

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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: POWER GENERATION</b>					
<b>System 1: GAS TURBINE</b>					
GAS TURBINE, UNIT NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, 505.7 MMBTU/HR MAX AT HHV, WITH WATER INJECTION WITH A/N:	D1	C2 C3 S4		CO: 6 PPMV (4) [RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; CO: 2000 PPMV (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV (4) [RULE 1303, 12-6-2002; RULE 1303(a)(1)-BACT, 5-10-1996]; NOX: 25 PPMM (8) [40CFR 60 Subpart KKKK, 7-6-2006]; PM: 0.01 GRAINS/SCF (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF (5) [RULE 475, 10-8-1976]; PM: 11 LBS/HR (5) [RULE 475, 10-8-1976]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU (8) [40CFR 60 Subpart KKKK, 7-6-2006]; VOC: 2 PPMV (4) [RULE 1303(a) (1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.1, A63.3, A63.4, A99.1, A99.2, A195.1, A195.2, A195.3, A195.5, A327.1, C1.1, C1.3, D12.1, D29.2, D29.3, D82.1, E57.1, E193.1, K40.1, K67.1
GENERATOR, 49 MW					
CO OXIDATION CATALYST, BASF, 80 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 461462	C2	D1			

- \* (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 SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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<b>Process 1: POWER GENERATION</b>					
SELECTIVE CATALYTIC REDUCTION, CORMETECH CMHT-21, WITH 547 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 18 FT ; HEIGHT: 25 FT 9 IN; LENGTH: 2 FT 6 IN WITH A/N: 461462  AMMONIA INJECTION	C3	D1		NH3: 5 PPMV (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1
STACK, HEIGHT: 80 FT ; DIAMETER: 13 FT A/N:	S4	D1			
<b>System 2: EMERGENCY IC ENGINE</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NATURAL GAS, WAUKESHA, MODEL MODEL VGF36 GL/GLD, 924 BHP A/N: 479361	D5			CO: 1.75 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; NOX: 1.25 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; VOC: 0.75 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.3, A63.4, C1.4, D12.5, E162.1, K67.2
<b>System 3: INORGANIC CHEMICAL STORAGE</b>					
STORAGE TANK, 19 PERCENT AQUEOUS AMMONIA, HORIZONTAL, 10500 GALS A/N: 461463	D6				C157.1, E144.1
<b>System 4: RULE 219 EXEMPT EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES</b>					

- \* (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 SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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: POWER GENERATION</b>					
RULE 219 EXEMPT EQUIPMENT, SPRAY COATING EQUIPMENT, EDUCATIONAL, AND ANY DRYERS AND CONTROL ENCLOSURES	E7			VOC: (9) [RULE 1113, 11-8-1996; RULE 1113, 6-9-2006; RULE 1171, 11-7-2003; RULE 1171, 7-14-2006]	
RULE 219 EXEMPT EQUIPMENT, EXEMPT HAND WIPING OPERATIONS	E8			VOC: (9) [RULE 1171, 11-7-2003; RULE 1171, 7-14-2006]	
RULE 219 EXEMPT EQUIPMENT, REFRIGERATION UNITS	E11				

\* (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 SOUTHERN CALIFORNIA EDISON**

## **SECTION D: 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  
SOUTHERN CALIFORNIA EDISON  
SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
D1	1	1	1
C2	1	1	1
C3	2	1	1
S4	2	1	1
D5	2	1	2
D6	2	1	3
E7	3	1	4
E8	3	1	4
E11	3	1	4

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

**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, 11-9-2001]**

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**

##### **A. Emission Limits**

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A63.1 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 1525 LBS IN ANY ONE MONTH
PM10	Less than 1460 LBS IN ANY ONE MONTH
CO	Less than 1979 LBS IN ANY ONE MONTH
SOX	Less than 81 LBS IN ANY ONE MONTH
VOC	Less than 364 LBS IN ANY ONE MONTH

