South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
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October 1, 2008

Mr. Gerardo Rios – via email (R9AirPermits_sc@epa.gov)
USEPA Region IX, Mail Stop AIR-3
75 Hawthorne
San Francisco, CA 94105

SUBJECT: Southern California Edison, Center Substation, ID#17104
Title V minor revision, Non-RECLAIM, Proposed Change of Conditions

Dear Mr. Rios:

The South Coast Air Quality Management District (AQMD) has received and reviewed a minor Title V revision application from Southern California Edison, Center Substation, located at 10601 Firestone Blvd., Norwalk, CA 90650. The permit revision involves increasing the start up emissions for the gas turbine and increasing the allowable operating hours for the black start engine, however, daily fuel use and annual emissions will not increase.

The AQMD has evaluated these applications and made a preliminary determination that the equipment will be operated in compliance with all of the applicable requirements of our rules and regulations.

The AQMD is required under Rule 3005(e) to provide a copy of the proposed permit to the EPA Administrator for a 45-day review. As such, a copy of the proposed revision to the existing Title V permit is attached along with our engineering analysis for your review. We intend to issue the final permit at the then end of EPA's 45-day review period, pending any comments we receive.

If you wish to provide comments or have any questions regarding this project, please contact Mr. Marcel Saulis at (909) 396-3093/ msaulis@aqmd.gov, or Mr. John Yee at (909) 396-2531 / jyee@aqmd.gov.

Sincerely,

Michael D. Mills

Michael D. Mills, P.E.
Senior Manager
General Commercial & Energy Team

cc: Uve Sillat, SCE

Enclosures: Proposed Title V Permit
Preliminary Engineering Analysis

ENGINEERING EVALUATION

COMPANY NAME AND ADDRESS

Southern California Edison
2244 Walnut Grove Ave
Rosemead, CA 91770

CONTACTS: Uve Sillat, Environmental Engineer, (626) 302-4047
Sai Banaji, Technical and EH&S Compliance Manager, (714) 895-0540

EQUIPMENT LOCATION

AQMD ID 17104
Southern California Edison
10601 E Firestone Blvd
Norwalk, CA 90650

EQUIPMENT DESCRIPTION

Section H of the facility permit: Permit to Construct and temporary Permit to Operate. The changes to this section are represented by a ~~double-strikethrough~~ for deletions and **bold underline** for additions.

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
Process 1: POWER GENERATION					
System 1: GAS TURBINE					
GAS TURBINE, PEAKING UNIT, UNIT NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, HEAT INPUT REFERENCED AT 93 DEGREES FAHRENHEIT, WITH WATER INJECTION, ~~441.7~~ **505** MMBTU/HR WITH A/N ~~462013~~ **478604**	D1	C3		**CO:** 2000 PPMV (5) [RULE 407]; CO: 6 PPMV NATURAL GAS (4) [RULE 1303 – BACT] **NOX:** 2.5 PPMV NATURAL GAS (4) [RULE 1303 - BACT]; NOX: 25 PPMV NATURAL GAS (8) [40 CFR 60 SUBPART KKKK]; **PM:** 11 LBS/HR (5A) [RULE 475]; PM: 0.01 GRAINS/SCF (5B) [RULE 475]; PM: 0.1 GRAINS/SCF (5) [RULE 409]	A63.1, A63.2, A63.3, A63.4, **A63.5**, A99.1, A99.2, A195.1, A195.2, A195.3, A327.1, C1.1, C1.2, C1.3, D12.1, D29.1, D29.2 D29.3, D82.1, E193.1, H23.2, K40.1, K67.1

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
GENERATOR, ~~44.6~~ 49 MW				**SOX:** 0.060 LB/MMBTU (8) [40 CFR 60 SUBPART KKKK] **SO2**: (9) [40 CFR 72 – ACID RAIN **VOC:** 2 PPMV NATURAL GAS (4) [RULE 1303 – BACT]	
CO OXIDATION CATALYST, BASF, 80 CUBIC FEET OF TOTAL CATALYST VOLUME A/N: 462011	C3	D1 c4			E193.1
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 462011 AMMONIA INJECTION, GRID	C4	C3 S6		**NH3:** 5 PPMV (4) [RULE 1303 – BACT]	A195.5, D12.2, D12.4, D12.6, E179.1, E179.2, E193.1
STACK, HEIGHT: 80 FT; DIAMENTER: 13 FT A/N 462013	S6	C4			
System 2: EMERGENCY IC ENGINE					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NATURAL GAS, WAUKESHA, MODEL VGF36GL/GLD, WITH TURBOCHARGER, ~~865~~ 924 BHP A/N ~~462010~~ 479363	D7			**CO:** 224 PPMV (4) [RULE 1303 – BACT] **NOX:** 107 PPMV (4) [RULE 1303 – BACT] **VOC:** 111 PPMV (4) [RULE 1303- BACT]	A63.2, A63.3, A63.5, C1.4, D12.5, D29.4, E162.1, E193.1, E193.2 K67.2
Process 2: INORGANIC CHEMICAL STORAGE					
STORAGE TANK, FIXED ROOF, 19% AQUEOUS AMMONIA, 10500 GALS A/N: 462006	D9				C157.1, E144.1, E193.1

BACKGROUND/SUMMARY

Southern California Edison (SCE) received a Permit to Construct a natural gas-fired turbine, associated air pollution control equipment, ammonia tank, and a natural gas-fired emergency blackstart engine for a new peaker power plant in Norwalk. Following installation and commissioning, SCE discovered that the start-up NOx emissions were higher than permitted levels and the allowable hours of operation for the blackstart engine were too restrictive. SCE also discovered that after reviewing CEMS data for the turbine, the actual heat input was higher than originally estimated. As a result of these findings SCE submitted permit applications to the District to modify their Title V permit; the applications are summarized in table 1.

Table 1 Application Summary

A/N	Equipment	Submittal Date	Deemed Complete	BCAT/ CCAT	Schedule	Base Fee[a]	XPP Fee	Total Filing Fees
478604	LM6000 Gas Turbine	2/28/08	4/23/08	13008	D	$4,071.37	$2,035.69	$6,107.06
479363	Emergency Engine	3/19/08	4/23/08	43902	B	$1,865.02	$932.51	$2,797.53
478607	TV Permit Revision	2/28/08	4/23/08	555007	-	$767.09	-	$767.09
Total								**$9,761.68**

SCE is proposing to make the following changes:

- Increase the mass emission rate for NOx during the start-up hour from 7.82 lbs/start to 10.52 lbs/start. Emission increases will be offset with a reduction in fuel usage limits.
- Increase the allowable number of start-ups and shutdowns from 120 to 200 per year.
- Increase the heat input for the turbine from 441.7 MMBtu/hr to 505 MMBtu/hr.
- In the event the heater for the ammonia injection system is offline during a grid blackout, BACT concentration limits will not be achieved within 15 minutes and the mass emissions for NOx will be higher during this time period. Therefore, a mass emission rate of 28.26 lb/hr will placed on the permit for this scenario.
- Increase the amount of hours the blackstart emergency engine could operate from 7 hours to 64 hours per year. An additional 26 annual hours (for a total of 90) would be allowed for emergencies. Correct the bhp rating from 865 to 924 bhp.
- In addition, a condition that limits the daily NOx mass emission rate not to exceed 55 lbs/day will be placed on the permit.

