough PM_{10} ERCs to offset the emission increase from the project, they have informed us that they will obtain the ERCs from our Priority Reserve (in accordance with AQMD Rule 1309.1) if they are unable to obtain all the required ERCs from the open market. They do not intend to generate ERCs by implementing a street sweeping program.
If you have any questions or wish to provide comments regarding this project, please call Mr. Knut J. Beruldsen (909) 396-3136 or Mr. John Yee (909) 396-2531.

Very truly yours,

Pang Mueller
Senior Manager
Refinery, Energy, & RECLAIM Administration
Engineering and Compliance

CM:TV:JTY:KJB

Attachments

cc: James Reede, CEC (w/ attachments)
    Tim Hemig, NRG Energy, Inc. (w/ attachments)
    Gary Rubenstein, Sierra Research (w/ attachments)
ESPR Project  
Second Addendum to P/C Evaluation originally dated 5/25/01

EQUIPMENT DESCRIPTION
Changes to the equipment description, emissions/requirements, and conditions are indicted with strikethrough and underline.

<table>
<thead>
<tr>
<th>Equipment</th>
<th>ID No.</th>
<th>Connected To</th>
<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions and Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORAGE TANK, UNDERGROUND, TK-001, AQUEOUS AMMONIA, CARBON STEEL, DOUBLE WALLED, WITH THREE TRANSFER PUMPS AND A PRV SET AT 50 PSIG, 20000 GALS; DIAMETER: 10 FT 2 IN; LENGTH: 37 FT 10 IN, WITH A TWO-STAGE JET VENTURI SCRUBBER, WITH A/N 379904 SCRUBBER, VENTURI, TWO STAGE</td>
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<td>Source Type/ Monitoring Unit</td>
<td>Emissions and Requirements</td>
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<tr>
<td>TURBINE, GAS, NO. 5, COMBINED CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL 7241FA, WITH DRY LOW NOX COMBUSTORS AND STEAM INJECTION FOR POWER AUGMENTATION, 1896 MMBTU/HR, WITH A/N 378766</td>
<td>D46</td>
<td>C51</td>
<td>NOX: MAJOR SOURCE</td>
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<tr>
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<td>C51</td>
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<td>Generator, Heat Recovery Steam</td>
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<tr>
<td>TURBINE, STEAM, COMMON TO UNITS 5 AND 7, 288 MW</td>
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<td>RECLAIM Emissions and Requirements</td>
<td>Conditions</td>
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<tr>
<td>TURBINE, GAS, NO. 7, COMBINED CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL 7241FA, WITH DRY LOW NOX COMBUSTORS AND STEAM INJECTION FOR POWER AUGMENTATION, 1896 MMBTU/HR, WITH A/N 378767</td>
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<td>GENERATOR, 179 MW</td>
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<tr>
<td>BURNER, DUCT, NATURAL GAS, 600 MMBTU/HOUR</td>
<td>D57</td>
<td>C60</td>
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<td>GENERATOR, HEAT RECOVERY STEAM</td>
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<tr>
<td>TURBINE, STEAM, COMMON TO UNITS 5 AND 7, 288 MW</td>
<td>B59</td>
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<td>CO OXIDATION CATALYST, SERVING UNIT 5, WITH 1000 CUBIC FEET CATALYST VOLUME, ENGELHARD, HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT, WITH A/N 378771</td>
<td>C51</td>
<td>D46, D48, C52</td>
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<td>SELECTIVE CATALYTIC REDUCTION, SERVING UNIT 5, CORMETECH, TITANIUM-VANADIUM, 4379 CU. FT.; HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT, WITH A/N 378771</td>
<td>C52</td>
<td>C51, S54</td>
<td>NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT]</td>
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<td>AMMONIA INJECTION, INJECTION GRID</td>
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<td>STACK, NO. 5, DIAMETER: 19 FT; HEIGHT: 215 FT, WITH A/N 378771</td>
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<td>C52</td>
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<td>CO OXIDATION CATALYST, SERVING UNIT 7, WITH 1000 CUBIC FEET CATALYST VOLUME, ENGELHARD, HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT, WITH A/N 378773</td>
<td>C60</td>
<td>D55, D57, C61</td>
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<tr>
<td>SELECTIVE CATALYTIC REDUCTION, SERVING UNIT 7, CORMETECH, TITANIUM-VANADIUM, 4379 CU. FT.; HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT, WITH A/N 378773</td>
<td>C61</td>
<td>C60, S63</td>
<td>NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT]</td>
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<td>AMMONIA INJECTION, GRID</td>
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<td>STACK, NO. 7 DIAMETER: 19 FT; HEIGHT: 215 FT, WITH A/N 378773</td>
<td>S63</td>
<td>C61</td>
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</table>
BACKGROUND/HISTORY

The subject permit applications (seven total) were submitted to the District on December 20, 2000, and January 18, 2001. The application package was deemed complete on January 19, 2001.

Since the first addendum (dated October 17, 2001) was written the following actions have occurred regarding this project.

October 17, 2001 - Preliminary Determination of Compliance (PDOC) is provided to the CEC and the applicant.

October 19, 2001 - Applicant's proposed street sweeping plan (along with their responses to the District's earlier comments) is submitted to District planning staff for reevaluation. Based on new information received from District Counsel, it appears that District rules do not preclude this type of credit generating program.

November 29, 2001 - Notice of Intent to Issue Permit Pursuant to AQMD Rules 212 and 3006 is mailed to persons included the District's and the CEC's mailing lists for this project.

November 29, 2001 - Notice of Intent to Issue Permit Pursuant to AQMD Rules 212 and 3006 is mailed to the following persons: Steve Odabashian (applicant), Gary Rubenstein (applicant's consultant), Jack Broadbent (EPA Region IX), Peter Venturini (CARB), Debra Brighton (El Segundo Library), Mike McCorison (USDA Forest Service), John Notar (National Parks Service), Jeffery Smith (SCAG), Mary Strenn (El Segundo City Manager), and David Janssen (LA County Chief Administrative Officer). In addition, the following persons also received copies of the draft permit and the District's engineering analysis of the subject project: Jack Broadbent, Peter Venturini, and Debra Brighton.

December 4, 2001 - EPA (Region IX) receives a copy of the proposed changes to the Title V permit. Their 45-day review period begins on this day.

December 6, 2001 - Notice of Intent to Issue Permit Pursuant to AQMD Rules 212 and 3006 is published in the LA Times, the Daily Breeze, and the El Segundo Herald.

December 13, 2001 - Applicant provides door-to-door distribution of the public notice to each business and residential address located within a 1/4 mile radius of the project site, with the exception of the following adjacent facilities which are notified via certified mail: Chevron Refinery, SCE, DWP, and the Hyperion Wastewater Treatment Plant. Written verification and proof of distribution of the public notice is provided to the District on December 19, 2001.
December 13, 2001 - Applicant and the CEC are informed that the District has completed its review of the proposed street sweeping program. The District believes that emission reductions achieved by this type of program cannot be adequately quantified and enforced for the purpose of using credits to offset increases in ducted, combustion point sources, or made permanent and enforceable to the degree required for credit generation. The District’s conclusion is that for this project street sweeping cannot be used as a mechanism to generate PM10 credits to offset the net increase in emissions from the new equipment.

February 5, 2002 - EPA (Region IX) informs the District (via telephone call) that they have no comments regarding the proposed revisions to the Title V permit.

**PROCESS DESCRIPTION**
No changes.

**TECHNICAL INFORMATION**
No changes.

**EMISSIONS**

The first year annual NOx emissions for this project were revised from 331,365 lbs/year to 332,147 lbs/year based on the additional emissions from the emergency fire pump engine. The detailed emission calculations are included in Revised Appendix G (dated 2/8/02).

