

CONSTRUCTION PERMIT / PSD APPROVAL - REVISED
NSPS SOURCEPERMITTEE

Duke Energy Lee, LLC
Attn.: Pamela G. Zaheri, Project Manager
5400 Westheimer Court
Houston, Texas 77056

Application No.: 99090029

I.D. No.: 103817AAH

Applicants Designation: LEE

Initial Date Received: September 13, 1999 Initial Date Issued: March 31, 2000

Date Revision Received: March 2, 2006 Date Revision Issued: "Draft Permit"

Subject: Electric Generation Facility (8 SSCT/80 MW Each)

Location: Nachusa Road, South Dixon Township, Lee County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of eight gas fired combustion turbines, and one emergency fire-water pump diesel fired engine as described in the above referenced application and summarized in Attachment A. This Permit is granted based upon and subject to the findings and special conditions that follow:

In conjunction with this permit, approval is given with respect to the Prevention of Significant Deterioration of Air Quality Regulations (PSD) to construct the above referenced project, in that the Illinois Environmental Protection Agency (Illinois EPA) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the Clean Air Act, as amended, 42 U.S.C. 7401 *et. seq.*, the Federal regulations promulgated thereunder at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a Delegation of Authority agreement between the United States Environmental Protection Agency and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with the provisions of 40 CFR 124.19. This approval is also based upon and subject to the following findings and conditions that follow:

Findings For Revised Permit

1. Duke Energy Lee, LLC (Duke Energy) received a permit for an electric generation facility that included eight "simple cycle" natural gas and oil-fired combustion turbines (CTs).
2. This facility is located in Lee County, an area that is currently designated attainment for all ambient air quality standards.
- 3a. Duke Energy has requested that the Construction Permit/PSD Approval for the facility be revised to address low load operation of the CTs in conjunction with the Black Start Capability, which was added to the facility when three distillate oil-fired reciprocating engines were installed under Construction Permit 04050068.

- b. The request evaluated the impact of low load operations of the CTs during Black Start on the Best Available Control Technology (BACT) determination for the CTs. The Illinois EPA has concluded that a revised BACT determination is needed for the CTs.
 - c. The request also addressed the implications of extended low-load operation on the initial air quality analysis. The analysis shows that the CTs will still have an insignificant impact on the ambient air quality standards.
- 4a. Duke Energy did not install fuel oil firing capability on the CTs, which was authorized for use as a backup fuel by the original Construction Permit/PSD Approval. Accordingly, this revised permit does not include the provisions related to fuel oil firing, which reduces the permitted emissions of the facility.
- b. This revised permit also includes limits on emissions of hazardous air pollutants from the CTs to ensure that the facility is not a major source of HAP emissions.
 - c. This permit also includes prior revisions to the original permit related to the procedures for emissions testing. Method 25A for testing emissions of VOM and the Celanese Method for testing emissions of formaldehyde (the principle HAP present in the exhaust of a turbine), are allowed rather than use of Method 18 to test for both VOM and HAP emissions. Testing for NOx, which is subject to a federal NSPS, is allowed to be conducted in accordance with an applicable USEPA determination setting forth acceptable procedures for testing for NOx emissions.
5. The Illinois EPA has determined that the revised permit complies with all applicable Illinois Air Pollution Board Regulations and the federal Prevention of Significant Deterioration of Air Quality Regulations (PSD), 40 CFR 52.21.
6. A copy of the application and the Illinois EPA's formal review of the application and a draft of this permit were placed in a location in the vicinity of the project, and the public was given notice and an opportunity to examine this material and to submit comments and to request a public hearing on this matter.

The Illinois EPA is issuing this approval subject to the following conditions and consistent with the specifications and data included in the application. Any departure from the conditions of this approval or terms expressed in the application would need to receive prior written authorization by Illinois EPA.