Each of the changes is discussed in detail below:

Start-up and Shutdown Emissions

Start-up is the period of time the gas turbine is heated to its normal operating temperature range from a cold/ambient temperature or the period of time from initial firing of the unit to the time permitted emission levels are reached. The NOx and CO concentrations are high due to the phased effectiveness of the SCR and CO catalysts which gradually come online as the operating temperatures are being reached. BACT during this time period is a mass emission rate verified with CEMS data.

SCE discovered that the mass emission rates for NOx exceeded the permitted levels upon learning that the permit condition was interpreted as a rolling hour covering the entire 60 minutes, from first fire, and not ending at the top of the hour. CEMS data was provided to show the number of exceedances from

August 2007 to March 2008; table 2 shows the reported mass emissions rate and the percentage of exceedances for Center.

Table 2 NOx Exceedances for Center

Date of NOx Exceedance	Reported NOx (lbs/start)	Permitted NOx (lbs/start)
9/6/07	12.74	7.82
9/13/07	10.89	7.82
9/14/07	11.19	7.82
9/17/07	7.73	7.82
12/5/07	8.54	7.82
12/8/07	8.29	7.82
12/9/07	8.82	7.82
12/10/07	11.52	7.82
12/12/07	9.52	7.82
12/13/07	49.96	7.82
12/14/07	11.37	7.82
12/15/07	9.03	7.82
12/16/07	8.88	7.82
12/18/07	9.97	7.82
12/19/07	9.39	7.82
12/20/07	9.98	7.82
12/21/07	9.54	7.82
12/22/07	9.37	7.82
12/31/07	10.04	7.82
1/4/08	9.52	7.82
1/6/08	9.38	7.82
1/22/08	9.38	7.82
1/23/08	10.28	7.82
1/24/08	10.56	7.82

Total no. of start-ups	99
Total no. of start-ups with exceedance	24
Percentage	24%

SCE requested that the mass emission rate be increased to 10.52 lbs/start after reviewing their start-up data for all four peaker sites. According to SCE, the requested rate is more reasonable to achieve on a consistent basis. Majority of the exceedances are attributed to operator inexperience and the earlier erroneous assumption of maintaining clock hour compliance and not rolling hour compliance; they are now more aware of the start-up requirements and what needs to be done operationally to meet the permit limits. SCE performed modeling to demonstrate that the proposed start-up emission rate complies with the ambient air quality standards pursuant to Regulation XIII.

Increase Number of Annual Allowable Start-ups

SCE is requesting to increase the number of allowable start-ups per year from 120 to 200. Since the emissions are higher during start-up phase of operation, SCE is proposing to take a restriction on fuel use to mitigate the emissions.

Heat Input Increase

The permit evaluation for the permit to construct was based on a heat input (441.7 MMBtu/hr) from theoretical data provided by GE on operating scenarios at various ambient temperatures and humidity. However, following commissioning SCE discovered that turbine was capable of higher heat inputs (504.72 MMBtu/hr) that violated the conditions of the permit. As a result, the equipment description on the permit requires correction and the increase in emission rates is subject to permit review to ensure increases are mitigated and analyzed to comply with District requirements. SCE adjusted the fuel usage to comply with the annual offset limits and they performed modeling to demonstrate that the higher emission rate complies with the ambient air quality standards pursuant to Regulation XIII and the short term risk requirements of Rule 1401.

Start-up during Grid Blackout

The SCR is equipped with an electrically pre-heated ammonia injection chamber where the ammonia is atomized and delivered to the distribution header and injection grid. The pre-heater minimizes the amount of time to reach normal operation from a cold start. However, in the event of a grid blackout, the pre-heaters will not be operational and will delay the time it takes for the turbine to reach BACT concentration limits. A condition will be placed on the permit to account for a grid blackout, in which the turbine would be used to re-start another major electric generating station. A mass emissions rate of 28.26 lb/hr for this scenario will also be placed on the permit. SCE performed modeling to demonstrate that the proposed start-up emission rate complies with the ambient air quality standards pursuant to Regulation XIII.

Blackstart Engine

The evaluation for the permit to construct was based on the blackstart engine operating a maximum of 7 hours per year. According to documents provided by SCE, the engine manufacturer requires maintenance and testing on a weekly basis for a total of 52 hours per year. SCE is also requesting an additional 12 hours per year for any testing that may be required by the California Independent System Operator (CAISO) as a part of their inspections to ensure peaker readiness. The equipment will be given an additional 26 hours per year to operate in the event of an emergency, for a total of 90 hours. Note: emergency engines are allowed 200 hours per year. The engine rating will be changed from 865 bhp to 924 bhp to reflect the manufacturer's nameplate rating.

Daily NOx Limit

AQMD has established thresholds for daily operational emissions to determine if a project is considered significant. The operational threshold for NOx is 55 pounds per day. Typically, when a project exceeds a threshold of significance, an environmental impact report and mitigations become necessary. Since the CEQA anaalysis centered on the SCE peaker operating less than this significant threshold, the operational emissions are required to remain below the NOx significance threshold. A daily fuel limit was placed on the permit to ensure the limit would not be exceeded; however, in the event that the turbine undergoes multiple start-ups in a day, it is conceivable that the daily emisisons may exceed the threshold while still meeting the permitted fule limit. Therefore, the daily mass emissions limit will ensure that the facility complies with the original CEQA analysis.

COMPLIANCE REVIEW

A review of the compliance database reveals that facility was inspected on 6/3/08 for an annual Title V inspection. The inspector determined that the facility was operating in compliance with the order of abatement.

SCE has reported deviations and has had to file petitions for variances. Table 3 shows the sequence of events for the Center facility.

Table 3 Sequence of Events for Edison Center Peaker

Date	Event
4/3/07	Permits to Construct issued for all four SCE peakers – Barre, Center, Mira Loma, and Etiwanda
7/20/07	Barre start-up
7/21/07	Center start-up
7/22/07	Mira Loma and Grapeland start-up
7/24/07	SCE files "Ex Parte Emergency" variance for exceeding the number of hours of allowed commissioning with no controls – 5 hours. SCE encountered problems with faulty wiring, gauges and control modules. In order to solve the turbine issues, SCE requests 4 additional hours to solve problems.
8/31/07	SCE files "Interim" variance requesting 120 start-ups per year. From first fire on 7/20/07 to 8/31/07, the turbine had 55 start-ups close to permit condition of 60. SCE is predicting to exceed the 60 with upcoming CEMS tests and an advisory from CALISO that the peaking unit may be dispatched.
9/18/07	Interim variance granted to SCE to allow 120 start-ups per commissioning year, provided they stay below emission and fuel usage limits on permit.
10/12/07	SCE submitted 500-N forms for exceeding 7 hours per year annual operating limit for engines at all four sites. SCE cited problems encountered during installation and start-up.
2/12/08	SCE files a petition for a variance upon discovering that the turbines for all four sites have exceeded the start-up emission rates allowed by the permits. SCE cited that they had interpreted a start-up hour to be equivalent to a "clock hour". Staff had informed them that the "hour" is 60 minutes beginning the moment of start. The petition requests to be able to continue to operate while corrective action is taken and permit are applications submitted.
2/27/08	District staff (Mike Mills, John Yee, Chris Perri and Marcel Saulis) met with SCE representatives (Nader Mansour, Uve Sillat, Lyle Nelson & Victor Gutierrez) to discuss the four peakers and the applications that will be submitted to the District. SCE staff indicate that the permit applications will request that the NOx mass emission rate be increased and the number of allowable hours be increased for the black start engine. Applications were filed with Permit Services to modify the permits for the four sites.
6/4/08	District staff (John Yee, Chris Perri and Marcel Saulis) meet with SCE representatives (Uve Sillat, Lyle Nelson, and Frank Tavakoli). SCE inform AQMD staff that heat input for turbines were underestimated. They indicate that additional information will be forthcoming.
7/31/08	District staff (John Yee, Chris Perri and Marcel Saulis) meet with SCE representatives (Uve Sillat, Lyle Nelson, and Sai Banaji). SCE provides data requested by AQMD to continue processing applications.
9/10/08	SCE files a request to the Clerk of the Board to extend the final compliance date of the order of abatement to 1/7/09 or until the modified permits are issued. SCE is also requesting to modify the number of hours of usage for the blackstart engine to 65 hours.