The operator shall calculate the monthly emission limit(s) by using fuel use data and the following emission factors: VOC: 3.15 lbs/mmcf, PM10: 11.19 lbs/mmcf, and SOx: 0.62 lbs/mmcf

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and a factor of 14.35 lbs/mmcf during normal operations, 8.58 lbs/hr during any start up hour, and 7.69 lbs/hr during any shutdown hour. The operator shall use the appropriate missing data procedures if NOx data is not available

If a CEMS calibration occurs within 60 minutes of a start up, NOx emissions for the calibration period shall be calculated using the actual duration of the calibration in minutes times a factor of 0.0792 lb/min, and shall only occur when the NOx emissions average for the five minutes immediately before calibration are at or below BACT levels.

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

[Devices subject to this condition : D1]

A63.3 The operator shall limit emissions from this equipment as follows:

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 7957 LBS IN ANY ONE YEAR
PM10	Less than 7402 LBS IN ANY ONE YEAR
CO	Less than 10414 LBS IN ANY ONE YEAR
SOX	Less than 412 LBS IN ANY ONE YEAR
VOC	Less than 1898 LBS IN ANY ONE YEAR

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

THIS CONDITION APPLIES AFTER THE 1st 12 MONTHS OF OPERATION, and the limits apply to the total emissions from the turbine plus the engine

The operator shall calculate the annual emission limit(s) by using fuel use data and the following emission factors for the turbine: VOC: 3.15 lbs/mmcf, PM10: 11.19 lbs/mmcf, and SOx: 0.62 lbs/mmcf.

The operator shall calculate the annual emission limit(s) by using hourly operation data and the following emission factors for the engine: NOx: 2.54 lbs/hr, CO: 3.56 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.064 lbs/hr, SOx: 0.0038 lbs/hr

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and a factor of 14.35 lbs/mmcf during normal operations, 8.58 lbs/hr during any start up hour, or any hour in which there is both a start up and a shut down, and 7.69 lbs/hr during any shutdown hour. The operator shall use the appropriate missing data procedures if NOx data is not available

If a CEMS calibration occurs within 60 minutes of a start up, NOx emissions for the calibration period shall be calculated using the actual duration of the calibration in minutes times a factor of 0.0792 lb/min, and shall only occur when the NOx emissions average for the five minutes immediately before calibration are at or below BACT levels.

For the purpose of this condition, the yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month

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

[Devices subject to this condition : D1, D5]

A63.4 The operator shall limit emissions from this equipment as follows:

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 55 LBS IN ANY ONE DAY

The purpose of this condition is to ensure that the facility emissions are below the CEQA thresholds, and the limit is based on the total emissions from the turbine and the black start generator. The operator shall keep records on the NOx daily emissions

The 55 lbs/day limit shall not apply when the unit undergoes CAL-ISO required black start testing, performance tuning, and WECC required generator modeling. During these periods, the daily total NOx from all operations shall not exceed 90 lbs/day.

[RULE 212, 12-7-1995; RULE 212, 11-14-1997; CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, D5]

A99.1 The 2.5 PPM NOX emission limit(s) shall not apply during, start-up, shutdown, an emergency electrical grid system blackout when the turbine is used to re-start another major electric generating station, and during CAL-ISO required testing, performance tuning, and WECC required generator modeling. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 350 start-ups/yr..

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

NOx emissions for the 60 minutes beginning with a start shall not exceed 10.36 lbs, and for the 60 minutes ending with a shut down 6.44 lbs.

