217/782-2113

CONSTRUCTION PERMIT - PSD – NSPS - REVISED

PERMITTEE

LSP Nelson Energy, LLC
Attn: Michael Vogt
655 Craig Road, Suite 336
St. Louis, Missouri 63141

Application No.: 98080039
Applicant's Designation: NELSON GEN
Subject: Electric Generation Facility
Initial Date Issued: January 28, 2000
Date Issued: November 19, 2001
Location: Nelson Generation Facility, Nelson Road at I-88, Nelson

I.D. No.: **103814AAC**
Initial Date Received: August 11, 1998
Date Received: August 21, 2001

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of 4 gas turbines and associated heat recovery steam generator each with supplemental firing, and ancillary operations 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, which 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 which follow:

Findings

1. LS Power, LLC (LS Power) has requested a permit for a electric generation facility that would include up to 4 "combined cycle" gas turbines equipped with heat recovery steam generators (HRSG) with fuel supplemental firing using duct burners. The facility would have the ability to generate up to about 1,100 MW of electrical energy. The facility would be fired on natural gas as its primary fuel with capability to fire low-sulfur distillate oil as a backup or emergency fuel. LS Power has requested the ability to initially operate the turbines as simple cycle units without the HRSG and to bypass the HRSG,

once installed, as needed to allow for a more rapid response to demand for electrical power.

2. The project would be located on a 90.3-acre parcel of property in Nelson Township in Lee County. The area is currently designated attainment for all criteria pollutants.

3. The proposed project has the potential to emit major amounts of nitrogen oxides (NO_X), carbon monoxide (CO), particulate matter (PM), volatile organic material (VOM), and sulfur dioxide (SO_2) as shown in Attachment B. The project is therefore subject to PSD review for NO_X, CO, PM, VOM, and SO_2.

4. After reviewing the materials submitted by LS Power, the Illinois EPA has determined that the project will (i) comply with applicable Board emission standards (ii) comply with applicable federal emission standards and (iii) utilize Best Available Control Technology (BACT) on emissions of NO_X, CO, SO_2, VOM, and PM.

5. The gas turbines are affected units under the Acid Rain Deposition Control Program pursuant to Title IV of the Clean Air Act and are subject to certain control requirements and emissions monitoring requirements pursuant to 40 CFR Parts 72, 73 and 75. As affected units under the Acid Rain Program, LS Power must also obtain an Acid Rain Permit before commencing operation.

6. The air quality analysis submitted by LS Power and reviewed by the Illinois EPA shows that the proposed project will not cause violations of the ambient air quality standard for NO_X, CO, SO_2, and PM/PM_{10}. The air quality analysis shows compliance with the allowable increment levels established under the PSD regulations. An analysis was also conducted for the impact of the facility's VOM emissions on ozone air quality using a conservative screening technique developed by USEPA. The analysis showed that the project would not cause a violation of the ozone air quality standard.

7. The Illinois EPA has determined that the proposed project 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.

8. A copy of the application, the project summary 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 approval to construct the proposed project subject to the following special 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.

2. Each combustion turbines (CT) is subject to the following requirements; except while installed as a simple cycle turbine as addressed by Condition 3.

a. Each CT shall be equipped, operated, and maintained with dry low NO_X combustors for natural gas firing, water injection for backup fuel firing (distillate oil), and a selective catalytic reduction (SCR) system in the HRSG to reduce emissions of NO_X.

b. i. Except during startup, malfunction or shutdown as addressed by Condition 4, the emissions of NO_X from each CT/HRSG when firing natural gas shall not exceed 4.5 ppmvd at 15% O_2 on an hourly average or 15 ppmvd at 15% O_2 on an hourly average when operated without the HRSG as a peaking facility.

ii. Except during startup, malfunction or shutdown as addressed by Condition 4, the emissions of NO_X from each CT/HRSG when firing backup fuel shall not exceed 16 ppmvd at 15% O_2 on an hourly average or 42 ppmvd at 15% O_2 on an hourly average when emergency fuel is fired only on a temporary basis, in accordance with Condition 10 (b)(iii).

c. The CT shall not be fired with distillate oil with sulfur content greater than 0.05% by weight.

d. The CT and duct burners shall be maintained and operated with good combustion practice to reduce emissions of CO, VOM, and PM.