SCE is currently operating under a Stipulated Order of Abatement until their new permits for all four sites are issued. As a part of the abatement order, SCE must maintain their start-up mass emission rates below 10.36 lbs-NOx/start and limit the operating time of the blackstart engine to more than 43 hours for the 180 day period that the abatement order is in effect. As of 9/10/08, SCE requests that the engine hours be limited to no more than 65 hours. Please refer to project file for a copy of the findings and decision.

EMISSION CALCULATIONS

TURBINE GENERATOR

Table 4 Turbine Data

Parameter	Value	Unit	Source
Heat Input	504.72	MMBtu/hr	Applicant
Gas HHV	1050	MMBtu/MMscf	AQMD default
Fuel use	0.481	MMscf/hr	
	4.21	MMscf/day	Applicant
	543	MMscf/yr	Applicant
Start-ups/Shutdowns	200	each per year	Applicant
Fd	8710	dscf/MMBtu	Fd for natural gas at 68°F
SMV	385.44	scf/lb-mole	v = RT/P at 68°F and 14.7 psia
15% O2 correct.	3.5424	%/%	calculated as 20.9/(20.9-15)
NOx MW	46	lb/lb-mole	calculated as NO2
CO MW	28	lb/lb-mole	
ROG MW	16	lb/lb-mole	calculated as CH4
NH3 MW	17	lb/lb-mole	

Table 5 Turbine Hourly Emission Rates and Emission Factors

Pollutant	Start-up (lb/hr)[a]	Shutdown (lb/hr)[b]	Controlled (ppmvd)	Controlled (lb/hr)[c]	Controlled (lb/mmscf)
NOx	10.52	6.61	2.5	4.65	9.67
SOx	0.30	0.30		0.30	0.63
PM10	5.18	5.18		5.18	10.77
CO	8.82	7.95	6	6.79	14.12
VOC	1.67	1.61	2	1.29	2.69
NH3	3.43	3.43	5	3.43	7.15

[a], [b] Start-up and shutdown emission data for NOx and CO provided by SCE. Start-up and shutdown emissions for SOx, PM10 and NH3 are calculated from emission factors and the data in table 4. VOC emissions are from the previous evaluation.
[c] NOx, CO, VOC and NH3 hourly emissions are calculated from the concentration limits and data from table 4.

Table 6 Turbine Total Emission Rates

Pollutant	Controlled (lb/day)[a]	Annual (lb/yr)[b]	Monthly (lb/mo)[c]
NOx	48.53	6,816	1,456
SOx	2.65	342	80
PM10	45.34	5,847	1,360
CO	62.65	8,307	1,879
VOC	12.02	1,599	361
NH3	30.08	3,880	902

[a] Daily emissions are based on one start-up and shutdown per day and the daily fuel limit in table 4.
[b] Annual emissions are based on the allowable start-ups and shutdowns per month and the annual fuel limit in table 4.
[c] Monthly emissions are based on 30 days of operation with 30 start-ups and shutdowns per month and 4.7 MMscfd of fuel usage.

BLACKSTART ENGINE

Table 7 Blackstart Engine Data

Parameter	Value	Unit	Source
Fuel use	6.43	mmbtu/hr	Applicant
Schedule	1	hrs/day	
	90	hrs/yr	
Rating	924	bhp	Manufacturer
NOx EF	1.25	g/bhp-hr	
SOx EF	5.88E-04	lb/mmbtu	AP-42
PM10 EF	3.84E-02	lb/mmbtu	AP-42
CO EF	1.59	g/bhp-hr	Manufacturer
VOC EF	0.45	g/bhp-hr	Manufacturer

Table 8 Engine Mass Emission Rates

Pollutant	lb/hr[a]	lb/day[b]	lb/yr[c]
NOx	2.55	2.55	229
SOx	0.00	0.00	0
PM10	0.25	0.25	22
CO	3.24	3.24	292
VOC	0.92	0.92	83

[a] EF (g/bhp-hr) x Engine Rating (bhp) ÷ 453.6 (g/lb)
[b] Rate (lb/hr) x Schedule (hrs/day)
[c] Rate (lb/hr) x Schedule (hrs/yr)

RULES EVALUATION

RULE 212-STANDARDS FOR APPROVING PERMITS AND ISSUING PUBLIC NOTICES

Rule 212 requires that a person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. Rule 212(c) states that a project requires written notification if there is an emission increase for ANY criteria pollutant in excess of the daily maximums specified in Rule 212(g), if the equipment is located within 1,000 feet of the outer boundary of a school, or if the MICR is equal to or greater than one in a million ($1x10^6$) during a lifetime (70 years) for facilities with more than one permitted unit, source under Regulation XX, or equipment under Regulation XXX, unless the applicant demonstrates to the satisfaction of the Executive Officer that the total facility-wide maximum individual cancer risk is below ten in a million ($10x10^6$) using the risk assessment procedures and toxic air contaminants specified under Rule 1402; or, ten in a million ($10x10^6$) during a lifetime (70 years) for facilities with a single permitted unit, source under Regulation XX, or equipment under Regulation XXX.

FACILITY / EQUIPMENT AND SCHOOL LOCATIONS

There are no schools located within 1,000 feet of this facility. The requirements of this section are not applicable.

DAILY EMISSIONS

As shown in the comparison of the pre-modification (PREMOD) and post-modification (POSTMOD) emissions in table 9, the total maximum daily emissions from this project will not trigger the daily thresholds of Rule 212(g).

Table 9 Daily Emission Thresholds

Pollutant	PREMOD (lb/day)[a]	POSTMOD (lb/day)[b]	Increase (lb/day)	Rule 212(g) Thresholds	Public Notice Required?
NOx	50.86	51.08	0.22	40	No
SOx	2.70	2.66	-0.04	60	No
PM10	45.46	45.58	0.12	30	No
CO	69.54	65.89	-3.65	220	No
VOC	14.12	12.94	-1.18	30	No

[a] The PREMOD emissions were taken from the evaluation for the permit to construct
[b] The POSTMOD emissions are taken from the calculation section of this evaluation

MAXIMUM INDIVIDUAL CANCER RISK (MICR)

SCE will be taking a reduction in the allowable fuel usage of the turbine; therefore, the MICR will decrease as a result of this project. The public notice requirements of this section are not required.

RULE 218 – CONTINUOUS EMISSION MONITORING

The turbines are equipped with CEMS to monitor both CO and NOx to verify compliance with hourly concentrations and emission limits. The CO CEMS complies with the requirements of Rule 218. The facility is subject to the Acid Rain Provisions of 40 CFR Part 72 and as a result, the NOx CEMS is subject to 40 CFR Part 75 and the requirements of Rule 218 do not apply pursuant to (b)(1)(A).