Conditions

1. Standard conditions for issuance of construction permits, attached hereto and incorporated herein by reference, shall apply to this project, unless superseded by the following special conditions.
- 2a. The turbines shall each be equipped, operated, and maintained with low NO_x combustors for natural gas firing.
 - b.
 - i. The emissions of NO_x from each CT when firing natural gas shall not exceed 15 ppmvd @ 15% O₂ on an hourly average, except during periods of startup, shutdown and low load operation, as addressed by Condition 3.
 - ii. The emission of NO_x from each CT when firing natural gas shall not exceed 12 ppmvd @ 15% O₂ on an annual average.
 - c. Deleted (This Condition in the original permit addressed firing of distillate oil in the CTs.)
 - d.
 - i. Operation of the CTs (8 units) shall not exceed a combined total of 20,000 hours per year and 2,500 hours per year per unit.
 - ii. Deleted (This Condition in the original permit addressed firing of distillate oil in the CTs.)
 - iii. Notwithstanding the above, for periods of extended CT outages or unexpected outages during high electrical demand, each of the remaining CTs at the facility may exceed the 2,500 hour per year per CT limit above but no greater than 4,000 hours per year, if the Permittee demonstrates that operation of such CT was consistent with its use as a peaking unit and the combined total limit above is not exceeded. The Permittee shall submit detail information to the Illinois EPA within two months after a CT exceed the annual limit, that includes the following:
 - A. The total hours that the CT actually operated during such year, estimated operating hours, and a summary of actual operating hours of the CT for the previous five years.
 - B. A description of the circumstances that contributed to actual operation for more than 2,500 hours in a year, with supporting documentation, including:
 1. The circumstances with respect to the public demand for power, e.g., unusually cold or hot weather.
 2. The circumstances with respect to unavailability of other CTs at the facility, e.g., unanticipated or reason for extended outage of CTs.

3. The circumstances with respect to electric utility need for power, e.g., unexpected outages of major generating units or damage to power transmission systems.
 4. Other circumstances that the Permittee believes contributed to the operation of the CT for more than 2,500 hours in a year.
- C. Further information to demonstrate that the above circumstances are uncommon or unlikely to reoccur so as to result in actual operation of the CT for more than 2,500 hours in a year.
- iv. Prior to operation of individual CTs in a manner that is inconsistent with the use of the source as a peaking facility, as described by the conditions of this permit, the Permittee shall obtain a revised permit allowing such operation pursuant to PSD, 40 CFR 52.21, which permit may establish additional requirements as are appropriate as Best Available Control Technology.
 - e. The CT's shall be maintained and operated with good combustion practice to control emissions of CO and PM. (See also Table 1A)

Condition 2 represents the application of the Best Available Control Technology as required by Section 165 of the Clean Air Act.

- 3a. Each turbine shall be operated in a manner consistent with good air pollution control practice to minimize emissions during startup, and shutdown including:
 - i. Operation in accordance with the manufacturer's written instructions or other written instructions developed and maintained by the Permittee, which shall include at a minimum the following measures:

Review of operating parameters of the unit during startup, or shutdown as necessary to make adjustments to reduce or eliminate excess emissions;
 - ii. Maintenance of the turbine in accordance with written procedures developed and maintained by the Permittee, these procedures shall be reviewed at least annually.
- b. i. The Permittee may operate the CTs at low load (extended operation at load less than normal operating load) under the circumstances below.
 - A. In conjunction with the restoration of the electrical grid following a black out.
 - B. For the periods of black start testing for a total of up to 64 CT operating hours per year.