3. Each CT may be constructed as a simple cycle turbine and operated subject to the following requirements until an associated HRSG has been installed:

a. 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. The CT shall be equipped, and maintained with dry low NO_X combustors for natural gas firing and water injection (WI) for backup fuel firing.

c. i. The emissions of NO_X from each CT when firing natural gas shall not exceed 15 ppmvd at 15% O_2 on an hourly average, except during startup and shutdown as addressed by Condition 4.

ii. The emissions of NO_X from the CT when firing backup fuel shall not exceed 42 ppmvd at 15% O_2 on an hourly average, except during startup, malfunction or shutdown as addressed by Condition 4.

d. Each simple cycle CT shall not operate more than 2,000 hours per year.

e. The CT shall not be fired with distillate oil with a sulfur content greater than 0.05% by weight.

f. The CT shall be maintained and operated with good combustion practice to reduce emissions of CO, VOM, and PM.

4a. Each CT and HRSG shall be operated in a manner consistent with good air pollution control practice to minimize emissions of NO_X during startup, malfunction, 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:

A. Review of operating parameters of the unit during startup, malfunction, and breakdown, or shutdown as necessary to make adjustments to reduce or eliminate excess emissions; and

B. Operation of the SCR system or water injection system as soon as and as long as the unit operating conditions are amenable to its effective use.

ii. Maintenance of the SCR and WI systems in accordance with written procedures developed and maintained by the Permittee, which procedures shall be reviewed at least annually.

b. i. Upon malfunction of the SCR system or water injection system that will result in NO_X emissions in excess of the applicable limit in Condition 2(b) or Condition 3 (c)(ii). The Permittee shall as soon as practicable repair the affected system or remove the CT/HRSG system from service so that excess emissions cease.

ii. Consistent with the above, if the Permittee has maintained and operated a CT/HRSG/SCR/WI so that malfunctions are sudden, infrequent, not caused by poor maintenance or careless operation, and in general are not reasonably preventable, the Permittee shall begin shutdown of the CT/HRSG system within 90 minutes, unless the malfunction is expected to be repaired in 120 minutes or such shutdown could threaten the stability of the regional electrical power system. In such case, shutdown of the CT/HRSG system shall be undertaken when it is apparent that repair will not be accomplished within 120 minutes or shutdown would not endanger the regional power system. In no case shall shutdown of a CT/HRSG be delayed solely for the economic benefit of the Permittee.

iii. Notwithstanding the above, if the Permittee determines that the NO_X continuous emission monitoring system (CEMS) is inaccurately reporting excess NO_X emissions, the Permittee may continue operation provided the Permittee records the information it is relying upon to conclude that the CT/HRSG/SCR is functioning properly and the CEMS is reporting inaccurate data and the Permittee takes prompt action to resolve the accuracy of the CEMS.

5a. The fuel heater shall be equipped with low-NO_X burners designed to emit no more than 0.15 lb NO_X/million Btu heat input (HHV) on an hourly average.

b. The fuel heater shall be maintained and operated with good combustion practice to reduce emissions of CO, VOM, and PM.

6a. The cooling towers shall each be equipped, operated, and maintained with drift eliminators designed to limit the loss of water droplets from the cooling tower to not more than 0.001% of the circulating water flow.

b. Good operating practices shall be followed for the cooling tower to maintain the level of dissolved solids in the cooling tower blowdown to not more than 5,750 mg/L, composite daily sample.

Conditions 2, 3, 4, 5 and 6 represent the application of the Best Available Control Technology as required by Section 165 of the Clean Air Act.

7a. The combustion turbines (CT) 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 SO_2 in excess of 0.015 percent by volume at 15 % O_2 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. The duct burners in the HRSG are subject to the New Source Performance Standard (NSPS) for Electric Utility Steam Generating Units, 40 CFR 60, Subpart A and Da. 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 HRSG’s duct burner shall not exceed the limit set by the NSPS, pursuant to 40 CFR 60.44a(d)(1).

ii. The SO_2 emissions from each HRSG’s duct burner shall not exceed 0.20 lb/mmBtu, pursuant to 40 CFR 60.43a(b)(2).

iii. The PM emission from each HRSG’s duct burner shall not exceed 0.03 lb/mmBtu, pursuant to 40 CFR 60.42a(a)(1).

c. The two fuel oil storage tanks are subject to the New Source Performance Standard (NSPS) for storage vessels, 40 CFR 60, Subpart A and Kb. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

d. At all times, the Permittee shall maintain and operate the CT’s, HRSG duct burners and storage tanks in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the NSPS, 40 CFR 60.11(d).

