

**DOCKETED**

<b>Docket Number:</b>	00-AFC-14C
<b>Project Title:</b>	EI Segundo Power Redevelopment Project Compliance
<b>TN #:</b>	238198
<b>Document Title:</b>	ESEC LLC Title V De Minimis Permit Revision
<b>Description:</b>	ESEC LLC Title V De Minimis Permit Revision
<b>Filer:</b>	Timothy R Sisk
<b>Organization:</b>	NRG Energy Inc
<b>Submitter Role:</b>	Applicant
<b>Submission Date:</b>	6/15/2021 8:47:55 AM
<b>Docketed Date:</b>	6/15/2021



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

June 11, 2021

Mr. Ken Riesz, Sr.  
Plant Manager  
El Segundo Energy Center, LLC  
301 Vista Del Mar  
El Segundo, CA 90245

Subject: Title V De Minimis Permit Revision (Facility ID# 115663)

Dear Mr. Riesz:

Please find enclosed the revised Title V permit for equipment located at 301 Vista Del Mar, El Segundo, CA 90245. The enclosed permit incorporates the approval of the de minimis permit revision requested in your Application No. 627771 to increase the maximum heat input rating of the two combined cycle gas turbines. The proposed permit revision was submitted to EPA on June 4, 2021 for their expedited review. The EPA has 45 days from receipt of the proposed permit and all necessary supporting documentation to object in writing to its issuance. The EPA has completed its review of the proposed permit revision package on June 9, 2021 and has no comments at this time.

The 60-day period for the public to petition the EPA to object to the permit begins the day after the EPA's 45-day review period. Also note, that if the permit is later found to require corrective steps (including, but not limited to, reopening the permit for cause), the expiration of both EPA's review period and the public petition period without EPA objection does not compromise the Agency's authority to take such measures.

Section H of this revised permit reflects the approval of the following:

Equipment	Application No.	Device ID	Permit Type
Gas Turbine	627769	D67	Permit to Construct
Gas Turbine	627770	D68	Permit to Construct

Please review the attached sections carefully. Insert the enclosed section into your RECLAIM/Title V Facility Permit and discard the earlier versions. If you determine there are administrative errors or if you have questions concerning your RECLAIM/Title V permit, please contact Mr. Christian Aviles at (909) 396-3147 or caviles@aqmd.gov within 30 days of receipt of your permit.

Sincerely,

Thomas G. Liebel  
Senior Engineering Manager  
Engineering and Permitting

TGL:RC:LC:CA  
Enclosures: Facility Permit  
cc: Laura Yannayon, USPEA Region IX  
South Coast AQMD Compliance



South Coast Air Quality Management District  
21865 Copley Drive, Diamond Bar, CA 91765-4178

Title Page	
Facility ID:	115663
Revision #:	51
Date:	June 10, 2021

## FACILITY PERMIT TO OPERATE

**EL SEGUNDO ENERGY CENTER LLC  
301 VISTADELMAR  
EL SEGUNDO, CA 90245**

### NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Wayne Nastri  
Executive Officer

By   
Jason Aspell  
Deputy Executive Officer  
Engineering and Permitting



## FACILITY PERMIT TO OPERATE EL SEGUNDO ENERGY CENTER LLC

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**FACILITY PERMIT TO OPERATE  
 EL SEGUNDO ENERGY CENTER LLC**

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
<b>System 2: GAS TURBINE POWER GENERATION</b>					

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) 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  
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The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
GAS TURBINE, UNIT NO.5, NATURAL GAS, SIEMENS, MODEL SGT6-5000F RAPID-RESPONSE, COMBINED CYCLE, 2,250 MMBTU/HR AT 68 DEGREES F, WITH DRY LOW-NOX COMBUSTORS WITH A/N:627769 Permit to Construct Issued: 06/10/21	D67		NOX: MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2)-PSD-BACT, 10-7-1988]; CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 8.66 LBS/MMSCFNATURAL GAS (1A) [RULE 2012, 2-5-2016]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.55 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 2-5-2016]; PM: 0.01 GRAINS/SCF NATURAL GAS (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF NATURAL GAS (5A) [RULE 409, 8-7-1981]; PM: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72- Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)	A63.2, A99.7, A99.8, A99.9, A195.8, A195.9, A195.10, A327.1, A433.1, B61.2, C1.10, C1.11, D12.10, D29.8, D29.9, D82.4, D82.5, E193.2, K40.4

- \* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
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\*\* Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.