The RECLAIM emission factor for the fire pump engine included in the proposed permit was revised to reflect NOx emissions at the current BACT level of 6.9 grams/BHP-hour.

Emission Factor = 6.9 grams/BHP-hour * 1 lb/453.593 grams * 265 BHP * 1/14.2 gallons per hour
= 284 lbs/1000 gallons

**EVALUATION**

**Rule 212 – Standards for Approving Permits**
During the public comment period that ended on January 12, 2002, written comments were submitted to the District by the following persons: Jeffrey Smith with SCAG (letter dated December 20, 2001), Joe Lyou with California League of Conservation Voters Education Fund (email dated January 6, 2002), and Gary Rubenstein with Sierra Research (letter dated January 11, 2002). The District’s responses to the comments are included in the Discussion section of this report.
1303(b)(2) - Emission Offsets (non-RECLAIM pollutants)
The amount of emissions offsets needed for his project is as follows:

CO = not required
PM10 = 312 to 374 lbs/day (depends on the amount of ERCs purchased from the District's Priority Reserve)
VOC = 109 lbs/day
SOx = 44 lbs/day

The applicant currently holds the following amounts of active ERCs:
PM10 = 23 lbs/day
VOC = 295 lbs/day
SOx = 247 lbs/day

2005(c)(2) - Emission Offsets
Based on the inclusion of the NOx emissions from the emergency fire pump engine, the first year annual emissions from the new equipment will be 332,147 lbs/year. The applicant will satisfy the NOx RTC requirement by utilizing existing RTCs allocated to the El Segundo and Long Beach Generating Stations.

Rule 2012 - Monitoring, Reporting, and Recordkeeping Requirements for NOx
The emergency fire pump engine is classified as a process unit and the draft permit specified a RECLAIM emission factor of 469 lbs/1000 gallons. The emission factor was revised to reflect NOx emissions at the current BACT limit of 6.9 grams/BHP-hour. The revised RECLAIM emission factor for the emergency fire pump engine is 284 lbs/1000 gallons.

DISCUSSION

Several comments were submitted to the District during the 30-day comment period, and a brief description of the comments along with the District’s responses is provided below.

Comments (Gary Rubenstein, Sierra Research representing the applicant)
He provided the following comments:
1. With regards to the amount of PM10 ERCs needed for the project, the District's addendum to the P/C evaluation dated October 17, 2001, states that the amount of offsets needed for this project is 374 lbs/day. Since the applicant is proposing to obtain a portion or all of the offsets from the District's Priority Reserve, the District's analysis should show that the amount of PM10 ERCs needed for the project will vary from 312 lbs/day (if 100% of the ERCs come from the Priority Reserve at a 1:1 ratio) to 374 lbs/day (if 100% of the ERCs are purchased on the ERC market at a 1.2:1 ratio).
2. Conditions 179-3 and 179-4 specify a monthly recording requirements. These conditions should specify an hourly recording requirement.

3. In our July 13, 2001 letter, we requested an alternative approach to monitoring ammonia slip. The suggested alternative involves measuring the ammonia flow rate during the initial compliance tests at the same time that the ammonia slip is measured in the gas turbine/HRSG exhaust. This information could be used to calculate the additional ammonia injection rate that would result in an exhaust ammonia slip of 5 ppm. For each load (i.e., 50%, 75%, and 100%), the sum of the ammonia injection rate measured during the compliance test and the additional ammonia injection needed to increase the ammonia slip to 5 ppm would equal the maximum allowable ammonia injection rate (excluding startups and shutdowns). Rather than include the ammonia slip calculation methodology specified in Condition 195-4 (and all the potential difficulties previously noted regarding this approach), the permit could contain three ammonia injection limits that would cover the full operating range of the new units.

Response
The District’s responses are as follows:

1. The FDOC will specify that the amount of PM 10 credits needed for this project will vary from 312 lbs/day to 374 lbs/day depending on the amount of credits purchased from the District's Priority Reserve and/or ERC market.

2. Condition 179-4 was revised to specify an hourly recording requirement. Condition 179-3, which applies to the SCR equipment for boiler no. 3, is not part of this project.

3. Condition 195-4 was revised and it no longer includes a calculation methodology to determine ammonia slip on a continuous basis. Condition 82-3 was added to the permit and it requires the applicant to install an ammonia CEMS to continuously monitor and record the ammonia emissions from the stack. Currently, there are several technologies available for directly measuring ammonia slip in situ. They include a GC-UV monitoring system and a laser gas NH3 monitor based on a tunable diode laser. The District recently issued a permit to construct to another facility that includes a requirement for continuous ammonia slip monitoring and recording, and the applicant plans to comply with the requirement by installing the tunable diode laser technology. Given the long lead time for this project (at least 3 years until startup), it is expected that a certified ammonia CEMS using the above technology (or equivalent) will be commercially available by the time the new combined cycle equipment becomes operational.

Comment (Jeffrey Smith with Southern California Association of Governments)
All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA.

Response
The CEC Compliance Project Manager will be responsible for implementing and monitoring compliance with the mitigation measures included in the Conditions of Certification.
Comment (Joe Lyou with California League of Conservation Voters Education Fund)
He provided the following comments:
1. The applicant failed to consider any cumulative impacts associated with the planned modifications at the adjacent Chevron refinery (and possibly other projects in the area). Would consideration of the Chevron project have changed the CEC's decision to accept the pending license application as data "adequate." Similarly, would this information have affected the District's intention to issue a Facility Permit at the end of the public comment and review period?
2. The El Segundo Library did not have the proposed permit on its shelves readily available to the public prior to the close of the public comment period. The library was instructed to make the information available until December 29, 2001. However, the public comment period was based on a distribution date of December 6, 2001, and the information should have been readily available until January 5, 2002. I went to the library on January 5, 2002, and I was lucky to locate the information.

Response
The District's responses are as follows:
1. The CEC Application for Certification (AFC) process is functionally equivalent to the CEQA process. As such, the CEC is the designated lead agency for this project and is responsible for the discussion of the cumulative impact analysis. The District has notified the CEC of Mr. Lyou's comments and concerns and it is anticipated that the CEC will address his comments on this matter. To assist the CEC in evaluating the cumulative impacts associated with the Chevron RFG 3 project, we recently provided them with the most current technical information regarding this project. Regarding the District's intention to issue a permit to construct at the end of the comment and review period, we cannot issue the final permit to construct until after the CEC has issued its Final Commission Decision for this project. In accordance with our public notice procedures, we will respond to all comments and will consider all relevant air quality issues including CEC's response to Mr. Lyou's comments, prior to issuing the final permit to construct for this project.

2. In general, for projects requiring a public notice pursuant to Rule 212, AQMD makes documents available for a 30-day public review period at the closest public library in the vicinity of the proposed project. For this project, the AQMD sent a letter to the El Segundo Library on November 29, 2001 requesting that they make the documents available until December 29, 2001. Unfortunately, the newspapers were unable to publish the public notice until December 6, 2001. We have reviewed our internal procedures and will in the future request the library to make the documents available for a suitable time frame that includes the time for the local newspapers to publish the notice. We would like to note that the documents are always available by contacting the AQMD directly.
PERMIT CONDITIONS (Section H)

Facility Conditions
No changes.

Device Conditions Applicable to Subject Project

1-5. No changes.
12-7. No changes.
12-8. No changes.
12-9. No changes.
29-4. No changes.

29-5. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Avg. Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx emissions</td>
<td>District Method 100.1</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
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<tr>
<td>CO emissions</td>
<td>District Method 100.1</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>SOx emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
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<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
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<td>PM emissions</td>
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<tr>
<td></td>
<td></td>
<td>Avg. Time</td>
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<tr>
<td>NH3 emissions</td>
<td>District Method 207.1 and</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
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<td>5.3 or EPA Method 17</td>
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</tbody>
</table>

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

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine and steam turbine generating output in MW.
The test shall be conducted in accordance with a District approved source test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the District 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 with and without duct firing, when this equipment is operating at loads of 100, 75, and 50 percent of maximum load.