8a. 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.

b. When the duct burner in a HRSG is being fired, the emission of smoke or other particulate matter from the CT/HRSG system shall not have an opacity greater than 20 percent, pursuant to 40 CFR 60.42a(b) and 35 IAC 212.122(a), except for one 6-minute period per hour of not more than 27 percent opacity, as further allowed by 40 CFR 60.42a(b).

9. Each CT shall be operated subject to the following requirements until the Permittee demonstrates compliance with an NO_X emission limit of 15 ppm or the associated HRSG has been installed:

a. After initial startup, commissioning and shakedown are completed, a CT shall only be operated for electrical generation during peak demand periods or for purpose of evaluating or verifying operation, or emissions testing.

b. Operation of the four CT's shall not exceed the following limits:

i. Total natural gas operating hours: 2,453 hours/year

ii. Total fuel oil operating hours: 96 hours/year

c. The CT shall be equipped, and maintained with dry low NO_X combustors for natural gas firing and WI for backup fuel firing.

d. The emissions of NO_X from each CT when firing natural gas shall not exceed 25 ppmv at 15% O_2 on an hourly average, except during startup and shutdown.

e. The emissions of NO_X from the CT when firing backup fuel shall not exceed 42 ppmvd at 15% O_2 on an hourly average, except during startup, malfunction or shutdown.

This Condition limits the source to below PSD applicability due to the manufacture/vendor inability to warranty emission levels to previous determined BACT levels.

10a. i. The only fuels fired in the CT shall be natural gas or distillate oil, as defined in 40 CFR 60.41c.

ii. Duct burners and the fuel heater shall only be fired with natural gas, as defined in 40 CFR 60.41c.

b. i. For the purpose of this permit, backup fuel is distillate oil with a sulfur content no greater than 0.05% by weight. Emergency fuel is backup fuel fired only during circumstances that make it impossible to fire natural gas, i.e., natural gas supply curtailment or breakdown of delivery systems.

ii. Backup fuel shall not be fired more than 1,440 hours per year per CT, based on a running total of 12 months of data.

iii. For the purpose of this permit, a CT shall be considered to be firing emergency fuel on an temporary basis if during the months of May through September (5 months) firing of emergency fuel does not occur for more than 24 hours total and during the remainder of

the calendar year (7 months) firing of emergency fuel does not occur for more than 120 hours total. When a CT is operated on emergency fuel on a temporary basis, the CT may be operated without the HRSG while firing emergency fuel, i.e. bypassing the HRSG.

iv. If backup fuel is burned in a CT for more than 100 hours in a calendar year, the Permittee shall perform representative testing of emissions with such fuel in accordance with Condition 13 with and without the SCR in operation, unless such testing is waived by the Illinois EPA.

c. After initial startup, commissioning and shakedown are completed, a simple cycle CT shall only be used for peaking operation or for purpose of evaluating or verifying operation, or emissions testing.

d. A combined cycle CT may be operated without its HRSG while firing natural gas for peaking operation or for purpose of evaluating or verifying operation, or emissions testing. Compliance with this requirement shall be assumed if the CT operates for no more than 300 hours per year without its HRSG.

e. 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. Peaking operation shall be assumed if a turbine complies with the time limits set elsewhere in this permit.

11a. i. Emissions from CT/HRSG's shall not exceed the limits in Table 1A, 1B, and 1C.

ii. Emissions from CT's shall not exceed the limits in Table 2A, 2B and 2C if operated as a simple cycle turbine pursuant to Condition 3.

iii. On a daily basis, VOM emissions from the CT's and or CT/HRSG's shall not exceed 5,385 pounds, total. This requirement is set to address the impact of the facility's VOM emissions on ozone air quality.

b. Emissions of NO_X from the fuel heater, shall not exceed 0.75 lb/hr and 3.29 tons/yr.

c. Emissions of PM from the cooling towers, in total, shall not exceed 30.2 tons/yr.

d. Emissions of VOM from the storage and handling of distillate oil shall not exceed 2 ton/year.

12a. Under this permit, each CT and each HRSG 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 supersedes Standard Condition 6.