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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
GENERATOR, HEAT RECOVERY STEAM, UNFIRED				-BACT, 12-6-2002]	
TURBINE, STEAM, 67.7 MW					
GENERATOR, 222.5 MW					
STACK, NO. 5, HEIGHT: 210 FT; DIAMETER: 20 FT 11 IN A/N: 627769 Permit to Construct Issued: 06/10/21	S78				

\* (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate  
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\*\* 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 ENERGY CENTER LLC

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

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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
GAS TURBINE, UNIT NO.7, NATURAL GAS, SIEMENS, MODEL SGT6-5000F RAPID-RESPONSE, COMBINED CYCLE, 2,250 MMBTU/HR AT 68 DEGREES F, WITH DRY LOW-NOX COMBUSTORS WITH A/N: 627770 Permit to Construct Issued: 06/10/21	D68		NOX:MAJOR SOURCE**	CO: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2)-PSD-BACT, 10-7-1988]; CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2 PPMV NATURAL GAS (4) [RULE 1703(a)(2)-PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]; NOX: 8.66 LBS/MMSCF NATURAL GAS (1A) [RULE 2012, 2-5-2016]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; NOX: 16.55 LBS/MMSCF NATURAL GAS (1) [RULE 2012, 2-5-2016]; PM: 0.01 GRAINS/SCF NATURAL GAS (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF NATURAL GAS (5A) [RULE 409, 8-7-1981]; PM: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72-Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 7-6-2006]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)	A63.2, A99.7, A99.8, A99.9, A195.8, A195.9, A195.10, A327.1, A433.1, B61.2, C1.10, C1.11, D12.10, D29.8, D29.9, D82.4, D82.5, E193.2, K40.4

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\*\* 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 ENERGY CENTER LLC**

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

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

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
<b>Process 1: INTERNAL COMBUSTION</b>					
GENERATOR, HEAT RECOVERY STEAM, UNFIRED  TURBINE, STEAM, 67.7 MW  GENERATOR, 222.5 MW				-BACT, 12-6-2002]	
STACK, NO. 7, HEIGHT: 210 FT; DIAMETER: 20 FT 11 IN A/N: 627770 Permit to Construct Issued: 06/10/21	S82				

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



**FACILITY PERMIT TO OPERATE  
EL SEGUNDO ENERGY CENTER LLC**

**SECTION H: DEVICE ID INDEX**

<b>Device Index For Section H</b>			
<b>Device ID</b>	<b>Section H Page No.</b>	<b>Process</b>	<b>System</b>
D67	3	1	2
D68	5	1	2
S78	3	1	2
S82	5	1	2



**FACILITY PERMIT TO OPERATE  
EL SEGUNDO ENERGY CENTER 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**

F2.1 The operator shall limit emissions from this facility as follows:

CONTAMINANT	EMISSIONS LIMIT
PM	Less than 70 TONS IN ANY ONE YEAR

For the purpose of this condition, the PM emission limit shall be applicable to particulate matter with an aerodynamic diameter of less than 2.5 microns.

For the purpose of this condition any one year shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new twelve month period beginning on the first day of each calendar month. The operator shall calculate the emissions using the calendar monthly fuel use data and the following emission factors: PM2.5: 4.66 lb/mmscf for Gas Turbines No. 5 and No. 7.

[RULE 1325, 1-4-2019; 40CFR 51 Subpart S, 3-8-2007]

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, 11-9-2001]

F21.1 Acid Rain SO2 Allowance Allocation for retired units are as follows:



**FACILITY PERMIT TO OPERATE  
EL SEGUNDO ENERGY CENTER LLC**

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

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

Boiler ID	Contaminant	Tons in year
Boiler No. 1	SO2	357
Boiler No. 2	SO2	62
Boiler No. 3	SO2	171
Boiler No. 4	SO2	363

- a). The allowance allocation(s) shall apply to calendar years 2010 and beyond.
- 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).
- c). A unit exempted under 40CFR72.8 shall not emit any sulfur dioxide starting on the date it is exempted.
- d). The owners and operators of a unit exempted under 40CFR72.8 shall comply with monitoring requirements in accordance with part 75 and will be allocated allowances in accordance with 40CFR73.
- e). A unit exempted under 40CFR73 shall not resume operation unless the designated representative of the source that includes the unit submits an Acid Rain permit application for the unit not less than 24 months prior to the later of January 1, 2000, or the date the unit is to resume operation. On the earlier of the date the written exemption expires or the date an Acid Rain permit application is submitted or is required to be submitted under this paragraph, the unit shall no longer be exempted and shall be subject to all requirements of 40CFR72.