The test shall be conducted for all pollutants 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input. In addition, tests shall be conducted when the gas turbine is operating alone at loads of 75 and 50 percent of maximum heat input for the NOx, CO, VOC and NH3 tests.


[Devices subject to this condition: D46, D48, D55, D57]

29-6. The operator shall conduct source tests for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Avg. Time</th>
<th>Test Location</th>
</tr>
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<tbody>
<tr>
<td>SOx emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
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<td></td>
<td></td>
<td>Avg. Time</td>
<td></td>
</tr>
<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>SCR Outlet</td>
</tr>
<tr>
<td>PM emissions</td>
<td>Approved District method</td>
<td>District</td>
<td>SCR Outlet</td>
</tr>
<tr>
<td></td>
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<td>Approved</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avg. Time</td>
<td></td>
</tr>
</tbody>
</table>

The test(s) shall be conducted at least once every three years.

The test shall be conducted and the results submitted to the District within 60 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 to 10 days prior to the test.
The test shall be conducted to demonstrate compliance with the Rule 1303 concentration and emissions limit.

The test shall be conducted 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input.

[Rule 1303 – BACT, Rule 1303 – Offsets]

[Devices subject to this condition: D46, D48, D55, D57]

40-3. No changes.
57-1. No changes.
63-1. No changes.

67-4. The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

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

[Rule 2012]

[Devices subject to this condition: D46, D48, D55, D57]

73-3. No changes.
82-1. No changes.
82-2. No changes.
82-3. The operator shall install and maintain a CEMS to measure the following parameters:

NH3 concentration in ppmv.

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS shall be installed and operated to measure NH3 concentration over a 15 minute averaging time period.

The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine.

The CEMS shall be installed and operated, in accordance with an AQMD approved CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD.

[Rule 1303 - BACT, Rule 1303 - Offset]

[Devices subject to this condition: C52, C61]

99-1. No changes.
99-2. No changes.
99-3. No changes.
99-4. No changes.
99-5. No changes.
99-6. No changes.
157-1. No changes.

179-4. For the purpose of the following condition number(s) 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. 12-7
Condition no. 12-8
Condition no. 12-9
Condition no. 195-6

[Rule 1303 - BACT]

[Devices subject to this condition: C52, C61]
179-5. For the purpose of the following condition number(s) continuously record shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month:

Condition no. 12-9

[Rule 1303—BACT]

[Devices subject to this condition: C52, C61]

193-2. The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In compliance with all mitigation measures as stipulated by the “Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan” and final subsequent Environmental Impact Report dated January, 1994 (SCH No. 88032315) for the El Segundo Generating Station ammonia storage and selective catalytic reduction project.

[CEQA]

[Devices subject to this condition: D30]

193-3. The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In compliance with all Conditions of Certification included in the California Energy Commission's Staff Assessment dated June 2001 (00-AFC-14) for the El Segundo Power Redevelopment Project.

[CEQA]

[Devices subject to this condition: D30, D45, D46, D48, D55, D57, C52, C61]

195-2. No changes.
195-3. No changes.
195-5. The 2.0 PPMV VOC emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry.

[Rule 1303 – BACT]

[Devices subject to this condition: D46, D48, D55, D57]

195-6. The 5 PPMV NH3 emissions limit(s) are averaged over 60 minutes at 15 percent oxygen, dry. The operator shall calculate and continuously record the NH3 slip concentration using the following:

\[ \text{NH}_3 \text{(ppmv)} = \left( a \times \frac{b}{c} \right) \times 1000000 \]

where

- \( a \) = ammonia injection rate (lb/hr)/17 (lbs/lb-mole)
- \( b \) = dry exhaust gas flow rate (lb/hr)/29 (lbs/lb-mole)
- \( c \) = change in measured NOx across the SCR (ppmv, dry basis)

The operator shall install and maintain a NOx analyzer, or other method as approved by the AQMD, to measure the SCR inlet NOx ppm accurate to within +/- 5 percent calibrated at least every 12 months.

[Rule 1303 – BACT]

[Devices subject to this condition: C52, C61]

296-1. No changes.
Revised Appendix G - Emission Offsets Calculations
Rule 2005 Analysis (RECLAIM Pollutants)

Data:
1. Operating Schedule (1st Year) per turbine/HRSG (unless otherwise stated):
   OC 1 = 2,099 hours, OC 2 = 2,099 hours, Hot Starts = 365 hours
   OC 4 = 3,801 hours for Unit 5, OC 4 = 3,945 hours for Unit 7
2. Operating Schedule Commissioning Period:
   Unit 5 = 396 hours
   Unit 7 = 252 hours
3. NOx emissions during the commissioning period:
   Unit 5 = 18,536 lbs
   Unit 7 = 15,999 lbs
4. Operating Schedule Emergency Fire Pump Engine = 200 hours/year

Assumptions:
Facility begins operation on January 1 (cold temperature operating condition)

<table>
<thead>
<tr>
<th>NOx Emissions 1st Year</th>
<th>Hours per Year</th>
<th>NOX (lbs/hr)</th>
<th>NOX (lbs/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 5 Hot Startup</td>
<td>365</td>
<td>80.00</td>
<td>29,200</td>
</tr>
<tr>
<td>Unit 5 Operating Condition 1</td>
<td>2,099</td>
<td>18.27</td>
<td>38,349</td>
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<tr>
<td>Unit 5 Operating Condition 2</td>
<td>2,099</td>
<td>12.62</td>
<td>26,489</td>
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<tr>
<td>Unit 5 Operating Condition 4</td>
<td>3,801</td>
<td>14.04</td>
<td>53,366</td>
</tr>
<tr>
<td>Unit 5 Commissioning</td>
<td>396</td>
<td></td>
<td>18,536</td>
</tr>
<tr>
<td>Unit 5 Totals</td>
<td>8,760</td>
<td></td>
<td>165,940</td>
</tr>
<tr>
<td>Unit 7 Hot Startup</td>
<td>365</td>
<td>80.00</td>
<td>29,200</td>
</tr>
<tr>
<td>Unit 7 Operating Condition 1</td>
<td>2,099</td>
<td>18.27</td>
<td>38,349</td>
</tr>
<tr>
<td>Unit 7 Operating Condition 2</td>
<td>2,099</td>
<td>12.62</td>
<td>26,489</td>
</tr>
<tr>
<td>Unit 7 Operating Condition 4</td>
<td>3,945</td>
<td>14.04</td>
<td>55,388</td>
</tr>
<tr>
<td>Unit 7 Commissioning</td>
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<td>15,999</td>
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<tr>
<td>Unit 7 Totals</td>
<td>8,760</td>
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<td>165,425</td>
</tr>
<tr>
<td>Fire Pump Engine</td>
<td>200</td>
<td>3.91</td>
<td>782</td>
</tr>
<tr>
<td>Total 1st Year Emissions (lbs/year)</td>
<td></td>
<td></td>
<td>332,147</td>
</tr>
<tr>
<td>Offset Ratio</td>
<td>PAG</td>
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</tr>
</tbody>
</table>