13a. Within 60 days after operating a CT and a CT/HRSG 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 the CT or the CT/HRSG as follows. These tests shall be used as the initial compliance tests to demonstrate compliance with the limits and conditions set in this permit.

b. Emissions shall be measured by an approved testing service at maximum load for NO_X, CO, PM, VOM, and opacity. During the initial performance tests, emissions shall also be measured at the minimum load, and four intermediate load levels for NO_X and VOM, including partial firing of the duct burners if installed, full turbine load without the duct burner, and two partial turbine loads without the duct burner. Unless the CT/HRSG is equipped with appropriately located test ports in the duct work between the CT and HRSG, compliance of the HRSG with the NSPS shall be determined by the difference between measurements with and without the duct burner in service.

c. 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 turbine, measurement of NO_X and SO_2 emissions shall be conducted and data collected in accordance with the test methods and procedures specified in 40 CFR 60.335.

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	USEPA Method 5
Nitrogen Oxides	USEPA Method 20
Opacity	USEPA Method 9
Carbon Monoxide	USEPA Method 10
Volatile Organic Material	USEPA Method 18, or 25A
PM_{10}	USEPA Method 5* or Method 201 or 201A (40 CFR 51, Appendix M)

* The Permittee may report all PM emissions measured by USEPA Method 5 as PM_{10}, including back half condensable particulate. If the Permittee reports USEPA Method 5 PM emissions as PM_{10}, testing using USEPA method 201 or 201A need not be performed.

d. 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/HRSG 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 CT/HRSG 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.

iv. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.

e. The Illinois EPA shall be notified prior to these tests to enable it to observe these tests. Notification for 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.

f. Three copies of the Final Reports for these tests shall be forwarded to the Illinois EPA, 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 ft^3 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.

g. 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

Phone: 309/693-5461   Fax: 309/693-5467

Illinois Environmental Protection Agency
Emission Monitoring and Testing Unit
P. O. Box 19276
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P. O. Box 19276
Springfield, Illinois 62794-9276

Phone: 217/782-5811 Fax: 217/782-6348

14a. The Permittee shall install, operate, and maintain a Continuous Emissions Monitoring (CEM) system in accordance with the provisions of the Acid Rain Program and the NSPS to measure emissions of NO_X from each CT/HRSG to demonstrate compliance with the limitations of this permit.

b. i. The procedures under 40 CFR 60.13 and 75.12 shall be followed for the installation, evaluation, and operation these CEM systems.

ii. The Permittee shall submit to the Illinois EPA for review and comments detailed monitoring plans as follows:

A. At least 30 days prior to initial startup of a CT; a plan shall be submitted describing the configuration and operation of the NO_X CEM system(s). The plan shall also state whether the Permittee is installing a SO_2 CEM system (40 CFR 75.11) rather than sulfur analysis and flow monitoring equipment in accordance with 40 CFR 75.11(e).

B. At least 30 days prior to initial startup of a HRSG; a plan shall be submitted describing the proposed changes to the NO_X CEM system for monitoring at the discharge from the HRSG.

c. These CEMS shall be operational and collecting data in accordance with the provisions of the Acid Rain Program.

15. The Permittee shall sample and analyze for sulfur and nitrogen content of the fuels being fired in each CT in accordance with 40 CFR 60.334(b) unless the Permittee has a custom schedule approved by the Illinois EPA, for the determination of these values based on the design and operation of the source and the characteristics of the fuel supply.

16. The Permittee shall install, operate, and maintain monitors on each CT/HRSG to measure and record fuel consumption.

17a. The Permittee shall maintain files of the following items:

i. The written Operating Procedures maintained for the CT and HRSG in accordance with Condition 4(a);

ii. The heat content of the fuel fired in the CT and HRSG's (Btu/standard ft^3 or Btu/gallon); and

iii. The sulfur and nitrogen content of each fuel.

b. The Permittee shall maintain the following daily records:

i. The quantity and type of fuel consumed for each CT (standard ft^3 or gallon);

ii. The quantity of fuel consumed for each duct burner (standard ft^3);

iii. Operating hours for each CT, with reason for operation and supporting documentation*;

iv. Operating hours for each duct burner;

v. For each combined cycle CT, operating hours while bypassing the HRSG, with reason for operation and supporting documentation*; and

vi. Identification of each hour when a turbine is operated at less than 75% load, other than during startup, malfunction, or shutdown as addressed below in Condition 16(f).