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



## FACILITY PERMIT TO OPERATE EL SEGUNDO ENERGY CENTER LLC

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

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

#### 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]**

#### F67.1 The facility operator shall comply with all terms and conditions specified below.

Continuous operation of monitoring systems not subject to Rule 218 are not required when necessary calibration, maintenance or repair activities are performed in accordance with manufacturer's recommendation. The operator shall take all reasonable actions to minimize the time required to perform such activities. In no event shall any such activities exceed 96 consecutive hours for any one calibration, maintenance, or repair episode.

The operator shall notify the Executive Officer within 24 hours of the start of a calibration, maintenance, or repair activity, if the activity is expected to last more than 24 consecutive hours.

**[RULE 204, 10-8-1993]**

### DEVICE CONDITIONS

#### A. Emission Limits

#### A63.2 The operator shall limit emissions from this equipment as follows:



**FACILITY PERMIT TO OPERATE  
EL SEGUNDO ENERGY CENTER LLC**

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

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

CONTAMINANT	EMISSIONS LIMIT
PM10	Less than or equal to 6935 LBS IN ANY ONE MONTH
SOX	Less than or equal to 1065 LBS IN ANY ONE MONTH
VOC	Less than or equal to 4930 LBS IN ANY ONE MONTH

The operator shall calculate the monthly emissions for VOC, PM10, and SOx, using the equation below and the following emission factors: VOC 2.93 lb/mmcf; PM10 4.66 lb/mmcf; and SOx 0.71lb/mmcf

Monthly Emissions, lb/month = X \*(EF)

where X = monthly fuel usage, mmcf/month; and EF = emission factor indicated above

For the purpose of this condition, the limits shall be based on the emissions from a single turbine.

**[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition : D67, D68]

A99.7 The 2.0 PPM NOX emission limit(s) shall not apply during start-up and shutdown periods. Start-up periods shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 2 start-ups per day. The turbine shall be limited to a maximum of 200 start-ups per year. Written records of start-ups and shutdowns shall be maintained and made available upon request from the Executive Officer.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.



## FACILITY PERMIT TO OPERATE EL SEGUNDO ENERGY CENTER LLC

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

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

**[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]**

[Devices subject to this condition: D67, D68]

- A99.8 The 2.0 PPM CO emission limit(s) shall not apply during start-up and shutdown periods. Start-up periods shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 2 start-ups per day. The turbine shall be limited to a maximum of 200 start-ups per year. Written records of start-ups and shutdowns shall be maintained and made available upon request from the Executive Officer.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**[RULE 1703(a)(2)-PSD-BACT, 10-7-1988]**

[Devices subject to this condition : D67, D68]

- A99.9 The 2.0 PPM VOC emission limit(s) shall not apply during start-up and shutdown periods. Start-up periods shall not exceed 60 minutes for each start-up. Shutdown periods shall not exceed 60 minutes for each shutdown. The turbine shall be limited to a maximum of 2 start-ups per day. The turbine shall be limited to a maximum of 200 start-ups per year. Written records of start-ups and shutdowns shall be maintained and made available upon request from the Executive Officer.

For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**



**FACILITY PERMIT TO OPERATE  
EL SEGUNDO ENERGY CENTER LLC**

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

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

[Devices subject to this condition : D67, D68]

A195.8 The 2.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O2, dry basis.

**[RULE 1703(a)(2) - PSD-BACT, 10-7-1988]**

[Devices subject to this condition : D67, D68]

A195.9 The 2.0 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry basis.

**[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]**

[Devices subject to this condition: D67, D68]

A195.10 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry basis.

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition: D67, D68]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

**[RULE 475, 10-8-1976; RULE 475, 8-7-1978]**

[Devices subject to this condition : D67, D68]

A433.1 The operator shall comply at all times with the 2.0 ppm 1-hour BACT limit for NOx, except as defined in condition A99.7 and for the following scenario:

Operating Scenario	Maximum Hourly Emission Limit	Operational Limit
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**FACILITY PERMIT TO OPERATE  
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**The operator shall comply with the terms and conditions set forth below:**

Start-up	56 lb/hr	NOx emissions not to exceed 56 lbs total per start-up per turbine. Each turbine shall be limited to 200 start-ups per year, with each start-up not to exceed 60 minutes
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For the purposes of this condition, the beginning of start-up occurs at initial fire in the combustor and the end of start-up occurs when the BACT levels are achieved. If during start-up the process is aborted and the turbine is restarted, then the start-up and restart will count as one start-up, provided the total time for the start-up does not exceed 60 minutes. The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015]**

[Devices subject to this condition : D67, D68]

**B. Material/Fuel Type Limits**

B61.2 The operator shall not use natural gas containing the following specified compounds:

Compound	Range	grain per 100 scf
H2S	greater than	0.25

This concentration limit is an annual average based on monthly samples of natural gas composition or gas supplier documentation. The gaseous fuel sample shall be tested using District Method 307-91 for total sulfur calculated as H2S

**[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]**

[Devices subject to this condition: D67, D68]

**C. Throughput or Operating Parameter Limits**

C1.10 The operator shall limit the heat input to no more than 51,130 MM Btu in any one day.