RULE 401 - VISIBLE EMISSIONS

This rule limits visible emissions to an opacity of less than 20 percent (Ringlemann No.1), as published by the United States Bureau of Mines. It is unlikely, with the use of the SCR /CO catalyst configuration on natural gas turbines that there will be visible emissions. However, in the unlikely event that visible emissions do occur, anything greater than 20 percent opacity is not expected to last for greater than 3 minutes. During normal operation, no visible emissions are expected. Therefore, based on the above and on experience with other natural gas fired turbines, compliance with this rule is expected.

RULE 402 - NUISANCE

This rule requires that a person not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The turbine and blackstart engine are not expected to create a public nuisance based on experience with identical natural gas fired turbines and engines. Therefore, compliance with Rule 402 is expected.

RULE 407 – LIQUID AND GASEOUS AIR CONTAMINANTS

This rule limits CO emissions to 2,000 ppmvd and SO_2 emissions to 500 ppmvd, averaged over 15 minutes. For CO, the natural gas fired turbine meets the BACT limit of 6.0 ppmvd @ 15% O_2, 1-hr average, and the turbine is conditioned as such and will be required to verify continued compliance

through CEMS data. For SO_2, equipment which complies with Rule 431.1 is exempt from the SO_2 limit in Rule 407. The applicant will be required to comply with Rule 431.1 and thus the SO_2 limit in Rule 407 will not apply.

RULE 409 – COMBUSTION CONTAMINANTS

This rule restricts the discharge of contaminants from the combustion of fuel to 0.1 grain per cubic foot of gas, calculated to 12% CO_2, averaged over 15 minutes. The turbine was sourced tested on 9/13/07 and 9/14/07 that demonstrated the PM concentration to be 0.0029 gr/dscf, which is less than the compliance limit of 0.1 gr/dscf. Continued compliance with this rule is expected.

The black start engine is exempt from the requirements of this rule.

RULE 431.1-SULFUR CONTENT OF GASEOUS FUELS

The turbine will use pipeline quality natural gas which will comply with the 16 ppm sulfur limit, calculated as H2S, specified in this rule. Natural gas will be supplied by the Southern California Gas Company which has a H2S content of less 0.25 gr/100scf, which is equivalent to a concentration of about 4 ppm. It is also much less than the 1 gr/100scf limit typical of pipeline quality natural gas. Compliance is expected. The applicant will comply with the reporting and record keeping requirements as outlined in subdivision (e) of this Rule.

RULE 475-ELECTRIC POWER GENERATING EQUIPMENT

This rule applies to power generating equipment greater than 10 MW installed after May 7, 1976. Requirements are that the equipment must meet a limit for combustion contaminants of 11 lbs/hr or 0.01 gr/scf. Compliance is achieved if either the mass limit or the concentration limit is met. Emissions from the turbine are estimated not to exceed 5.18 lbs/hr and the source test demonstrated the turbine to meet a concentration of 0.0029 during natural gas firing at maximum load. Therefore, continued compliance is expected and will be verified through triennial source testing.

RULE 1110.2 – EMISSIONS FROM GASEOUS- AND LIQUID FUELED ENGINES

The black start engine is considered an emergency engine and is exempt from the requirements of this rule per subdivision (h)(2).

RULE 1134 – EMISSIONS OF OXIDES OF NITROGEN FROM GAS TURBINES

This rule applies to gas turbines, 0.3 MW and larger, installed on or before August 4, 1989. Therefore, as a new installation, the turbine is not subject to this Rule.

RULE 1135 – EMISSIONS OF OXIDES OF NITROGEN FROM ELECTRIC POWER GENERATING SYSTEMS

This rule applies to the electric power generating systems of several of the major utility companies in the basin. Although the peaker plant uses a turbine with spray inter-cooled technology to help augment power, it is only simple cycle and not considered as an advanced combustion resource. Therefore, the NOx requirements of this rule are not applicable to the unit.

NEW SOURCE REVIEW (NSR)

RULE 1303(a) – BACT FOR GAS TURBINES

This rule states that the Executive Officer shall deny the Permit to Construct for any new source which results in an emission increase of any non-attainment air contaminant, any ozone depleting compound, or ammonia unless the applicant can demonstrate that BACT is employed for the new source. Table 10 shows the change in daily emissions for the turbine and BACT applicability.

Table 10 BACT Applicability for Gas Turbine

Pollutant	PREMOD (lb/day)[a]	POSTMOD (lb/day)[b]	Increase (lb/day)	BACT Triggered?
NOx	49.66	48.53	-1.13	No
SOx	2.70	2.65	-0.05	No
PM10	45.46	45.34	-0.12	No
CO	68.02	62.65	-5.37	No
VOC	13.69	12.02	-1.67	No

[a] The PREMOD emissions were taken from the evaluation for the permit to construct
[b] The POSTMOD emissions are taken from the calculation section of this evaluation

The change in emissions shown in table 10 demonstrates that BACT is not triggered for the gas turbine.

RULE 1303(a) – BACT FOR BLACK START ENGINE

SCE is proposing to increase the daily hours of operation of the equipment from 30 minutes to an hour. This represents an increase in daily NOx emissions more than one pound per day; therefore, BACT requirements are applicable.

The AQMD BACT Guidelines, Part D – Non Major Polluting Facilities lists the requirements for an emergency compression ignited engine as shown in table 11.

Table 11 BACT Emission Limits for Emergency Spark-Ignited Engines

Type	NOx (g/bhp-hr)	SO_X	PM_{10}	CO (g/bhp-hr)	VOC (g/bhp-hr)
Spark Ignition	1.5	Clean Fuels	Clean Fuels	2.0	1.5

The engine was source tested on 2/19/08 (refer to project file) and the results of the test are shown in Table 12.

Table 12 Source Test Results for Emergency Spark-Ignited Engine

Type	NOx (g/bhp-hr/ppmvd at 15% O2)	SO_X	PM_{10}	CO (g/bhp-hr/ppmvd at 15% O2)	VOC (g/bhp-hr/ ppmvd at 15% O2)
Spark Ignition	0.756/64.8	Clean Fuels	Clean Fuels	1.10/156	0.212/52.2

The test results in Table 12 demonstrate that the engine meets District BACT requirements; therefore, compliance with BACT is achieved.

RULE 1303(b)(1) – MODELING

SCE is proposing to increase the hourly emissions of the turbine; therefore, modeling requirements are applicable. Table 13 shows the modeling results for normal operation, as well as the impacts of NO2 for start-up and start-up during a grid blackout.

Table 13 Center Modeling Results Normal Operation

Pollutant	Averaging Period	Maximum Predicted Impact (ug/m3)	Back ground Conc. (ug/m3)	Total Conc. (ug/m3)	Significant Change (µg/m³)	CAAQS (µg/m³)	NAAQS (µg/m³)	Complies?
NO2	1-hour	2.84	257.49	260.33	20	339	-	Yes
NO2[a]	1-hour	6.30	257.49	263.79				Yes
NO2[b]	1-hour	16.80	257.49	274.29				Yes
CO	1-hour	4.14	9611.08	9615.21	1100	23000	40000	Yes
	8-hour	1.49	7139.66	7141.15	500	10000	10000	Yes
SO2	1-hour	0.17	107.30	107.47	-	655	-	Yes
	3-hour	0.12	86.37	86.49	-	-	1300	Yes

[a] Start-up operation
[b] Start-up operation during grid blackout

Planning, Rule Development & Area Sources (PRA) review of the modeling and HRA analyses concluded that the applicant used the appropriate EPA models, as shown in the internal District memorandum from Naveen Berry to Mike Mills dated 9/23/08. The memorandum states that the modeling as performed by the applicant conforms to the District's dispersion modeling requirements. No significant deficiencies in methodology were noted. Therefore compliance with modeling requirements is expected.