* Data from the applicable electric reliability council is sufficient if it demonstrates need for peaking power generation as defined in Condition 10(e).

c. The Permittee shall keep inspection, maintenance, and repair logs with dates and nature of such activities for the following:

i. Each CT/HRSG, including duct burners;

ii. Each SCR system;

iii. The SCR reagent storage system;

iv. Each fuel heater; and

v. Cooling tower drift eliminators.

d. The Permittee shall maintain records related to use of backup fuel as follows:

i. Operating hours for each CT with backup fuel, including when bypassing the HRSG and if firing emergency fuel is fired on a temporary basis, with explanation why emergency fuel is needed; and

ii. Sulfur content of fuel (weight %).

e. The Permittee shall maintain the following cumulative records for operation for each CT:

   i. Operating hours during May through September with backup fuel, including emergency fuel;

   ii. Operating hours during January through April and October through December with backup fuel, including emergency fuel;

iii. For simple cycle CT's, operating hours; and

iv. For combined cycle CT's, operating hours for operation without the HRSG.

f. The Permittee shall maintain following records related to startup, malfunction and breakdown, and shutdown of each CT/HRSG:

i. The time and date of startup, malfunction or breakdown and shutdown of a CT/HRSG, and confirmation that standard practices were followed; and

ii. Each incident when operation of a CT/HRSG continued during malfunction or breakdown with excess emissions, including the following information:

A. Date and duration of malfunction or breakdown;

B. A description of the malfunction or breakdown;

C. The reason continued operation was necessary, including supporting documentation; and

D. The corrective actions used to reduce the quantity of emissions and the duration of the incident.

g. The Permittee shall keep the following records with regards to emissions:

i. The ppmvd limit for each simple cycle unit that the Permittee is complying with and the associated limit on annual operating hours;

ii. NO_X emissions from each CT and CT/HRSG in ppmvd recorded hourly and recorded hourly, quarterly, and annual (in lb/mmBtu) by combining the NO_X concentration (in ppm) and diluent concentration (in percent O_2 or CO_2) measurements according to the procedures in 40 CFR 75 Appendix F;

iii. Monthly emissions of NO_X, CO, SO_2, VOM, and PM from each CT, CT/HRSG and fuel heater (ton/month). NO_X emissions shall be based on data from the CEM. All other emissions shall be calculated based on fuel consumption data and site-specific emission factors developed from emission test data; and

iv. Annual plant emissions of NO_X, CO, SO_2, VOM, and PM based on monthly emission totals.

h. The Permittee shall maintain a permanent file of the following items for the life of each emission unit:

i. Date a turbine is fully operational; and

ii. Records showing the dimensions of the fuel oil storage tanks and an analysis showing the capacity of the storage tanks.

18. All records required by this permit shall be retained on site for a period of at least 3 years and shall be made available for inspection and copying by the Illinois EPA upon request.

19a. For each CT and HRSG, 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 identify the manufacturers and model of the turbine, HRSG, and SCR that it has selected and provide a copy of the manufacturer's guarantee for emissions.

b. In the event of continued operation of a CT/HRSG with excess NO_X emissions during a malfunction of the SCR system, is expected to occur for more than 90 minutes, as addressed by Condition 4(b) the Permittee shall promptly notify the Illinois EPA's regional office of the malfunction and the reason for continued operation.

c. If the backup fuel is used in a CT for more than 100 hours in a calendar year, the Permittee shall notify the Illinois EPA within 30 days

d. The Permittee shall submit a notification to the Illinois EPA, with supporting test data and other information when the simple cycle turbines will comply with a NO_X emission limitation of 15 ppm (BACT Limit Condition 3) and the turbines will not longer be complying with Condition 9.

20. If construction of an HRSG is not commenced within 24 months of January 28, 2000, prior to commencing such construction, the Permittee shall submit an updated BACT demonstration and obtain reauthorization of the BACT determination for the CT, as it may be affected by installation of the HRSG and SCR, as provided by 40 CFR 52.21 (j)(4).

21a. If there is an exceedance of the requirements of Condition 2 through 10 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. In conjunction with the Annual Emission Report required by 35 IAC Part 254, the Permittee shall provide:

i. The hours of operation with backup fuel;

ii. The hours and month of operation with backup fuel when the HRSG was bypassed.

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 Unit.