PAGES E

Revised AvpdAnixnRvGdxAnIAbold Revis
## FACILITY PERMIT TO OPERATE

### EL SEGUNDO POWER, LLC

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<th>Conditions</th>
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</thead>
<tbody>
<tr>
<td><strong>Process 1: EXTERNAL COMBUSTION</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>System 2: BOILER, POWER GENERATION</strong></td>
<td></td>
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</tr>
<tr>
<td>Permit to Construct Issued: 04/27/01</td>
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<tr>
<td>BURNER, NATURAL GAS, REFINERY/NATURAL GAS, TODD, WITH LOW NOX BURNER, 12 TOTAL; 1785 MMBTU/HR</td>
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<tr>
<td>TURBINE, STEAM</td>
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</tr>
<tr>
<td>GENERATOR, 175 MW</td>
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<tr>
<td>Permit to Construct Issued: 04/27/01</td>
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</tr>
<tr>
<td>BURNER, NATURAL GAS, REFINERY/NATURAL GAS, TODD, WITH LOW NOX BURNER, 12 TOTAL; 1785 MMBTU/HR</td>
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<tr>
<td>TURBINE, STEAM</td>
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</tr>
</tbody>
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  (2) Denotes RECLAIM emission rate
  (3) Denotes RECLAIM concentration limit
  (4) Denotes BACT emission limit
  (5)(5A)(5B) Denotes command and control emission limit
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<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILER, UNIT NO. 3, FUEL OIL, NATURAL GAS, REFINERY GAS, COMBUSTION ENGINEERING, WITH 24 COMBUSTION ENGINEERING BURNERS, 3350 MMBTU/HR WITH A/N: 372264</td>
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<td>CO: 300 PPMV REFINERY GAS (5) [RULE 1303(b)(2)-Offset, 5-10-1996] ; CO: 2000 PPMV (5A) [RULE 407, 4-2-1982] ; NOX: 10.75 LBS/1000 GAL FUEL OIL (1) [RULE 2012, 12-7-1995; RULE 2012, 3-16-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981] ; SOX: 500 PPMV FUEL OIL (5) [RULE 407, 4-2-1982]</td>
<td></td>
</tr>
<tr>
<td>TURBINE, STEAM</td>
<td></td>
<td></td>
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<tr>
<td>GENERATOR, 335 MW</td>
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</tbody>
</table>

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<th>ID No.</th>
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<th>Emissions * And Requirements</th>
<th>Conditions</th>
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</thead>
<tbody>
<tr>
<td>SELECTIVE CATALYTIC REDUCTION, SERVING BOILER NO. 3, NORTH DUCT, MITSUBISHI HEAVY INDUSTRIES, TITANIUM/VANADIUM, 2029 CU.FT.; HEIGHT: 15 FT 8 IN; LENGTH: 31 FT 1.5 IN; WIDTH: 6 FT 4 IN WITH A/N: 372265</td>
<td>C39</td>
<td>D11</td>
<td>NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]</td>
<td>12-3, 12-4, 12-5, 12-6, 28-3, 73-1, 179-2, 179-3, 193-1, 195-1</td>
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</tr>
<tr>
<td>SELECTIVE CATALYTIC REDUCTION, SERVING BOILER NO. 3, SOUTH DUCT, MITSUBISHI HEAVY INDUSTRIES, TITANIUM/VANADIUM, 2029 CU.FT.; HEIGHT: 15 FT 8 IN; LENGTH: 31 FT 1.5 IN; WIDTH: 6 FT 4 IN WITH A/N: 372265</td>
<td>C41</td>
<td></td>
<td>NH3: 10 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]</td>
<td>12-3, 12-4, 12-5, 12-6, 28-3, 73-1, 179-2, 179-3, 193-1, 195-1</td>
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(7) Denotes NSR applicability limit  
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<table>
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<th>Equipment Description</th>
<th>ID No.</th>
<th>Connected To</th>
<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions And Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process 2 : INTERNAL COMBUSTION</strong></td>
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<tr>
<td>INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, CLARKE, MODEL JDFP 06WA,</td>
<td>D45</td>
<td></td>
<td>NOX: PROCESS UNIT**</td>
<td>NOX: 6.9 GRAM/BHP-HR</td>
<td>1-5, 193-3</td>
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<tr>
<td>WITH AFTERCOOLER, TURBOCHARGER, 265 BHP</td>
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<td>DIESEL (4) [RULE 2005,4-9-</td>
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<tr>
<td>A/N:</td>
<td></td>
<td></td>
<td></td>
<td>1999; RULE 2005,4-20-2001] ;</td>
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</tr>
<tr>
<td>NOX: 284 LBS/1000 GAL DIESEL (1) [RULE 2012,12-7-1995]</td>
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<td>NOX: 80 LBS/HR (7) [RULE 2005,4-9-1999, 29-5, 29-6, 40-3, 57-1, 63-1, 67-4, 82-1,</td>
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</tr>
<tr>
<td><strong>System 1 : DIESEL ENGINES</strong></td>
<td></td>
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</tr>
<tr>
<td>TURBINE, GAS, NO. 5, COMBINED CYCLE, NATURAL GAS, GENERAL ELECTRIC, MODEL 7241FA,</td>
<td>D46</td>
<td></td>
<td>NOX: MAJOR SOURCE**</td>
<td>CO: 6 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996] ;</td>
<td></td>
</tr>
<tr>
<td>BTU/HR WITH A/N:</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>C51</td>
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</tr>
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<tbody>
<tr>
<td><strong>GENERATOR, HEAT RECOVERY STEAM</strong></td>
<td></td>
<td></td>
<td></td>
<td>RULE 2012, 3-16-2001 ; PM: 0.05 GRAINS/SCF (5) [RULE 475, 10-8-1976, RULE 475, 8-7-1978] ; PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]</td>
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<tr>
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<td>NO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997] ; SOX: 150 PPMV (8) [40CFR 60 Subpart GG, 3-6-1981]</td>
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<tr>
<td></td>
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<td></td>
<td>VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996]</td>
<td></td>
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<tbody>
<tr>
<td>Process 2: INTERNAL COMBUSTION</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TURBINE, STEAM, COMMON TO UNITS 5 AND 7, 288 MW</td>
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<tr>
<td>BURNER, DUCT, NATURAL GAS, 600 MMBTU/HR A/N:</td>
<td>D48</td>
<td>C51</td>
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*CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; CO: 6 PPMV (4) [RULE 1383(a)(1)]-BACT, 5-10-1996; NOX: 102 LBS/MMCF (1) [RULE 2012,12-7-1995]

RULE 2012,3-16-2001] ; NOX: 114 PPMV (5B) [40CFR 60 Subpart GG,3-6-1981] ; NOX: 0.2 LBS/MMBTU (8A) [40CFR 60 Subpart Da,10-4-1991]

NOX: 2.5 PPMV (4) [RULE 2005,4-9-1999;RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981]

PM: 0.03 LBS/MMBTU (8A) [40CFR 60 Subpart Da,10-4-1991] ; PM: 0.05 GRAINS/SCF (5A) [RULE 475,10-8-1976]

RULE 475,8-7-1976) ; SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SO2: 0.2 LBS/MMBTU (8A) [40CFR 60 Subpart Da,10-4-1991]