In the case of a start during an emergency electrical grid system blackout, total NOx shall not exceed 28.23 lbs/hr

In case of a turbine shutdown which occurs less than 75 minutes from a start up, for determination of compliance with the start up and shutdown limits only, the emissions calculated for the shutdown 60 minute period shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 60 minute period shall not include any of the last 10 minutes of the shutdown

A shutdown is defined as a reduction in turbine load ending in a period of zero fuel flow. The hour which includes a shutdown is defined as the 60 minutes counted back from the period of zero fuel flow

During CAL-ISO required testing, NOx emissions shall not exceed 40 lbs/hr, including the start up and shutdown hours. In any one calendar year, there shall be no more than 1 completed successful test, and no more than 2 hours of total test time (including any aborted test time)

A start up is defined as whenever the turbine begins combusting fuel after a period of zero fuel flow. If the turbine does not complete its full start up sequence, and is restarted, the restart is defined as a separate start up.

During performance tuning, NOx emissions shall not exceed 50 lbs/hr for no more than 4 hrs in any one calendar year (including the start up and shut down hours) while the turbine is being operated without ammonia injection.

During performance tuning, NOx emissions shall not exceed 45 lbs/hr for no more than 2 hrs in any calendar year (including start up and shut down hours) while the turbine is being operated without ammonia injection.

During black start testing, NOx emissions shall not exceed 40 lbs/hr for no more than 4 hrs in any calendar year (including start up and shut down hours) including

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

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

unsuccessful attempts.

During performance tuning, NO<sub>x</sub> emissions shall not exceed 6 lbs/hr for no more than 22 hrs in any calendar year (not including start up and shut down hours).

In any one calendar year, the total time of turbine operation for testing activities shall be no more than 32 hours. In any one calendar year, there shall be no more than 1 completed successful black start test. The black start testing hours (including unsuccessful attempts) shall not exceed 4 hours per calendar year.

The unit performance tuning activities shall not exceed 28 hours except during the calendar year when the turbine will be operated to perform WECC required generator modeling which will take place once every 5 calendar years for 10 hours.

During WECC required generator modeling, the NO<sub>x</sub> emission rate shall not exceed 6 lbs/hr (not including start up and shut down hours) for 8 hours, and 45 lbs/hr (including start up and shut down hours) for 2 hours. During a calendar year in which the WECC generator modeling is performed, turbine operation time for unit performance tuning activities shall not exceed to 18 hours for the calendar year.

The operator shall maintain all records demonstrating compliance with this permit condition.

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

[Devices subject to this condition : D1]

- A99.2 The 6.0 PPM CO emission limit(s) shall not apply during, start-up, shutdown, an emergency electrical grid system blackout when the turbine is used to re-start another major electric generating station, and during CAL-ISO required testing performance tuning, and WECC required generator modeling. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 350 start-ups/yr..

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

In case of a turbine shutdown which occurs less than 75 minutes from a start up, for determination of compliance with the start up and shutdown limits only, the emissions calculated for the shutdown 60 minute period shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 60 minute period shall not include any of the last 10 minutes of the shutdown

A shutdown is defined as a reduction in turbine load ending in a period of zero fuel flow. The hour which includes a shutdown is defined as the 60 minutes counted back from the period of zero fuel flow

During CAL-ISO required testing and performance tuning, CO emissions shall not exceed 10 lbs/hr. In any one calendar year, there shall be no more than 32 hours of total test time (including any aborted test time)

CO emissions for the 60 minutes beginning with a start or including a start and shutdown, shall not exceed 8.58 lbs, and for the 60 minutes ending with a shutdown 7.69 lbs.

A start up is defined as whenever the turbine begins combusting fuel after a period of zero fuel flow. If the turbine does not complete its full start up sequence, and is restarted, the restart is defined as a separate start up.