- C. Testing of enhancements to the electric system to maintain phase, frequency and load for a total of up to 128 CT operating hours per year.
 - D. Other operational testing needed to demonstrate reliable operation such as that described above, provided that the Permittee gives advance written notification describing required operational testing.
- ii. On an annual basis, the total operation of CTs as allowed by Condition 3(b) (i) (B), (C) and (D) above, shall not exceed 200 CT operating hours.
 - iii. NO_x CEMs on the CTs shall be operational consistent with good monitoring practice to measure emissions of NO_x during the low load operation as allowed under Condition 3(b) (i).
- 4a. The gas turbines are subject to the New Source Performance Standard (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subpart A and GG. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- i. The NO_x emissions from each CT shall not exceed the limit established by the NSPS, pursuant to 40 CFR 60.332 (a) (1).
 - ii. The emission from each CT shall not contain SO₂ in excess of 0.015 percent by volume at 15 % O₂ and on a dry basis or the CT shall not burn any fuel which contains sulfur in excess of 0.8 percent by weight, pursuant to 40 CFR 60.333 (a) and (b).
- b. Deleted (This Condition in the original permit addressed storage tanks for fuel oil for the CTs which were not constructed.)
- c. At all times, the Permittee shall maintain and operate the gas turbines in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).
5. The emission of smoke or other particulate matter from a CT or fuel heater shall not have an opacity greater than 30 percent, pursuant to 35 IAC 212.123(a), except as allowed by 35 IAC 201.149, 212.123(b) or 212.124.
- 6a. i. Emissions from the CTs shall not exceed the limits in Table 1A, 1B, and 1C.
- ii. This permit is issued based on minimal emissions of VOM, PM/PM10 and SO₂ from CTs during operation as allowed by Condition 3(b). For this purpose, emissions of each pollutant shall not exceed 10 lb/hr and 1.0 ton/yr.
- b. The only fuel fired in the CTs shall be natural gas as defined in 40 CFR 60.331.
7. The emissions of individual hazardous air pollutants (HAPs)* from the CTs shall not exceed the following limits.

Hourly Emissions - Each CT (lb/hr)		Annual Emissions - Total 8 CTs (Tons/yr)		
Normal Operation	Low load Operation (Condition 3(b))	Normal Operation	Low load Operation (Condition 3(b))	Total
0.7	3.8	7.0	0.4	7.4

* Emissions of individual HAP, e.g., formaldehyde, benzene, etc.

Note: These limits on HAP emissions, together with the limits for HAP emissions from the three Black Start reciprocating engines (0.9 tons/year) in Condition 6 of Construction Permit 04050068, are intended to ensure that this source is not a major source of HAP emissions. These limits have been requested by the Permittee so that the source does not trigger requirements of 40 CFR 63 Subpart YYYY, National Emission Standards for Hazardous Air Pollutants (NESHAP) from Combustion Turbines. The emissions of combined HAPs are restricted by the limits on VOM emissions.

- 8a. After initial startup, commissioning and shakedown are completed, the CT shall only be operated for electrical generation during peak demand periods or for purpose of evaluating or verifying operation, or emissions testing.
- b. For the purposes of this permit, peaking operation means operation when base load generation capacity is insufficient to meet electrical demand and operating reserve requirements, due to high demand, outage of base load generating units, restrictions or interruptions in the power grid, etc. Peaking operation may include operation of a turbine to meet electrical demand from utilities other than the local utility. The facility shall be assumed to be in compliance with this condition if the turbines comply with the time limits set elsewhere in this permit.
- 9a. Under this permit, each CT may be operated for a period of up to 180 days from initial startup to allow for equipment shakedown and emissions testing as required. This period may be extended by the Illinois EPA upon request of the Permittee if additional time is needed to complete startup or perform emission testing.
- b. Upon successful completion of emission testing demonstrating compliance with applicable limitations, the Permittee may continue to operate the facility as allowed by Section 39.5 (5) of the Environmental Protection Act.
- c. This condition supercedes Standard Condition 6.
- 10a. Within 60 days after operating a CT at the greatest load at which it will normally be operated but not later than 180 days after its initial startup, the Permittee shall perform emissions tests of gas turbines as follows. These tests shall be used as the initial compliance tests to demonstrate compliance with the limits and conditions set in this permit. Emissions shall be measured by an approved testing service

during conditions which are representative of maximum emissions (peak load) for NO_x, CO, PM, VOM, and opacity and also at the minimum normal operating load, and two intermediate load levels for NO_x.

- b. The following USEPA methods and procedures shall be used for testing of emissions, unless another USEPA method is approved or specified by the Illinois EPA. For each CT, measurement of NO_x emissions shall be conducted and data collected in accordance with the test methods and procedures specified in 40 CFR 60.335 unless USEPA approves use of an alternative method for such testing or waives such testing pursuant to 40 CFR 60.8(b), in which case the Permittee shall follow the terms of USEPA's determination.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3 or 3A
Moisture	USEPA Method 4
Particulate Matter ¹	USEPA Method 5
Nitrogen Oxides	USEPA Method 20
Opacity	USEPA Method 9
Carbon Monoxide	USEPA Method 10
Volatile Organic Material ²	USEPA Method 25A
PM ₁₀	USEPA Method 201 or 201A (40 CFR 51, Appendix M)

¹ The Permittee may report all PM emissions measured by USEPA Method 5 as PM₁₀, including back half condensable particulate. If the Permittee reports USEPA Method 5 PM emissions as PM₁₀, testing using USEPA method 201 or 201A need not be preformed.