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<td><strong>Process 2: INTERNAL COMBUSTION</strong></td>
<td></td>
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</tr>
<tr>
<td>CO OXIDATION CATALYST, SERVING UNIT 5, WITH 1000 CUBIC FEET CATALYST VOLUME, ENGELHARD, HEIGHT 3 FT, LENGTH 44 FT, WIDTH 41 FT A/N:</td>
<td>C51</td>
<td>D46 D48 C52</td>
<td>SOX: 150 PPMV (8B) (40CFR 60 Subpart GG, 3-6-1981); VOC: 2 PPMV (4) (RULE 1303(a)(1)-BACT, 5-10-1996)</td>
<td></td>
</tr>
<tr>
<td>SELECTIVE CATALYTIC REDUCTION, SERVING UNIT 5, CORMETECH, TITANIUM-VANADIUM, 4379 CU. FT.; HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT WITH A/N: AMMONIA INJECTION, GRID</td>
<td>C52</td>
<td>C51 S54</td>
<td>NH3: 5 PPMV (4) (RULE 1303(a)(1)-BACT, 5-10-1996)</td>
<td>12-7, 12-8, 12-9, 29-1, 73-3, 82-3, 179-4, 193-3, 195-6</td>
</tr>
<tr>
<td>STACK, NO. 5, DIAMETER: 19 FT; HEIGHT: 215 FT A/N:</td>
<td>S54</td>
<td>C52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* (1) Denotes RECLAIM emission factor
(2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>ID No.</th>
<th>Connected To</th>
<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions * And Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>NOX: 2.5 PPMV (4) [RULE 2005,4-9-1999;RULE 2005,4-20-2001] ; NOX: 109 LBS/MMCF (1) [RULE 2012,12-7-1995 RULE 2012,3-16-2001] ; PM: 0.05 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475.8-7-1978] ; PM: 0.1 GRAINS/SCF (5) [40CFR 409,8-7-1981]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]</td>
<td></td>
</tr>
</tbody>
</table>

| Generator, 179 MW              |        |              |                                      | RULE 2005,4-20-2001 ; NOX: 33.9 LBS/MMCF NATURAL GAS (1) [RULE 2012,12-2-1995]; RULE 2012,3-16-2001 ; NOX: 114 PPMV (8) [40CFR 60 Subpart GG,3-6-1981] |            |
| Generator, Heat Recovery Steam |        |              |                                      | NOX: 2.5 PPMV (4) [RULE 2005,4-9-1999;RULE 2005,4-20-2001] ; NOX: 109 LBS/MMCF (1) [RULE 2012,12-7-1995 RULE 2012,3-16-2001] ; PM: 0.05 GRAINS/SCF (5A) [RULE 475,10-8-1976;RULE 475.8-7-1978] ; PM: 0.1 GRAINS/SCF (5) [40CFR 409,8-7-1981] |            |
|                                |        |              |                                      | VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996] |            |

(1) Denotes RECLAIM emission factor
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(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes CFR limits (e.g., NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.
## FACILITY PERMIT TO OPERATE

**EL SEGUNDO POWER, LLC**

### SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions * And Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process 2: INTERNAL COMBUSTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| | | | | | |
| TURBINE, STEAM, COMMON TO UNITS 5 AND 7, 288 MW | | | | | |
| **BURNER, DUCT, NATURAL GAS, 600 MMBTU/HR** | D57 | C60 | NOX: MAJOR SOURCE** | CO: 2000 PPMV (5) [RULE 407,4-2-1982] ; CO: 6 PPMV (4) [RULE 1303a(1)-BACT,5-10-1996] ; NOX: 102 LBS/MMCF (1) [RULE 2012,12-7-1995] ; NOX: 2.5 PPMV (4) [RULE 2005,4-9-1999; RULE 2005,4-20-2001] ; PM: 0.1 GRAINS/SCF (5) [RULE 409,8-7-1981] ; PM: 0.03 LBS/MMBTU (8A) [40CFR 60 Subpart Da,10-4-1991] ; PM: 0.05 GRAINS/SCF (5A) [RULE 475,8-7-1978] ; SO2: (9) [40CFR 72 - Acid Rain Provisions,11-24-1997] ; SO2: 0.2 LBS/MMBTU (8A) [40CFR 60 Subpart Da,10-4-1991] | 29-5, 29-6, 40-3, 57-1, 63-1, 67-4, 82-1, 82-2, 99-1, 99-2, 99-3, 99-5, 193-3, 195-2, 195-3, 195-5, 296-1 |

| BURNER, DUCT, NATURAL GAS, 600 MMBTU/HR | | | | | |

---

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(2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.
**FACILITY PERMIT TO OPERATE**
**EL SEGUNDO POWER, LLC**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

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<thead>
<tr>
<th>Equipment</th>
<th>ID No.</th>
<th>Connected To</th>
<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions * And Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process 2 : INTERNAL COMBUSTION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO OXIDATION CATALYST, SERVING UNIT 7, WITH 1000 CUBIC FEET CATALYST VOLUME, ENGELHARD, HEIGHT 3 FT, LENGTH 44 FT, WIDTH 41 FT</td>
<td>C60</td>
<td>D55 D57 C61</td>
<td></td>
<td>SOX: 150 PPMV (8B) [40CFR 60 Subpart GG,3-6-1981] ; VOC: 2 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]</td>
<td></td>
</tr>
<tr>
<td>SELECTIVE CATALYTIC REDUCTION, SERVING UNIT 7, CORMETECH, TITANIUM-VANADIUM, 4379 CU.FT.; HEIGHT: 3 FT; LENGTH: 44 FT; WIDTH: 41 FT</td>
<td>C61</td>
<td>C60 S63</td>
<td></td>
<td>NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT,5-10-1996]</td>
<td>12-7, 12-8, 12-9, 29-4, 73-3, 82-3, 179-4, 193-3, 195-6</td>
</tr>
<tr>
<td>AMMONIA INJECTION, GRID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STACK, NO. 7, DIAMETER: 19 FT; HEIGHT: 215 FT</td>
<td>S63</td>
<td>C61</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Process 5 : INORGANIC CHEMICAL STORAGE** | | | | | |
| STORAGE TANK, UNDERGROUND, TK-001, AQUEOUS AMMONIA, CARBON STEEL, DOUBLE WALLED, WITH 3 TRANSFER PUMPS AND A PRV SET AT 50 PSIG, 20000 GALS; DIAMETER: 10 FT 2 IN; LENGTH: 37 FT 10 IN | D30 | | | 157-1, 193-2, 193-3 |

* (1) Denotes RECLAIM emission factor  
(2) Denotes RECLAIM emission rate  
(3) Denotes RECLAIM concentration limit  
(4) Denotes BACT emission limit  
(5)(5A)(5B) Denotes command and control emission limit  
(6) Denotes air toxic control rule limit  
(7) Denotes NSR applicability limit  
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)  
(9) See App B for Emission Limits  
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>ID No.</th>
<th>Connected To</th>
<th>RECLAIM Source Type/ Monitoring Unit</th>
<th>Emissions * And Requirements</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process 5: INORGANIC CHEMICAL STORAGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCRUBBER, VENTURI, TWO STAGE</td>
<td>C64</td>
<td>D30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* (1) Denotes RECLAIM emission factor
(2) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: DEVICE ID INDEX

The following sub-section provides an index to the devices that make up the facility description sorted by device ID.
### SECTION H: DEVICE ID INDEX

<table>
<thead>
<tr>
<th>Device ID</th>
<th>Section H Page No.</th>
<th>Process</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>D7</td>
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<td>1</td>
<td>2</td>
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<td>D9</td>
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<td>D11</td>
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<td>1</td>
<td>2</td>
</tr>
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<td>D30</td>
<td>10</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>C39</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C41</td>
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<tr>
<td>D48</td>
<td>6</td>
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<td>C51</td>
<td>7</td>
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</tr>
<tr>
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<td>S54</td>
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</tr>
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<tr>
<td>D57</td>
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<tr>
<td>C60</td>
<td>10</td>
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<td>2</td>
</tr>
<tr>
<td>C61</td>
<td>10</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>S63</td>
<td>10</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

FACILITY CONDITIONS

F9-1. Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

   (a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or
   (b) Of such opacity as to obscure an observer’s view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 9-11-1998]

F14-1. The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

F14-2. The operator shall not purchase fuel oil containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

This condition shall become effective on or after June 1, 2004.