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

[Devices subject to this condition : D1]

A195.1 The 2.5 PPM NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

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

[Devices subject to this condition : D1]

**A195.2 The 6.0 PPM CO emission limit(s) is averaged over 60 minutes at 15 percent O<sub>2</sub>, dry.**

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

[Devices subject to this condition : D1]

**A195.3 The 2.0 PPM VOC emission limit(s) is averaged over 60 minutes at 15 percent O<sub>2</sub>, dry.**

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

[Devices subject to this condition : D1]

**A195.4 The 5.0 PPM NH<sub>3</sub> emission limit(s) is averaged over 60 minutes at 15% O<sub>2</sub>, dry basis.**

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

The operator shall calculate and continuously record the NH<sub>3</sub> slip concentration using the following

1. NH<sub>3</sub> (ppmv) =  $[a-b*c/1E+06]*1E+06/b$ , where
2. a = NH<sub>3</sub> injection rate (lbs/hr)/17(lb/lb-mol)
3. b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol)
4. c = change in measured NO<sub>x</sub> across the SCR (ppmvd at 15% O<sub>2</sub>)

The operator shall install and maintain a NO<sub>x</sub> analyzer to measure the SCR inlet NO<sub>x</sub> ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months. The NO<sub>x</sub> analyzer shall be installed and operated within 90 days of initial start-up.

The operator shall use the above described method or another alternative method approved by the Executive Officer.

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

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

[Devices subject to this condition : C3]

A195.5 The 25 PPMV NO<sub>x</sub> emission limit(s) is averaged over 4 hours rolling at 15 percent O<sub>2</sub>, dry..

**[40CFR 60 Subpart KKKK, 7-6-2006]**

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### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

[Devices subject to this condition : D1]

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.

[Devices subject to this condition : D1]

#### **C. Throughput or Operating Parameter Limits**

C1.1 The operator shall limit the fuel usage to no more than 4.43 MM cubic feet per day.

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

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

[Devices subject to this condition : D1]

C1.3 The operator shall limit the fuel usage to no more than 470 MM cubic feet per year.

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### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

The operator may increase the annual fuel use, if the turbine Start Ups are 325 or less, in accordance with the following:

If the Start Ups over the previous 12 months are equal to or less than 325, but more than 300, then the fuel use limit for that 12 month period shall not exceed 490 mmscf.

If the Start Ups over the previous 12 months are equal to or less than 300, but more than 275, then the fuel use limit for that 12 month period shall not exceed 510 mmscf.

If the Start Ups over the previous 12 months are equal to or less than 275, but more than 250, then the fuel use limit for that 12 month period shall not exceed 530 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 250, but more than 225, then the fuel use limit for that 12 month period shall not exceed 545 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 225, but more than 200, then the fuel use limit for that 12 month period shall not exceed 565 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 200, but more than 175, then the fuel use limit for that 12 month period shall not exceed 580 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 175, but more than 150, then the fuel use limit for that 12 month period shall not exceed 600 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 150, but more than 125, then the fuel use limit for that 12 month period shall not exceed 620 mmscf.

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

If the Start Ups over the previous 12 month period are equal to or less than 125, but more than 100, then the fuel use limit for that 12 month period shall not exceed 640 mmscf.

If the Start Ups over the previous 12 month period are equal to or less than 100, then the fuel use limit for that 12 month period shall not exceed 660 mmscf.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available upon AQMD request..

The number of start ups and the fuel use shall be determined on a twelve (12) consecutive month rolling basis, with a new 12 month period beginning on the first day of each calendar month..

The data acquisition system shall record the number of start ups per month..

Exceeding the fuel use and start up limits for any 12 month period, as defined in this condition, shall require the operator to supply emission offsets and submit an application(s) to enter this facility into RECLAIM..

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

[Devices subject to this condition : D1]

C1.4 The operator shall limit the operating time to no more than 90 hour(s) in any one year.

The 90 hours per year limit may include up to 64 hours per year operating time to maintain engine readiness.

[**RULE 1110.2, 6-3-2005; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1401, 3-4-2005**]

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : D5]

C157.1 The operator shall install and maintain a pressure relief valve set at 50 psig.

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

[Devices subject to this condition : D6]

#### **D. Monitoring/Testing Requirements**

D12.1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months

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

[Devices subject to this condition : D1]

D12.2 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the the total hourly throughput of injected ammonia.