RULE 1303(b)(2) – OFFSETS

SCE is proposing to increase the number of annual allowable start-ups as well as increase the mass emission rates during the start-up period. Also, the amount of hours for the blackstart engine will increase from 7 to 90 hours per year. In order to have no increase in annual emissions, SCE is proposing to accept an annual fuel use limit for the turbine that will maintain the facility emissions below the thresholds shown in Table A of Rule 1304(d)(2)(B). SCE is proposing to reduce the annual natural gas fuel limit from 636 to 543 MMscf per year. Table 14 shows the pre-modification (PREMOD) and post-modification (POSTMOD) emissions for the project.

Table 14 Comparison of PREMOD and POSTMOD Emissions

Pollutant	PREMOD[a]	POSTMOD[b]
	lb/yr	lb/yr
NOx	7,994	7,712
SOx	409	343
PM10	6,859	5,880
CO	10,257	8,703
VOC	2,064	1,699
NH3	4,838	3,880

[a] The PREMOD Emissions are based on the evaluation for the Permit to Construct.
[b] The POSTMOD Emissions were presented in the calculation section of this permit and includes the emissions from the existing emergency engine.

As shown in table 14, the facility emissions are below the thresholds of Rule 1304(d)(2)(B); therefore, no external offsets are required.

RULE 1401 – NEW SOURCE REVIEW OF TOXIC AIR CONTAMINANTS

This rule is applicable to applications deemed complete on or after June 1, 1990 and it imposes specific limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard indices from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants (TAC) listed in Table I of Rule 1401. The rule establishes allowable risks for permit units requiring new permit pursuant to Rules 201 or 203. SCE is proposing to reduce the annual hours of operation; therefore, the MICR will not increase. However, the hourly heat input will increase from 441.7 MMBtu/hr to 504.72 MMBtu/hr and as a result the hourly toxic air contaminants (TAC) emissions will increase that will cause the acute hazard index (HIA) to increase.

SCE performed a Tier 4 health risk assessment (HRA) using the Hot Spots Analysis and Reporting Program (HARP) distributed by the California Air Resources Board (CARB). The model is a multiple pollutant, multiple pathway health risk program that uses calculation procedures set forth in CARB and CAPCOA guidelines and it works with a facility information database, an integrated ICST3 air dispersion model, and a health risk assessment model. The health risk model in HARP was run with standard CARB options that are based on analyses derived from the California Office of Environmental Health Hazard Assessment (OEHHA) methods. The calculated TAC emissions are shown in table 15 and the results for the HRA analysis are shown in table 16.

Table 15 TAC Rates Used for HIA Determination

Pollutant	TAC Emissions (g/s)
1,3 Butadiene	2.74E-05
Acetaldehyde	2.55E-03
Acrolein	4.07E-04
Benzene	9.55E-04
Ethylbenzene	2.03E-03
Formaldehyde	4.52E-02
Naphthalene	8.26E-05
PAH	1.40E-04
Propylene Oxide	1.84E-03
Toluene	8.26E-03
Xylene	4.07E-03
Ammonia	4.61E-01

Table 16 Rule 1401 Modeled Results and Requirements

Parameter	Modeling Result	Rule 1401 Requirements	Complies?
HIA	0.00438	≤ 1.0	Yes

AQMD staff reviewed the methodology and procedures of the modeling runs submitted by SCE and it was determined that the results shown in table 14 were appropriately estimated. Please refer to internal memorandum in the project file from Naveen Berry to Mr. Mike Mills dated 9/23/08. Therefore, compliance with Rule 1401 is expected.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The SCE peaker plant is operating under a Negative Declaration, state clearinghouse number 2006121113. The operation of the equipment was evaluated to operate below AQMD significance threshold of 55 lbs-NOx per day. A condition will be added to the permit to ensure that turbine and blackstart engine will operate below the threshold level. Compliance with CEQA is expected.

40CFR PART 60 SUBPART JJJJ - NSPS FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES

The blackstart engine operating at this facility is considered to be an emergency engine. The provisions of this subpart are not applicable for emergency engines manufactured before January 1, 2009. Therefore, the requirements are not applicable.

40CFR PART 60 SUBPART KKKK - NSPS FOR STATIONARY GAS TURBINES

The turbine is subject to Subpart KKKK because the heat input is greater than 10.7 gigajoules per hour (10.14 MMBtu per hour) at peak load, based on the higher heating value of the fuel fired. The standards applicable for a turbine firing natural gas with a heat input at peak load >50 MMBtu/hr and ≤850 MMBtu/hr are as follows:

NOx: 25 ppm at 15% O2 or 1.2 lb/MW-hr
SO2: 0.90 lbs/MW-hr discharge, or 0.060 lbs/MMBtu potential SO2 in the fuel

The BACT NOx limit that the turbine is subject to is 2.5 ppmv and should comply with the concentration limit of this Rule.

SO2 = 0.30 lb/hr / 49 MW = 0.0061 lb/MW-hr

The SO2 emissions of 0.0061 lb/MW-hr are below the emissions limits of this Rule

MONITORING

The regulation requires that the fuel consumption and water to fuel ratio be monitored and recorded on a continuous basis, or alternatively, that a NOx and O2 CEMS be installed. For the SO2 requirement, either a fuel meter to measure input, or a watt-meter to measure output is required, depending on which limit is selected. Also, daily monitoring of the sulfur content of the fuel is required if the fuel limit is selected. However, if the operator can provide supplier data showing the sulfur content of the fuel is less than 20 grains/100scf (for natural gas), then daily fuel monitoring is not required.

The turbine is equipped with a CEMS to monitor NOx Major Sources. Therefore, NOx monitoring requirements are satisfied. The turbine is fired on natural gas provided by the Southern California Gas Company which contains less than 1 grains-sulfur/100scf. Daily monitoring will not be required for fuel sulfur content.

TESTING

An initial performance test is required for both NOx and SO2. For units with a NOx CEMS, a minimum of 9 RATA reference method runs is required at an operating load of +/- 25 percent of 100 percent load. For SO2, either a fuel sample methodology or a stack measurement can be used, depending on the chosen limit. Annual performance tests are also required for NOx and SO2.

Compliance with the requirements of this rule is expected.

40CFR PART 63 SUBPART YYYY - NESHAPS FOR STATIONARY GAS TURBINES

This regulation applies to gas turbines located at major sources of HAP emissions. Per this subpart, a major source is defined as a facility with emissions of 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of a combination of HAPs. The largest single HAP emission is formaldehyde which is approximately 405 lb/yr (0.203 tpy) for the turbine. The total combined HAPs is 588 lb/yr (0.294 tpy) - ammonia is not defined as an HAP pollutant per this Rule. Therefore, the SCE facility is not a major source, per this subpart, and the requirements of this regulation do not apply.

40 CFR PART 72 – ACID RAIN PROVISIONS

The SCE facility is subject to the requirements of the federal Acid Rain program. The program is similar in concept to RECLAIM in that facilities are required to cover SO2 emissions with SO2 allowances; analogous to NOx RTCs. SO_2 allowances are however, not required in any year when the unit emits less than 1,000 lbs of SO_2. Facilities with insufficient allowances are required to purchase SO_2 credits on the open market. In addition, both NOx and SO_2 emissions will be monitored and reported directly to USEPA. Appropriate conditions are in Appendix B of the Title V permit. SCE is expected to comply with this regulation.