[RULE 431.2, 9-15-2000]

F16-1. The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

   purchase records of fuel oil and sulfur content of the fuel

[RULE 3004(a)(4)-Periodic Monitoring, 8-11-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

F18-1. Acid Rain SO2 Allowance Allocation for affected units are as follows:

<table>
<thead>
<tr>
<th>Device ID</th>
<th>Boiler ID</th>
<th>Contaminant</th>
<th>Tons in any year</th>
</tr>
</thead>
<tbody>
<tr>
<td>D7</td>
<td>Boiler No. 1</td>
<td>SO2</td>
<td>437</td>
</tr>
<tr>
<td>D9</td>
<td>Boiler No. 2</td>
<td>SO2</td>
<td>90</td>
</tr>
<tr>
<td>D11</td>
<td>Boiler No. 3</td>
<td>SO2</td>
<td>182</td>
</tr>
<tr>
<td>D13</td>
<td>Boiler No. 4</td>
<td>SO2</td>
<td>370</td>
</tr>
</tbody>
</table>

a). The allowance allocation(s) shall apply to calendar years 2000 through 2009.

b). The number of allowances allocated to Phase II affected units by U.S. EPA may change in a 1998 revision to 40CFR73 Tables 2, 3, and 4. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO2 allowance allocations identified in this permit (see 40 CFR 72.84)

[40CFR 73 Subpart B, 1-11-1993]

F24-1. Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

[40CFR 68 - Accidental Release Prevention, 5-24-1996]

DEVICE CONDITIONS
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

1-2. The operator shall limit the refinery gas fuel usage to no more than 34 MM cubic feet per day.

   This limit shall be based on the total combined limit for equipment D7, D9, D11, D13.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[ Devices subject to this condition : D7, D9, D11 ]

1-4. The operator shall limit the operating time to no more than 2 hour(s) in any one day.

   The purpose(s) of this condition is to insure that there is no increase in PM10 emissions requiring BACT. This condition shall only apply when the equipment is firing fuel oil.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : D11 ]

1-5. The operator shall limit the operating time to no more than 199 hour(s) in any one year.

   To comply with this condition, the operator shall install and maintain a(n) 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.

[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D45 ]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

12-3. The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH3).

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 12 months.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]

12-4. The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the ammonia-to-emitted-NOx mole ratio applied to the SCR reactor.

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 12 months.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]

12-5. The operator shall install and maintain a(n) pressure gauge to accurately indicate the pressure across the SCR catalyst bed in inches water column.

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 12 months.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

12-6. The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature of the boiler exhaust at the inlet of the SCR reactor.

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 12 months.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]

12-7. The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected NH3.

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 12 months.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C52, C61]

12-8. The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor.

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 12 months.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C52, C61]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

12-9. The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches water column.

   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 12 months.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C52, C61]

28-2. The operator shall conduct source test(s) in accordance with the following specifications:

   The test shall be conducted to determine the CO emissions at the outlet.
   The test shall be conducted at least annually.
   The test shall be conducted to demonstrate compliance with Rule 1303 concentration limit.
   The test shall be conducted when the equipment is operating under normal conditions. No test shall be required in any one year for which the equipment is not in operation.
   The test shall be conducted to determine compliance with the CO emissions by either: (a) conducting a source test using District method 100.1 measured over a 30 minute averaging time, or (b) using a portable analyzer and a District-approved test method.

[RULE 3004(a)(4)-Periodic Monitoring, 8-11-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[ Devices subject to this condition : D11]
SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

28-3. The operator shall conduct source test(s) in accordance with the following specifications:

The District shall be notified of the date and time of the test at least 7 days prior to the test.

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

The test shall be conducted to determine the NH3 emissions using District Methods 207.1 and 5.3, or EPA Method 17 measured over a 60 minute averaging time period. The NOx concentration, as determined by reading the CEMS, shall be simultaneously recorded during the 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.

The test shall be conducted and the results submitted to the District within 45 days after the test date.

The test shall be conducted shall be conducted at least quarterly during the first 12 months of operation of the SCR, and at least annually thereafter.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1401, 3-17-2000]

[Devices subject to this condition: C39, C41]
The operator shall comply with the terms and conditions set forth below:

28-4. The operator shall conduct source test(s) in accordance with the following specifications:

- The test shall be conducted to determine the NOX emissions using District method 100.1 measured over a 60 minute averaging time period.
- The test shall be conducted to determine the CO emissions using District method 100.1 measured over a 60 minute averaging time period.
- The test shall be conducted to determine the SOX emissions using District method 6.1 measured over a 60 minute averaging time period.
- The test shall be conducted to determine the ROG emissions using approved District method measured over a 60 minute averaging time period.
- The test shall be conducted to determine the PM emissions using District method 5.2 measured over a 60 minute averaging time period.
- The District shall be notified of the date and time of the test at least 10 days prior to the test.
- The test shall be conducted to determine the NH3 emissions using District Methods 207.1 and 5.3, or EPA Method 17 measured over a 60 minute averaging time period.
- 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 rate, flue gas temperature, and the generator power output (MW).
- The test shall be conducted in accordance with a District approved source test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days prior to the proposed test date. The source test protocol shall include the proposed operating conditions of the boiler during the tests, identity of the testing lab, a statement from the test lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.
- The test shall be conducted with and without ammonia injection when this equipment is operating at loads of 100, 75, and 50 percent and the minimum load at which ammonia injection occurs during the NOx and PM tests. For CO, SOx, and ROG, the test shall be conducted at 100 percent load with ammonia injection only.
- The test shall be conducted after approval of the source test protocol, but no later than 180 days after initial start-up of the SCR control system.
- The test shall be conducted with ammonia injection when this equipment is operating at loads of 100, 75, and 50 percent and the minimum load at which ammonia injection occurs during the NH3 tests.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 3-17-2000; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[Devices subject to this condition: D11]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

29-1. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>CO emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>SOX emissions</td>
<td>District method 6.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>PM10 emissions</td>
<td>District method 5.2</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
</tbody>
</table>

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD engineer no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

During the source test(s), the facility permit holder shall also measure the oxygen levels in the exhaust, flue flow rate (CFH), the flue gas rate, flue gas temperature, and the generator output (MW).

The test(s) shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted when the equipment is operating under at loads of 100, 75 and 50 percent while burning natural gas.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[Devices subject to this condition: D7, D9]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

29-2. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>CO emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>SOX emissions</td>
<td>District method 6.1</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
<tr>
<td>PM10 emissions</td>
<td>District method 5.2</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
</tbody>
</table>

In addition to the source test requirements of Section E of this facility permit, the facility permit holder shall submit the protocol to the AQMD engineer no later than 45 days prior to the proposed test date, and notify the District of the date and time of the test at least 10 days prior to the test.

During the source test(s), the facility permit holder shall also measure the oxygen levels in the exhaust, flue flow rate (CFH), the flue gas rate, flue gas temperature, and the generator output (MW).

During the source test(s), the facility permit holder shall also analyze the natural gas and refinery gas mixture sulfur content in accordance with District Method 307.91.

The test(s) shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up.

The test shall be conducted when the equipment is operating under at loads of 100, 75 and 50 percent while burning the mixture of natural gas and refinery gas.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[Devices subject to this condition: D7, D9]
FACILITY PERMIT TO OPERATE  
EL SEGUNDO POWER, LLC  

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE  

The operator shall comply with the terms and conditions set forth below:

29-3. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM10 emissions</td>
<td>District method 5.2</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
</tbody>
</table>

The test(s) shall be conducted at least once every three years.

The test shall be conducted when the equipment is operating under normal conditions. However, no test shall be required in any one year if the equipment is not in operation.

The test shall be conducted to demonstrate compliance with the Rule 409 limit.

[RULE 3004(a)(4)-Periodic Monitoring, 8-11-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition: D7, D9]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

29-4. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NH3 emissions</td>
<td>District method 207.1 and 5.3 or EPA method 17</td>
<td>1 hour</td>
<td>Outlet</td>
</tr>
</tbody>
</table>

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

The test shall be conducted at least quarterly during the first 12 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.

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

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C52, C61]
**FACILITY PERMIT TO OPERATE**  
**EL SEGUNDO POWER, LLC**

**SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE**

The operator shall comply with the terms and conditions set forth below:

29-5. The operator shall conduct source test(s) for the pollutant(s) identified below.