## FACILITY PERMIT TO OPERATE EL SEGUNDO ENERGY CENTER LLC

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

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

For the purpose of this condition, heat input shall be defined as the total heat input to a single turbine.

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

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002**]

[Devices subject to this condition : D67, D68]

- C1.11 The operator shall limit the fuel usage to no more than 11,124 MM cubic feet in any one calendar year.

For the purpose of this condition, fuel usage shall be defined as the total natural gas usage of a single turbine.

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

[**RULE 1401, 9-1-2017; RULE 2005, 12-4-2015**]

[Devices subject to this condition: D67, D68]

#### D. Monitoring/Testing Requirements

- D12.10 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage of the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[**RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 2012, 2-5-2016**]

[Devices subject to this condition : D67, D68]

- D29.8 The operator shall conduct source test(s) for the pollutant(s) identified below.



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

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NH3 emissions	District method 207.1	1 hour	Outlet of the SCR serving this equipment

The test shall be conducted within 180 days of the date of issuance of this permit.

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 annually. If an annual source test is failed, four consecutive quarterly source tests must demonstrate compliance with ammonia emission limits prior to resuming annual source tests. 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 determine compliance with the Rule 1303 BACT concentration limit.

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

**[RULE 1135, 7-19-1991; RULE 1135, 11-2-2018; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]**

[Devices subject to this condition : D67, D68]

D29.9 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
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**The operator shall comply with the terms and conditions set forth below:**

SOX emissions	AQMD Laboratory Method 307-91	Not Applicable	Fuel sample
VOC emissions	District Method 25.3	1 hour	Outlet of the SCR serving this equipment
PM10 emissions	District Method 5	4 hours	Outlet of the SCR serving this equipment
PM2.5	EPA Method 201A and 202	District-approved averaging time	Outlet of the SCR serving this equipment



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

The test shall be conducted within 180 days of the date of issuance of this permit.

The test(s) shall be conducted at least once every three years for SO<sub>x</sub>, VOC, PM<sub>2.5</sub>, and PM<sub>10</sub>.

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

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

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

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

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters is done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA method TO-12 (with preconcentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD method 25.3, nor does it mean that it may be used in lieu of AQMD method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines. The test results shall be reported with two significant digits.



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

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

**[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703(a)(2)- PSD-BACT, 10-7-1988]**

[Devices subject to this condition : D67, D68]

D82.4 The operator shall install and maintain a CEMS to measure the following parameters:



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

CO concentration in ppmv

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

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

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

CO Emission Rate, (lb/hr) =  $K \text{ Ceo Fd} [20.9 / (20.9 - \%O_2)] [(Qg * HHV) / 1000000]$ , where

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

$\text{Ceo} = \text{Average of four consecutive 15 min avg CO concentrations, ppm}$

$\text{Fd} = 8710 \text{ dscf/MMBTU natural gas}$

$\%O_2 = \text{Hourly avg \% by volume O}_2, \text{ dry basis, corresponding to Ceo}$

$\text{Qg} = \text{Fuel gas usage during the hour, scf/hr}$

$\text{HHV} = \text{Gross high heating value of fuel gas, BTU/scf}$

**[RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 218, 5-14-1999]**

[Devices subject to this condition : D67, D68]

D82.5 The operator shall install and maintain a CEMS to measure the following parameters:



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

NOX concentration in ppmv

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

The CEMS shall be installed and shall comply with the requirements of Rule 2012.

**[RULE 1703(a)(2)- PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015; RULE 2012, 2-5-2016]**

[Devices subject to this condition : D67, D68]

#### **E. Equipment Operation/Construction Requirements**

E193.2 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

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

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition: D67, D68]

#### **K. Record Keeping/Reporting**

K40.4 The operator shall provide to the District a source test report in accordance with the following specifications:



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

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(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1703-PSD Analysis, 10-7-1988; RULE 2005, 12-4-2015]**

[Devices subject to this condition : D67, D68]