REGULATION XXX – TITLE V

The SCE facility has a Title V permit as a result of the applicability of federal Acid Rain provisions. Per Rule 3000(b)(28). The request to modify the permit by increasing start-up NOx mass emissions, number of start-ups per year, and the hours of operation of the blackstart engine is considered a minor permit revision as there will be no increase in emissions. EPA is afforded the opportunity to review and comment on the project within a 45-day review period.

RECOMMENDATION(S)

Following the EPA review period, issue a Facility Permit to Construct with the following permit conditions.

PERMIT CONDITIONS

Changes in the permit conditions are represented by a ~~double strikethrough~~ for deletions and **bold underline** for additions.

GAS TURBINE (DEVICE D1)

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

CONTAMINANT	EMISSION LIMIT
NOx	~~1490~~ **1456** LBS IN ANY ONE MONTH
PM10	1360 LBS IN ANY ONE MONTH
CO	~~2041~~ **1879** LBS IN ANY ONE MONTH
SOx	~~81~~ **80** LBS IN ANY ONE MONTH
VOC	~~411~~ **361** LBS IN ANY ONE MONTH

The operator shall calculate the annual emission limit(s) by using fuel use data and the following emission factors: VOC: ~~3.09~~ **2.94** lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: ~~0.64~~ **0.63** lbs/mmcf.

~~Compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors- NOx: 10.46 lb/mmcf and CO: 15.21 lbs/mmcf during normal operations, and NOx: 7.82 lbs/start, 6.61 lbs/shutdown, CO: 8.82 lbs/start, 7.95 lbs/shutdown.~~

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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

[Rule 1303 – Offsets]

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

CONTAMINANT	EMISSION LIMIT
NOx	7324 LBS IN ANY ONE YEAR
PM10	5847 LBS IN ANY ONE YEAR
CO	9593 LBS IN ANY ONE YEAR
SOx	349 LBS IN ANY ONE YEAR
VOC	1805 LBS IN ANY ONE YEAR

The operator shall calculate the annual emission limit(s) by using fuel use data and the following emission factors **for the turbine**: During commissioning with no control- NOx: 255.21 lb/mmcf; CO: 119.18 lbs/mmcf, VOC: 11.25 lb/mmcf; PM10: 10.77 lbs/mmcf, and SOx: 0.64 lb/mmcf . During commissioning with water injection- NOx: 104.60 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.09 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.64 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: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 lbs/hr, SOx: 0.0038 lbs/hr.

~~Compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors: NOx: 10.46 lb/mmcf and CO: 15.21 lbs/mmcf during normal operations, and NOx: 7.82 lbs/start, 6.61 lbs/shutdown, CO: 8.82 lbs/start, 7.95 lbs/shutdown~~

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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions 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. **The limits apply to the total emissions from the turbine plus the engine.** THIS CONDITION APPLIES DURING THE 1ST 12 MONTHS OF OPERATION ONLY. [Rule 1303 – Offsets]

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

CONTAMINANT	EMISSION LIMIT
NOx	~~7328~~ **7045** LBS IN ANY ONE YEAR
PM10	~~6849~~ **5869** LBS IN ANY ONE YEAR
CO	~~10152~~ **8599** LBS IN ANY ONE YEAR
SOx	~~408~~ **342** LBS IN ANY ONE YEAR
VOC	~~2047~~ **1682** LBS IN ANY ONE YEAR

The operator shall calculate the annual emission limit(s) by using fuel use data and the following emission factors **for the turbine**: VOC: ~~3.09~~ **2.94** lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: ~~0.64~~ **0.63** lbs/mmcf. ~~THIS CONDITION APPLIES AFTER THE 1st 12 MONTHS OF OPERATION.~~

The operator shall calculate the annual emission limit(s) by using hourly operation data and the following emission factors for the engine: NOx: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 lbs/hr, SOx: 0.0038 lbs/hr.

~~The operator shall calculate the emission limit(s) and compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors: NOx: 10.46 lb/mmcf and CO: 15.21 lbs/mmcf during normal operations, and NOx: 7.82 lbs/start, 6.61 lbs/shutdown, CO: 8.82 lbs/start, 7.95 lbs/shutdown.~~

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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions 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. **The limits apply to the total emissions from the turbine plus the engine. THIS CONDITION APPLIES AFTER THE 1st 12 MONTHS OF OPERATION.**

[Rule 1303 – Offsets]

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

CONTAMINANT	EMISSION LIMIT
NOx	2797 LBS IN ANY ONE MONTH
PM10	1360 LBS IN ANY ONE MONTH
CO	3134 LBS IN ANY ONE MONTH
SOx	81 LBS IN ANY ONE MONTH
VOC	497 LBS IN ANY ONE MONTH

The operator shall calculate the annual emission limit(s) by using fuel use data and the following emission factors: During commissioning with no control- NOx: 255.21 lb/mmcf; CO: 119.18 lbs/mmcf, VOC: 11.25 lb/mmcf; PM10: 10.77 lbs/mmcf, and SOx: 0.64 lb/mmcf . During commissioning with water injection- NOx: 104.60 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.09 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.64 lbs/mmcf. THIS CONDITION APPLIES DURING THE 1ST MONTHS OF OPERATION ONLY.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors- NOx: 10.46 lb/mmcf and CO: 15.21 lbs/mmcf during normal operations, and NOx: 7.82 lbs/start, 6.61 lbs/shutdown, CO: 8.82 lbs/start, 7.95 lbs/shutdown

[Rule 1303 – Offsets]

A63.5 The operator shall limit emission from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
NOx	**55 LBS IN ANY 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.

[CEQA]

A99.1 The 2.5 PPM NOx emission limits shall not apply during commissioning, start-up, ~~and~~ shutdown ~~periods~~, **and an emergency electrical grid system blackout when the turbine is used to re-start another major electric generating station**. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 60 start ups per year

in the first year of operation, and ~~120~~ **200** start-ups per year thereafter. NOx emissions for the hour which includes a start shall not exceed ~~7.82~~ **10.52** lbs, and for the hour which includes a shutdown 6.61 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, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 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.

[Rule 1303(a) – BACT, Rule 1303(b)(1) – Modeling, Rule 1303(b)(2) - Offsets]

A99.2 The 6.0 PPM CO emission limits shall not apply during commissioning, start-up, and shutdown periods. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 60 start ups per year in the first year of operation, and ~~120~~ **200** start-ups per year thereafter. CO emissions for the hour which includes a start shall not exceed 8.82 lbs, and for the hour which includes a shutdown 7.95 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, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 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.

[Rule 1303(a) – BACT, Rule 1303(b)(1) – Modeling, Rule 1303(b)(2) - Offsets]

A195.1 The 2.5 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 1303(a) – BACT, Rule 1303(b)(1) – Modeling, Rule 1303(b)(2) - Offsets]

A195.2 The 6.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 1303(a) – BACT, Rule 1303(b)(1) – Modeling, Rule 1303(b)(2) - Offsets]

A195.3 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.
[Rule 1303(a) – BACT, Rule 1303(b)(1) – Modeling, Rule 1303(b)(2) - Offsets]

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

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]

C1.1 The operator shall limit the fuel usage to no more than 4.21 mmcf in any one day.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.
[Rule 1303(b)(2) – Offset]

C1.2 The operator shall limit the fuel usage to no more than 543 mmcf in any one year.

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.

For the purpose of this condition, the yearly fuel use limit shall apply only during the 1st 12 months of operation.
[Rule 1303(b)(2) – Offset]

C1.3 The operator shall limit the fuel usage to no more than ~~636~~ **543** mmcf in any one year.