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>CO emissions</td>
<td>District method 100.1</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>SOX emissions</td>
<td>Approved District method</td>
<td>District-approved averaging time</td>
<td>Fuel Sample</td>
</tr>
<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>PM emissions</td>
<td>Approved District method</td>
<td>District-approved averaging time</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>NH3 emissions</td>
<td>District method 207.1 and 5.3 or EPA method 17</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
</tbody>
</table>

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

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the test 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 approved source test protocol. The protocol shall be submitted to the District engineer no later than 45 days before the proposed test date and shall be approved by the District before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the test, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of R304, and a description of all sampling and analytical procedures.

The test shall be conducted for all pollutants 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input. In addition, test shall be conducted when the gas turbine is operating alone at loads of 75 and 50 percent of maximum heat input for the NOx, CO, VOC and NH3 tests.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[Devices subject to this condition: D46, D48, D55, D57]
FACILITY PERMIT TO OPERATE  
EL SEGUNDO POWER, LLC  

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE  

The operator shall comply with the terms and conditions set forth below:  

29-6. The operator shall conduct source test(s) for the pollutant(s) identified below.  

<table>
<thead>
<tr>
<th>Pollutant(s) to be tested</th>
<th>Required Test Method(s)</th>
<th>Averaging Time</th>
<th>Test Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOX emissions</td>
<td>Approved District method</td>
<td>District-approved averaging time</td>
<td>Fuel Sample</td>
</tr>
<tr>
<td>ROG emissions</td>
<td>Approved District method</td>
<td>1 hour</td>
<td>Outlet of the SCR</td>
</tr>
<tr>
<td>PM emissions</td>
<td>Approved District method</td>
<td>District-approved averaging time</td>
<td>Outlet of the SCR</td>
</tr>
</tbody>
</table>

The test(s) shall be conducted at least once every three years.  

The test shall be conducted and the results submitted to the AQMD within 60 days after the test date. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.  

The test shall be conducted 1) when the gas turbine and duct burner are operating simultaneously at 100 percent of maximum heat input and 2) when the gas turbine is operating alone at 100 percent of maximum heat input.  

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration and emissions limits.  

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]  

[ Devices subject to this condition : D46, D48, D55, D57]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

40-1. The operator shall provide to the District a source test report in accordance with the following specifications:

- Source test results shall be submitted to the District no later than 60 days after the source test was conducted.
- Emission data shall be expressed in terms of concentration (ppmv), corrected to 3 percent oxygen, dry basis.
- All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).
- All moisture concentration shall be expressed in terms of percent corrected to 3 percent oxygen.
- Emission data shall be expressed in terms of mass rate (lbs/hr). In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.
- Source test results shall also include fuel flow rate (CFH) and generator output (MW) under which the test was conducted.
- Emission data shall be expressed in terms of lbs/MM cubic feet.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1401, 3-17-2000; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D11]

40-2. The operator shall provide to the District a source test report in accordance with the following specifications:

- Source test results shall be submitted to the District no later than 60 days after the source test was conducted.
- Emission data shall be expressed in terms of concentration (ppmv) corrected to 3 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM Cubic Feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.
- All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).
- All moisture concentration shall be expressed in terms of percent corrected to 3 percent oxygen.
- Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D7, D9]
The operator shall comply with the terms and conditions set forth below:

40-3. The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of concentration (ppmv) corrected to 15 percent oxygen (dry basis), mass rate (lbs/hr), and lbs/MM Cubic Feet. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition : D46, D48, D55, D57]

57-1. The operator shall vent this equipment to the CO oxidation and SCR control whenever this equipment is in operation.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition : D46, D48, D55, D57]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

61-1. The operator shall not use refinery gas containing the following specified compounds:

<table>
<thead>
<tr>
<th>Compound</th>
<th>ppm by volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulfur compounds calculated as greater than hydrogen sulfide</td>
<td>40</td>
</tr>
</tbody>
</table>

The 40 ppm limit is averaged over 4 hours

[RULE 431.1, 6-12-1998]

[ Devices subject to this condition: D7, D9, D11]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

63-1. The operator shall limit emissions from this equipment as follows:

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>EMISSIONS LIMIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>Less than or equal to 20566 LBS IN ANY ONE MONTH</td>
</tr>
<tr>
<td>PM10</td>
<td>Less than or equal to 20336 LBS IN ANY ONE MONTH</td>
</tr>
<tr>
<td>VOC</td>
<td>Less than or equal to 7588 LBS IN ANY ONE MONTH</td>
</tr>
<tr>
<td>SOX</td>
<td>Less than or equal to 2342 LBS IN ANY ONE MONTH</td>
</tr>
</tbody>
</table>

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

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 percent load, and 14 lbs/MMscf during the full load tests when the turbine is operating above 60 percent 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 combined cycle gas turbines No. 5 and No. 7.

[RULE 1303(b)(2)-Offset, 5-10-1996]

[ Devices subject to this condition: D46, D48, D55, D57]
SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

67-4. The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):
   - Natural gas fuel use during the commissioning period.
   - Natural Gas usage after the commissioning period and prior to CEMS certification.
   - Natural Gas usage after the CEMS certification.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition: D46, D48, D55, D57]

73-1. The operator may, at his discretion, choose not to use ammonia injection if any of the following requirement(s) are met:
   - The inlet exhaust temperature to the SCR reactor is below 500 degrees F

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1401, 3-17-2000; RULE 402, 5-7-1976]

[ Devices subject to this condition: C39, C41]

73-3. The operator may, at his discretion, choose not to use ammonia injection if any of the following requirement(s) are met:
   - The inlet exhaust temperature to the SCR is 450 degrees F or less, not to exceed 3 hours during a cold start-up, 2 hours during a warm start-up, and 1 hour during a hot start-up

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition: C52, C61]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

82-1. The operator shall install and maintain a CEMS to measure the following parameters:

   CO concentration in ppmv

   Concentrations shall be corrected to 15 percent oxygen on a dry basis.

   The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

   The CEMS shall be installed and operated in accordance with an approved AQMD 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD. The CO CEMS shall be installed and operated within 90 days after initial start-up (first firing) of the gas turbines.

   The CEMS shall be installed and operated to measure CO concentrations over a 15 minute averaging time period.

   [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

   [ Devices subject to this condition : D46, D48, D55, D57]

82-2. The operator shall install and maintain a CEMS to measure the following parameters:

   NOX concentration in ppmv

   Concentrations shall be corrected to 15 percent oxygen on a dry basis.

   The CEMS shall be installed and operating no later than 12 months after the initial start-up of the turbine and shall comply with all requirements of Rule 2012. During the interim period between the initial start-up and the provisional certification date of the CEMS, the operator shall comply with the monitoring requirements of Rule 2012(b)(2) and 2012(h)(3). Within 2 weeks of the turbine start-up date, the operator shall provide written notification to the District of the exact date of start-up.

   [RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

   [ Devices subject to this condition : D46, D48, D55, D57]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

82-3. The operator shall install and maintain a CEMS to measure the following parameters:

- NH₃ concentration in ppmv
- Concentrations shall be corrected to 15 percent oxygen on a dry basis.
- The CEMS shall be installed and operated to measure NH₃ concentration over a 15 minute averaging time period.
- The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine.
- The CEMS shall be installed and operated, in accordance with an AQMD approved CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(b)(2)-Offset, 5-10-1996]

[Devices subject to this condition: C52, C61]

90-1. The operator shall sample and analyze the sulfur content of the blended refinery-natural gas according to the following specifications:

- The operator shall sample once per month or once per batch when burning blended refinery-natural gas. The draw time for the sample shall be at least 15 minutes. The analysis shall be conducted using District Method 307.91.