The operator shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every twelve months

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

[Devices subject to this condition : C3]

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

D12.3 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 twelve months

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

[Devices subject to this condition : C3]

D12.4 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the the SCR catalyst bed in inches of 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 twelve months

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

[Devices subject to this condition : C3]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the the engine.

**[RULE 1110.2, 6-3-2005; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;  
RULE 1401, 3-4-2005]**

[Devices subject to this condition : D5]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

**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 and 5.3 or EPA method 17	1 hour	Outlet of the SCR serving this equipment

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

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

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

[Devices subject to this condition : D1]

**D29.3** 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
SOX emissions	Approved District method	District-approved averaging time	fuel sample
VOC emissions	Approved District method	1 hour	Outlet of the SCR serving this equipment

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

PM10  
emissions

| Approved District method

| District-approved  
averaging time

| Outlet of the SCR  
serving this equipment

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

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

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

The test shall be conducted in accordance with 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 are 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 pre concentration) 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

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits

**[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]**

[Devices subject to this condition : D1]

**D82.1 The operator shall install and maintain a CEMS to measure the following parameters:**

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

NOx and CO 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 90 days after initial startup of the turbine, in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD

The CEMS will convert the actual NOx and 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 to measure the NOx and CO concentration over a 15 minute, or more frequent, averaging time period

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

1. CO Emission Rate, lbs/hr =  $K * C_{co} * F_d [20.9 / (20.9\% - \%O_2 d)] [(Q_g * HHV) / 10E6]$ , where
2. HHV = Gross high heating value of the fuel gas, BTU/scf
3.  $Q_g$  = Fuel gas usage during the hour, scf/hr
4.  $\%O_2, d$  = Hourly average % by volume O2 dry, corresponding to  $C_{co}$
5.  $F_d$  = 8710 dscf/MMBTU natural gas
6.  $C_{co}$  = Average of 4 consecutive 15 min. average CO concentrations, ppm
7.  $K = 7.267 * 10^{-8}$  (lbs/scf)/ppm

When the measured O2 concentration is > 19 percent, a default of 19 percent O2 shall be used in the calculation of NOx and CO mass emissions

[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]

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : D1]

#### E. Equipment Operation/Construction Requirements

E57.1 The operator shall vent this equipment to the SCR and the oxidation catalyst whenever the turbine is in operation.

Ammonia injection shall commence once the exhaust temperature into the SCR catalyst has reached 540 degrees F

[**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**]

[Devices subject to this condition : D1]

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

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

[Devices subject to this condition : D6]

E162.1 The operator shall use this equipment only during utility failure periods, except for maintenance purposes.

[**RULE 1110.2, 6-3-2005; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1401, 3-4-2005**]

[Devices subject to this condition : D5]

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

E179.1 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 D 12- 2

Condition Number D 12- 3

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

[Devices subject to this condition : C3]

E179.2 For the purpose of the following condition number(s), continuous monitoring shall be defined as measuring at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

Condition Number D 12- 4

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

[Devices subject to this condition : C3]

E193.1 The operator shall construct, operate, and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Mitigated Negative Declaration prepared for this project (CEQA State Clearinghouse No. 2006121109)

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, C3]

## FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

#### K. Record Keeping/Reporting

K40.1 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 15 percent oxygen (dry basis), mass rate (lb/hr), and lb/MMCF. In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains/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. 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]**

[Devices subject to this condition : D1]

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Date and time of each start-up and shutdown, and CEMS minute data during the 60 minute periods which include a start up or shutdown

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

## **FACILITY PERMIT TO OPERATE SOUTHERN CALIFORNIA EDISON**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

[Devices subject to this condition : D1]

**K67.2** The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

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 two years and made available to district personnel upon request

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;**  
RULE 1401, 3-4-2005]

[Devices subject to this condition : D5]