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

For the purpose of this condition, the yearly fuel use limit shall apply after the 1st 12 months of operation. 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]

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District Method 100.1	1 hour	Outlet of the SCR
CO emissions	District Method 100.1	1 hour	Outlet of the SCR
SOX emissions	Approved District method	District approved averaging time	Fuel Sample
VOC emissions	Approved District method	1 hour	Outlet of the SCR
PM10 emissions	Approved District method	District approved averaging time	Outlet of the SCR
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. 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 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 loads of 100, 75, and 50 percent.

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 theVOC 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 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, Rule 1303(b)(2) – Offset]

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

Pollutant 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

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]

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant 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
PM10 emissions	Approved District method	District approved averaging time	Outlet of the SCR

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 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, Rule 1303(b)(2) – Offset]

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

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 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.

CO Emission Rate, lbs/hr = K*Cco*Fd[20.9/(20.9%-%O2 d)][(Qg*HHV)/10E6], where

K	= $7.267*10^{-8}$ (lbs/scf)/ppm
Cco	= Average of 4 consecutive 15 min. average CO concentrations, ppm
Fd	= 8710 dscf/MMBTU natural gas
%O2, d	= Hourly average % by volume O2 dry, corresponding to Cco
Qg	= Fuel gas usage during the hour, scf/hr
HHV	= Gross high heating value of the fuel gas, BTU/scf

[Rule 1303(a)(1) – BACT, Rule 1303(b)(2) – Offset]

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Negative Declaration prepared for this project (CEQA State Clearinghouse No. 2006121113).

[CEQA]

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, Rule 1303(b)(2) – Offset]

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

Commissioning hours and type of control and fuel use
Date and time of each start-up and shutdown
Natural gas fuel use after the commissioning period and prior to CEMS certification
CEMS minute data during start up and shutdown

[Rule 1303(b)(2) – Offsets]

BLACK START ENGINE (Device D7)

C1.4 The operator shall limit the operating time to no more than ~~7~~ **90** hours per year.

The ~~7~~ **90** hours per year limit may include up to ~~½~~ **64** hours per year operating time to maintain engine readiness or testing.

[Rule 1110.2, Rule 1304-Exemptions, Rule 1401]

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

[Rule 1110.2, Rule 1304-Exemptions, Rule 1401]

D29.4 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District Method 100.1	1 hour	Outlet
CO emissions	District Method 100.1	1 hour	Outlet
VOC emissions	Approved District method	1 hour	Outlet

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. 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 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 engine output in hp.

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 a load of 100 percent.

The test shall be conducted for compliance verification of the NOx, CO, and VOC BACT limit.

[Rule 1303(a)(1) – BACT]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameters or items:

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, Rule 1304-Exemptions, Rule 1401]

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

[Rule 1110.2, Rule 1304-Exemptions, Rule 1401]

E193.2 The operator shall operate and maintain this equipment according to the following specifications:

The TA Luft carburetor settings shall be maintained at all times
[Rule 1303-BACT]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

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
Process 1 : POWER GENERATION					
System 1 : GAS TURBINE					
GAS TURBINE, PEAKING UNIT, UNIT NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, HEAT INPUT REFERENCED AT 93 DEGREES FAHRENHEIT, WITH WATER INJECTION, 505 MMBTU/HR WITH A/N: 462008 Permit to Construct Issued: 04/03/07	D1	C3		**CO:** 2000 PPMV (5) **[RULE 407,4-2-1982]** ; **CO:** 6 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;*RULE 1303(a)(1)-BACT,12-6-2002*]** **NOX:** 25 PPMV NATURAL GAS (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **NOX:** 2.5 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996** ***RULE 1303(a)(1)-BACT,12-6-2002*]** ; **PM:** 0.1 GRAINS/SCF (5) **[RULE 409,8-7-1981]** ; **PM:** 11 LBS/HR (5A) **[RULE 475,10-8-1976** ***RULE 475,8-7-1978*]** ; **PM:** 0.01 GRAINS/SCF (5B) **[RULE 475,10-8-1976;*RULE 475,8-7-1978*]** ; **SO2:** (9) **[40CFR 72 - Acid Rain Provisions,11-24-1997]**	A63.1, A63.2, A63.3, A63.4, A63.5, A99.1, A99.2, A195.1, A195.2, A195.3, A327.1, C1.1, C1.2, C1.3, D12.1, D29.1, D29.2, D29.3, D82.1, E193.1, H23.2, K40.1, K67.1

* (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
SO CAL EDISON CO

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
Process 1 : POWER GENERATION					
GENERATOR, 49 MW				**SOX:** 0.06 LBS/MMBTU (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)-BACT,12-6-2002*]	
CO OXIDATION CATALYST, BASF, TOTAL CATALYST VOLUME 80 CUBIC FEET A/N: 462011 Permit to Construct Issued: 04/03/07	C3	D1 C4			E193.1
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: 462011 Permit to Construct Issued: 04/03/07 AMMONIA INJECTION	C4	C3 S6		**NH3:** 5 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*]	A195.5, D12.2, D12.4, D12.6, E179.1, E179.2, E193.1
STACK, HEIGHT: 80 FT; DIAMETER: 13 FT A/N: 462008 Permit to Construct Issued: 04/03/07	S6	C4			

* (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
SO CAL EDISON CO

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
Process 1 : POWER GENERATION					
System 2 : EMERGENCY IC ENGINE					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NATURAL GAS, WAUKESHA, MODEL VGF36 GL/GLD, WITH TURBOCHARGER, 924 BHP WITH A/N: 462010 Permit to Construct Issued: 04/03/07 GENERATOR, 645 KW	D7			**CO:** 224 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*] ; **NOX:** 107 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*] ; **VOC:** 111 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*]	A63.2, A63.3, A63.5, C1.4, D12.5, D29.4, E162.1, E193.1, E193.3, K67.2
System 3 : INORGANIC CHEMICAL STORAGE					
STORAGE TANK, 19% AQUEOUS AMMONIA, HORIZONTAL, 10500 GALS A/N: 462006 Permit to Construct Issued: 04/03/07	D9				C157.1, E144.1, E193.1

* (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
SO CAL EDISON CO

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
SO CAL EDISON CO

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	**Section H Page No.**	**Process**	**System**
D1	1	1	1
C3	2	1	1
C4	2	1	1
S6	2	1	1
D7	3	1	2
D9	3	1	3

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

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, 11-9-2001]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

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

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
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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 1456 LBS IN ANY ONE MONTH
PM10	Less than 1360 LBS IN ANY ONE MONTH
CO	Less than 1879 LBS IN ANY ONE MONTH
SOX	Less than 80 LBS IN ANY ONE MONTH
VOC	Less than 361 LBS IN ANY ONE MONTH

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors: VOC: 2.94 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.63 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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions 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]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 7324 LBS IN ANY ONE YEAR
PM10	Less than 5847 LBS IN ANY ONE YEAR
CO	Less than 9593 LBS IN ANY ONE YEAR
SOX	Less than 349 LBS IN ANY ONE YEAR
VOC	Less than 1805 LBS IN ANY ONE YEAR

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors for the turbine: During commissioning with no control- NOx: 255.21 lbs/mmcf; CO: 119.18 lbs/mmcf, VOC: 11.25 lbs/mmcf; PM10: 10.77 lbs/mmcf, and SOx: 0.64 lb/mmcf . During commissioning with water injection- NOx: 104.60 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.09 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.64 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: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

For the purposes of this condition, the yearly emission limit shall be defined as The limits apply to the total emissions from the turbine plus the engine. THIS CONDITION APPLIES DURING THE 1ST 12 MONTHS OF OPERATION ONLY..