[Devices subject to this condition: D7, D9, D11]

99-1. The 2.5 PPM NOₓ emission limit(s) shall not apply during turbine commissioning and startup periods. Startup time shall not exceed 3 hrs per day. The commissioning period shall not exceed 33 operating days from the initial startup. The operator shall provide the AQMD written notification of the startup date. No more than one turbine shall be in startup mode at any one time. Written records of commissioning and startups shall be maintained and made available upon request from AQMD.

[RULE 2005, 4-9-1999; RULE.2005, 4-20-2001]

[Devices subject to this condition: D46, D48, D55, D57]
SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

99-2. The 6 PPM CO emission limit(s) shall not apply during turbine commissioning and startup periods. Startup time shall not exceed 3 hrs per day. The commissioning period shall not exceed 33 operating days from the initial startup. The operator shall provide the AQMD written notification of the startup date. No more than one turbine shall be in startup mode at any one time. Written records of commissioning and startups shall be maintained and made available upon request from AQMD.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : D46, D48, D55, D57]

99-3. The 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 percent load to report RECLAIM emissions.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D46, D48, D55, D57]

99-4. The 33.9 LBS/MMCF NOX emission limit(s) shall only apply during the turbine commissioning period during the full load tests when the turbine is operating above 60 percent 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.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D46, D55]

99-5. 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 startup date.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D48, D57]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

99-6. The 80 Lbs/hr 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.

[RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition : D46, D55]

157-1. The operator shall install and maintain a pressure relief valve set at 50 psig.

[ Devices subject to this condition : D30]

179-2. For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour.

   Condition Number 12-3
   Condition Number 12-4
   Condition Number 12-6

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]

179-3. For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

   Condition Number 12-5

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : C39, C41]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

179-4. For the purpose of the following condition number(s), 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 Number 12-7
   Condition Number 12-8
   Condition Number 12-9

   [RULE 1303(a)(1)-BACT, 5-10-1996]

   [ Devices subject to this condition : C52, C61]

193-1. The operator shall construct, operate, and maintain this equipment according to the following specifications:

   In compliance with all mitigation measures as stipulated by the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" final subsequent Environmental Impact Report dated January, 1994 (SCH No. 88032315) for the El Segundo Generating Station ammonia storage and selective catalytic reduction project.

   The schedule for installation of air pollution control (APC) equipment shall be done in consultation with the California Energy Commission (CEC) and the California Independent System Operator (CISO) to ensure that compliance with air pollution laws and requirements can be achieved with no significant power interruption.

   For facilities operating under an Order of Abatement or a Settlement Agreement, in the event the specified schedule of installation of APC equipment under these agreements cannot be met, the operator must seek amendment of the Order of Abatement or Settlement Agreement at SCAQMD discretion.

   [CA PRC CEQA, 11-23-1970]

   [ Devices subject to this condition : D11, C39, C41]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

193-2. The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In compliance with all mitigation measures as stipulated by the "Statement of Findings, Statement of Overriding Considerations, and Mitigation Monitoring Plan" final subsequent Environmental Impact Report dated January, 1994 (SCH No. 88032315) for the El Segundo Generating Station ammonia storage and selective catalytic reduction project.

[ Devices subject to this condition : D30]

193-3. The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In compliance with all Conditions of Certification included in the California Energy Commission Staff Assessment dated June 2001 (00-AFC-14) for the El Segundo Power Redevelopment Project.

[CA PRC CEQA, 11-23-1970]

[ Devices subject to this condition : D30, D45, D46, D48, C52, D55, D57, C61]

195-1. The 10 PPMV NH3 emission limit(s) are averaged over 60 minutes at 3 percent oxygen, dry. This limit shall be determined and measured in the combined exhaust from the North and South ducts.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C39, C41]

195-2. The 2.5 PPMV NOX emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry.

[RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition : D46, D48, D55, D57]
LOCATION PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

195-3. The 6 PPMV CO emission limit(s) are averaged over 60 minutes at 15 percent oxygen, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : D46, D48, D55, D57]

195-5. The 2 PPMV VOC emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : D46, D48, D55, D57]

195-6. The 5 PPMV NH3 emission limit(s) are averaged over 60 mins at 15 percent oxygen, dry.

[RULE 1303(a)(1)-BACT, 5-10-1996]

[ Devices subject to this condition : C52, C61]

296-1. 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.

[RULE 2005, 4-9-1999; RULE 2005, 4-20-2001]

[ Devices subject to this condition : D46, D48, D55, D57]
FACILITY PERMIT TO OPERATE
EL SEGUNDO POWER, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

305-1. Whenever this equipment is in operation, control devices C39 and C41 may be operated at any control efficiency provided that the emission concentrations being monitored by the certified CEMS serving this equipment is below the valid upper range specified in the approved CEMS plan.

[RULE 2012, 12-7-1995; RULE 2012, 4-9-1999]

[ Devices subject to this condition : D11]

331-1. The conditions and requirements for this device in Section H shall take effect, and shall supersede those in Section D, when the modifications authorized in Section H are completed. The operator shall notify the AQMD when the modifications are completed.

[RULE 202, 5-7-1976]

[ Devices subject to this condition : D7, D9, D11]

371-1. The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever this equipment has combusted one million gallons of diesel fuel, to be counted cumulatively over a five year period. The inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall:

Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three working days (or during the next fuel oil firing period if the unit ceases firing on fuel oil within the three working day time frame) and report any deviations to AQMD.

In addition, the operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

a). Stack or emission point identification;

b). Description of any corrective actions taken to abate visible emissions;

c). Date and time visible emission was abated; and

d). Visible emission observation record by a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 8-11-1995; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[ Devices subject to this condition : D11]
SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

425-1. The operator shall have the existing CEMS monitoring this device recertified within 90 days of the start-up of the modification of this device. If the CEMS is not recertified within 90 days of start-up of this device, the facility permit holder shall calculate and report NOx emissions in accordance with Rule 2012, Appendix A, Chapter 2, Paragraph (B)(16) - Recertification Requirements.

[RULE 2012, 12-7-1995; RULE 2012, 3-16-2001]

[ Devices subject to this condition : D7, D9]
STATE OF CALIFORNIA
Energy Resources Conservation and Development Commission

In the Matter of:
Application for Certification of the El Segundo Power Plant Redevelopment Project

Docket No. 00-AFC-14

PROOF OF SERVICE LIST
[*Revised 7/25/02]

I, Pat Owen, declare that on January 31, 2003, I deposited copies of the attached letter dated February 14, 2002 from SOUTH COAST, AIR QUALITY MANAGEMENT DISTRICT TO MR. ROBERT L. THERKELSEN REGARDING EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14), in the United States mail at Sacramento, CA with first class postage thereon fully prepaid and addressed to the following:

DOCKET UNIT

Send the original signed document plus the required 12 copies to the address below:

CALIFORNIA ENERGY COMMISSION
DOCKET UNIT, MS-4
*Attn: Docket No. 00-AFC-14
1516 Ninth Street
Sacramento, CA 95814-5512
E-mail: docket@energy.state.ca.us

* * * *

In addition to the documents sent to the Commission Docket Unit, also send individual copies of any documents to:

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*Revisions to POS List, i.e. updates, additions and/or deletions
EL SEGUNDO POWER PLANT REDEVELOPMENT PROJECT Docket No. 00-AFC-14
California State Lands Commission
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I declare under penalty of perjury that the foregoing is true and correct.

[signature]
FOR YOUR INFORMATION ONLY! Parties DO NOT mail to the following individuals. The Energy Commission Docket Unit will internally distribute documents filed in this case to the following:

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WILLIAM J. KEESE, Chairman
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MS-32

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*Revisions to POS List, i.e. updates, additions and/or deletions
EL SEGUNDO POWER PLANT REDEVELOPMENT PROJECT Docket No. 00-AFC-14