² The Permittee shall also measure formaldehyde emissions by the "Celanese Method" ("Formaldehyde in Stack Gas Test procedure," adapted from the Celanese Method (CL 8-4)).

- c. At least 60 days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing and shall include as a minimum:
- i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The specific conditions under which testing shall be performed including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the CT will be tracked and recorded.
 - iii. The specific determinations of emissions that are intended to be made, including sampling and monitoring locations. As part of this plan, the Permittee may set forth a strategy for performing emission testing of selected turbines provided that all turbines are fitted for testing; the identity of the engines to be tested

is determined immediately before testing, by the Illinois EPA or otherwise randomly; and continuous emission monitoring of NO_x is present on all turbines. The Permittee may also propose a plan for testing across the normal operating range of the turbines.

- iv. The test method(s), which will be used, with the specific analysis method, if the method can be used with different analysis methods.
- d. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- e. Three copies of the Final Reports for these tests shall be forwarded to the Compliance Section in Springfield within 30 days after the test results are compiled and finalized, in advance of the operating permit application if necessary. The Final Report from testing shall contain a minimum:
 - i. A summary of results;
 - ii. General information;
 - iii. Description of test method(s), including a description of sampling points, sampling train, analysis equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. Fuel consumption (standard ft³ or gallons);
 - B. Firing rate (million Btu/hr); and
 - C. Turbine/Generator output rate (MW).
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment calibration.
- f. Submittals and notification with respect to emissions testing shall be made to the following:

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
5415 North University
Peoria, Illinois 61614
Telephone: 309/693-5461 Fax: 309/693-5467

Illinois Environmental Protection Agency
Division of Air Pollution Control, Compliance Section (#40)
P. O. Box 19276
Springfield, Illinois 62794-9276
Telephone: 217/782-5811 Fax: 217/782-6348

- 11a. The Permittee shall install, operate, and maintain a Continuous Emissions Monitoring (CEM) system to measure emissions of NO_x from each CT in accordance with the Federal Acid Rain Program which CEMS shall also be used to demonstrate compliance with the limitations of this permit.
 - b. i. The procedures under 40 CFR 60.13 and 75.12 and 40 CFR 75, Appendix F shall be followed for the installation, evaluation, and operation of these CEM systems.
 - ii. At least 30 days prior to initial startup of a CT, the Permittee shall submit to the Illinois EPA for review and comments a detailed plan describing the configuration and operation of the NO_x CEM system(s). The plan shall also state whether the Permittee is complying with the alternative monitoring requirements for SO₂, i.e., sulfur analysis and flow monitoring.
 - c. These CEMs shall be operational and collecting data in accordance with the provisions of the Acid Rain Program.
- 12a. The Permittee shall monitor sulfur content of the gas fired in the CTs pursuant to the applicable provisions in 40 CFR Part 75, Appendix D, Section 2.3 for pipeline natural gas combustion.
 - b. Monitoring of fuel nitrogen content is not required while pipeline quality natural gas, as defined in 40 CFR 72.2, is the only fuel fired in the CTs.
 - c. The above provisions establish a custom schedule for determination of sulfur content and nitrogen content of the natural gas in accordance with 40 CFR 60.13(i), 40 CFR 60.334 (b) (2) and USEPA's Custom Fuel Monitoring Document dated August 14, 1987.
13. Deleted (This Condition in the original permit addressed sampling and analysis of fuel oil for the CTs.)
14. The Permittee shall install, operate, and maintain monitors on each CT to measure and record fuel consumption and maintain records.