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

[Devices subject to this condition : D1, D7]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 7045 LBS IN ANY ONE YEAR
PM10	Less than 5869 LBS IN ANY ONE YEAR
CO	Less than 8599 LBS IN ANY ONE YEAR
SOX	Less than 342 LBS IN ANY ONE YEAR
VOC	Less than 1682 LBS IN ANY ONE YEAR

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors for the turbine: VOC: 2.94 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.63 lbs/mmcf.

The operator shall calculate the emission limit(s) The operator shall calculate the annual emission limit(s) by using hourly operation data and the following emission factors for the engine: NOx: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 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 14.12 lbs/mmcf during normal operations, 8.82 lbs/hr during any start up hour, and 7.95 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 0.0775 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

For the purposes 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. The limits apply to the total emissions from the turbine plus the engine. THIS CONDITION APPLIES AFTER THE 1st 12 MONTHS OF OPERATION.

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

[Devices subject to this condition : D1, D7]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

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

CONTAMINANT	EMISSIONS LIMIT
NOX	Less than 2797 LBS IN ANY ONE MONTH
PM10	Less than 1360 LBS IN ANY ONE MONTH
CO	Less than 3134 LBS IN ANY ONE MONTH
SOX	Less than 81 LBS IN ANY ONE MONTH
VOC	Less than 497 LBS IN ANY ONE MONTH

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors: During commissioning with no control- NOx: 255.21 lbs/mmcf; CO: 119.18 lbs/mmcf, VOC: 11.25 lbs/mmcf; PM10: 10.77 lbs/mmcf, and SOx: 0.64 lb/mmcf . During commissioning with water injection- NOx: 104.60 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.09 lbs/mmcf, PM10: 10.77 lbs/mmcf, and SOx: 0.64 lbs/mmcf. THIS CONDITION APPLIES DURING THE 1ST 12 MONTHS OF OPERATION ONLY.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors- NOx: 10.46 lb/mmcf and CO: 15.21 lbs/mmcf during normal operations, and NOx: 7.82 lbs/start, 6.61 lbs/shutdown, CO: 8.82 lbs/start, 7.95 lbs/shutdown.

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

[Devices subject to this condition : D1]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A63.5 The operator shall limit emissions from this equipment as follows:

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.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, D7]

A99.1 The 2.5 PPM NOX emission limit(s) shall not apply during commissioning, start-up, shutdown, and an emergency electrical grid system blackout when the turbine is used to re-start another major electric generating station. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min.

There shall be no more than 60 start ups per year in the first year of operation, and 200 start-ups per year thereafter. NOx emissions for the hour which includes a start shall not exceed 10.52 lbs, and for the hour which includes a shutdown 6.61 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, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 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.

[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]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A99.2 The 6.0 PPM CO emission limit(s) shall not apply during commissioning, start-up, and shutdown periods. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 60 start ups per year in the first year of operation, and 200 start-ups per year thereafter. CO emissions for the hour which includes a start shall not exceed 8.82 lbs, and for the hour which includes a shutdown 7.95 lb.

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, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up 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.

[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 PPMV NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, 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]

A195.2 The 6.0 PPMV CO emission limit(s) is averaged over 60 minutes at 15 percent O2, 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]

FACILITY PERMIT TO OPERATE
SO CAL EDISON CO

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

A195.3 The 2.0 PPMV VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, 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]

A195.5 The 5 PPMV NH3 emission limit(s) is averaged over 60 *minutes* at 15% O2, dry basis. The operator shall calculate and continuously record the NH3 slip concentration using the following:.

NH3 (ppmv) = [a-b*c/1E+06]*1E+06/b.
where,

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

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

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

The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months. The NOx 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 : C4]

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 : D1]

C. Throughput or Operating Parameter Limits

FACILITY PERMIT TO OPERATE
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The operator shall comply with the terms and conditions set forth below:

C1.1 The operator shall limit the fuel usage to no more than 4.21 MM cubic feet per day.

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

[Devices subject to this condition : D1]

C1.2 The operator shall limit the fuel usage to no more than 543 MM cubic feet per year.

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.

For the purpose of this condition, the yearly fuel use limit shall apply only during the 1st 12 months of operation.

[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 543 MM cubic feet per year.

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.

For the purpose of this condition, the yearly fuel use limit shall apply after the 1st 12 months of operation. 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]

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

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 or testing.

[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 : D7]

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 : D9]

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 12 months.

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

[Devices subject to this condition : D1]

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

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 12 months.

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

[Devices subject to this condition : C4]

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 12 months.

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

[Devices subject to this condition : C4]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of 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 : D7]

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

D12.6 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; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

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

D29.1 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
NOX emissions	District method 100.1	1 hour	Outlet of the SCR
CO emissions	District method 100.1	1 hour	Outlet of the SCR
SOX emissions	Approved District method	District-approved averaging time	Fuel Sample
VOC emissions	Approved District method	1 hour	Outlet of the SCR
PM10 emissions	Approved District method	District-approved averaging time	Outlet of the SCR
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. 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 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 loads of 100, 75, and 50 percent.

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.

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

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 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)(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]

D29.2 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
NH3 emissions	District method 207.1 and 5.3 or EPA method 17	1 hour	Outlet of the SCR

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]

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

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
PM10 emissions	Approved District method	District-approved averaging time	Outlet of the SCR

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

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 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]

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

[Devices subject to this condition : D1]

D29.4 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
NOX emissions	District method 100.1	1 hour	Outlet
CO emissions	District method 100.1	1 hour	Outlet
VOC emissions	Approved District method	1 hour	Outlet

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. 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 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 engine output in hp.

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 a load of 100 percent.

The test shall be conducted The test shall be conducted for compliance verification of the NOx, CO, and VOC BACT limit.

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

[Devices subject to this condition : D7]

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

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

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 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.

CO Emission Rate, lbs/hr = K*Cco*Fd[20.9/(20.9%-%O2 d)][(Qg*HHV)/10E6], where

K = 7.267*10-8 (lbs/scf)/ppm

Cco = Average of 4 consecutive 15 min. average CO concentrations, ppm

Fd = 8710 dscf/MMBTU natural gas

%O2, d = Hourly average % by volume O2 dry, corresponding to Cco

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

HHV = Gross high heating value of the fuel gas, BTU/scf

[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 218, 8-7-1981**; RULE 218, 5-14-1999]

[Devices subject to this condition : D1]

E. Equipment Operation/Construction Requirements

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

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 : D9]

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 : D7]

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 upon the average of the continuous monitoring for that hour.

Condition Number D 12- 2

Condition Number D 12- 6

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

[Devices subject to this condition : C4]

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 : C4]

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

E193.1 The operator shall upon completion of construction, operate and maintain this equipment according to the following specifications:

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

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, C3, C4, D7, D9]

E193.3 The operator shall operate and maintain this equipment according to the following specifications:

The TA Luft carburetor settings shall be maintained at all times

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

[Devices subject to this condition : D7]

H. Applicable Rules

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
SOX	40CFR60, SUBPART	KKKK
NOX	40CFR60, SUBPART	KKKK

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

[Devices subject to this condition : D1]

K. Record Keeping/Reporting

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

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.

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.

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]

[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):

Commissioning hours and type of control and fuel use

Date and time of each start-up and shutdown

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

CEMS minute data during start up and shutdown

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

[Devices subject to this condition : D1]

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

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 : D7]