- 15a. The Permittee shall maintain a file of the following items:
- i. The heat content of the fuel fired in the CTs (Btu/standard ft³).
 - ii. The sulfur content of the fuel for the CTs in accordance with Condition 12 or 13.
- b. The Permittee shall maintain the following daily records:
- i. The quantity of fuel consumed for each CT (standard ft³).
 - ii. Operating hours for each CT.
- c. The Permittee shall keep inspection, maintenance, and repair logs with dates and nature of such activities for each CT.
- d. Deleted (This Condition in the original permit contained records related to use of fuel oil.)
- e. Records related to low load operation, as allowed in Condition 3(b):
- i. Operating logs or other records for each CT that identify each period of low load operation with explanation of circumstances, hours of operation (hrs/event), and CT operating load (MWe).
 - ii. Total operating hours at low load operation (hrs/year).
 - iii. Emissions of NO_x, CO and HAP (lbs/event) with supporting calculations.
- f. The Permittee shall keep the following records with regards to emissions:
- i. NO_x emissions from each CT recorded hourly and annual (in lb/mmBtu and lb or ton) by combining the NO_x concentration (in ppm) and diluent concentration (in percent O₂ or CO₂) measurements according to the procedures in 40 CFR 75 Appendix F.
 - ii. Monthly emissions of NO_x, VOM, CO, SO₂ and PM from the CTs (tons/month). NO_x emissions shall be based on data from the CEM. Emissions of SO₂ shall be determined in accordance with condition 12 or 13. Emissions of CO, VOM and PM shall be calculated from fuel consumption data and other operating records and emission factors developed from emission testing or other methods approved by the Illinois EPA.
 - iii. Annual facility emissions of NO_x, VOM, CO, SO₂, and PM, based on monthly emission totals.
 - iv. HAP emissions from the CTs (tons/month and tons/year) based on fuel consumption, other operating records and appropriate emission factors for the principal HAPs from emission testing

conducted on the CTs, manufacturer's literature, or published USEPA Emission Factors.

- g. The Permittee shall maintain a permanent file of the date each CT is fully operational for the life of the CT.
 - h. The Permittee shall maintain the following records related to startup and shutdown of each CT:

The time and date of startup and shutdown of a CT, and confirmation that standard practices were followed.
 - i. The Permittee shall retain a copy of the information that is required by Condition 2(d) (iii).
16. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be available for inspection and copying by the Illinois EPA upon request. Any record retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 17a. For each CT, the Permittee shall fulfill applicable notification requirements of the NSPS, 40 CFR 60.7(a), including notifications for date of commencement of construction, and actual date of initial startup. With the notification for commencement of construction, the Permittee shall provide a copy of the manufacturer's guarantee for emissions.
- b. The Permittee shall submit semi-annual progress reports to the Illinois EPA while construction is underway, which the reports shall describe for each CT for which construction has been commenced, the accomplishments in the previous six months and the schedule of activities for the next six months.
 - c. The Permittee shall promptly notify the Illinois EPA if construction of a particular CT, once commenced, is discontinued or interrupted for a period of 18 months.
- 18a. If there is an exceedance of the requirements of Condition 2 through 6 of this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include a description of the exceedance, a copy of relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
- b. At the same time that the Annual Emission Report required by 35 IAC Part 254 is submitted, the Permittee shall provide an annual operating report containing:
 - i. For each CT, the total operating hours.

- ii. A review of the use of each CT and the facility as a whole to confirm that they were used for peaking operation.
 - iii. Information concerning low load operation as addressed by this permit, including the total hours of low load operation and a brief description of the various types of low load operation that occurred.
- c. The Permittee shall comply with applicable reporting requirements under the Acid Rain Program, with a single copy of such report sent to Illinois EPA, Division of Air Pollution Control, Compliance Section.
- 19a. Any required reports and notifications concerning equipment operation, emissions testing, or a monitoring system shall be sent to the Illinois EPA at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
Telephone: 217/782-5811 Fax: 217/782-6348

- b. A copy of all reports and notifications, as required above, except the Annual Emission Report required by 35 Ill. Adm. Code 254, shall also be sent to the Illinois EPA at the following address:

Illinois Environmental Protection Agency
Division of Air Pollution Control
5415 North University
Peoria, Illinois 61614
Telephone: 309/693-5461 Fax: 309/693-5467

- 20a. Pursuant to 40 CFR 52.21(r)(2), this permit shall become invalid if construction is not commenced within 18 months after this permit becomes effective, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time. The 18 month period may be extended by the Illinois EPA upon a satisfactory showing that an extension is justified. This condition supersedes Standard Condition 1.
- b. For purposes of the above provisions, the definitions of "construction" and "commence" at 40 CFR 52.21 (b)(8) and (9) shall apply, which require that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (Also see the definition of "begin actual construction," 40 CFR 52.21 (b)(11))
21. This Permit for the above referenced project does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as all other applicable Federal, State, and Local requirements.

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It should be noted that this permit has been revised to address low load operation of turbines in conjunction with the Black Start Capability of the facility and other changes in the development and operation of the facility, as discussed in the findings of this permit.

If you have any questions concerning this permit, please contact Manish Patel at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:CPR:MNP:psj

cc: Region 2
USEPA

Attachments

Attachment A

Emission Units at the facility

<u>Unit I.D.</u>	<u>Description</u>	<u>Number</u>	<u>Rated Heat Input¹ (mmBtu/Hr)</u>	<u>Rated Electrical Output¹ (MWe)</u>	<u>Control</u>
1-8	Simple Cycle Gas Turbine	8	985 ²	80	Low NO _x Combustors
9	Emergency Fire Pump Engine	1	1.6	--	None

¹ Nominal Ratings are Per Unit.

² Natural Gas Firing (HHV @ 100% Load and 49°F)

Attachment B

<u>Unit</u>	<u>Project Emissions (ton/yr)</u>				
	<u>NO_x</u>	<u>CO</u>	<u>PM/PM10</u>	<u>VOM</u>	<u>SO₂</u>
Turbines	448.7	601.9	101.0	19.2	57.4
Emergency Fire Pump Engine and Fuel Storage Tank	1.3	0.3	0.1	0.2	0.1
Road Dust	--	--	2.0	--	--
Totals:	450.0	602.2	103.1	19.4	57.5

Table 1A

Emission Limits for Each CT

<u>Pollutant</u>	<u>(lb/mmBtu¹)</u>	<u>(lb/hr²)</u>
NO _x	0.06	54.0
CO	0.055	54.0
PM/PM10	0.016	10.0
VOM	0.005	1.8
SO ₂	0.006	5.6

¹ Limits based on vendor/manufacture data and information provided in the permit application.

² Limits based on modeling data and information provided in the permit application. If the applicable limits for CO or PM/PM₁₀ are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 2(e), as well as an exceedance of Condition 6.

Table 1B

Annual Emissions (ton/yr) for CTs

<u>Pollutant</u>	<u>Normal¹ Each CT²</u>	<u>Normal¹ 8 CTs</u>	<u>Startup/ Shutdown (8 CTs)</u>	<u>Low Load Operation (8 CTs)</u>	<u>Total (Combined, 8 CTs)</u>
NOx	53.8	430.2	1.7	16.8	448.7
CO	67.5	540.0	9.4	52.5	601.9
PM/PM10	12.5	100.0	--	1.0	101.0
VOM	2.3	18.0	0.2	1.0	19.2
SO ₂	7.0	56.4	--	1.0	57.4

¹ Normal addresses all emissions except for Startup, Shutdown and Low Load Operation.

² The annual limits for CO, PM/PM₁₀, VOM, and SO₂ are based on 2,500 hours/year operation at the hourly emission rate from Table 1A. The annual limits for NOx are based on 2,500 hours/year operation at the highest expected average emission rate, considering variation in maximum turbine load due to ambient temperature and humidity, as presented in the application. These limits do not account for the additional emissions of NOx, CO or VOM from startup, shutdown, or low load operation, as addressed by Condition 3, which are addressed separately.

Table 1C

Emissions from CTs During Low Load Operations

<u>Pollutant</u>	<u>(lb/hr) (each CT)</u>	<u>Emission (ton/yr) (Combined all CTs)</u>
NOx	250	16.8
CO	525	52.5