22a. 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 (40-CASM)
Division of Air Pollution Control
Compliance Unit (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Phone: 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

Phone: 309/693-5467 Fax: 309/693-5467

23a. 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 than an extension is justified. This condition supersedes Standard Condition 1.

b. i. This permit shall become invalid as applied to a particular CT if construction of such unit does not commence within 18 months after this permit becomes effective, if construction is discontinued for a period of 18 months or more, or if construction of the CT is not completed within a reasonable period of time. The 18 month period may be extended by the Illinois EPA upon a satisfactory showing from the Permittee that an extension is justified.

ii. This permit shall become invalid as applied to a particular HRSG if construction of such unit does not commence within 18 months after completion of construction of the associated CT, if construction is discontinued for a period of 18 months or more, or if construction of the HRSG is not completed within a reasonable period of time. The 18 month period may be extended by the Illinois EPA upon a satisfactory showing from the Permittee that an extension is justified.

c. 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))

24. 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.

It should be noted that pursuant to the Permittee's letter dated August 17, 2001, this permit has been revised to address a reduction in fuel heater size and a change to cooling tower design with decrease in the permitted emissions. This revision does not change the effective date of the 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

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cc: Region 2

Attachment A: Emission Units

Unit I.D.	**Description**	Number	**Rated Heat Input**[1] (HHV) (mmBtu/hr)	**Rated Electrical Output**[1] (MWe)	**Control**
Unit 1 - 4	Combustion Turbine (CT)	4	2,166	180-220	**Selective Catalytic Reduction**[2] **and Low NO_x Combustors**
HRSG 1 – 4	Heat Recovery Steam Generator	4	350	---	**Selective Catalytic Reduction and Low NO_x Combustors**
	Fuel Heater	1	18.1	---	**Low NO_x Burner**
	Backup Diesel Fire Pump (300 Hp Maximum)[3]	1	---	---	**None**
	Cooling Towers	18 Cells	---	---	**Drift Eliminators**

[1] Nominal ratings per unit.

[2] Selective catalytic reduction will be used when the HRSG is installed for a CT.

[3] Unit operated on a limited basis for backup purposes. As a result, the units are not considered significant units.

Attachment B

Project Emissions (Ton/Yr)

Pollutant	Potential Emissions
CO	3,757
NO_X	1,509
PM/PM_{10}	951
VOM	794
SO_2	574

Table 1A: Emission Limits for Each CT/HRSG (Without Duct Burners)

Pollutant	Natural Gas (Lb/mmBtu[1])	Natural Gas (Lb/Hr[2])	Fuel Oil (Lb/mmBtu[1])	Fuel Oil (Lb/Hr[3])
NO_X	0.0166	36.0	0.0647	139.0
CO	0.0511	93.8	0.0986	181.6
PM/PM_{10}	0.0191	38.9	0.0423	77.9
VOM	0.0123	22.7	0.0157	28.9
SO_2	0.0060	13.4	0.0556	119.6

Emission limits are per unit

[1] Limit based on vendor/manufacture data and information provided in the permit application. These limits only apply at the maximum load of the CT.

[2] Limit based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO and VOM, which do not apply at and below 75% load. CO and VOM emissions at and below 75% load shall not exceed 595 and 33.1 lb/hour, respectively. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 2(d), as well as an exceedance of Condition 11(a)(i).

[3] Limit based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO and VOM, which do not apply at and below 75% load. CO and VOM emissions at and below 75% load shall not exceed 456 and 169 lb/hour, respectively. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 2(d), as well as an exceedance of Condition 11(a)(i).

Table 1B: Emission Limits for Each CT/HRSG (With Duct Burners)

Pollutant	Natural Gas (Lb/mmBtu[1])	Natural Gas (Lb/Hr[2])	Fuel Oil (Lb/mmBtu[1])	Fuel Oil (Lb/Hr[3])
NO_X	0.0143	36.0	0.0556	139.0
CO	0.0626	136.7	0.1024	224.4
PM/PM_{10}	0.0193	46.1	0.0320	85.0
VOM	0.0186	40.7	0.0230	50.3
SO_2	0.0060	15.6	0.0479	119.9

Emission limits are per unit

[1] Limits based on vendor/manufacture data and information provided in the permit application. These limits only apply in the maximum load range of the CT/HRSG.

[2] Limits based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO, which does not apply at and below 75% load. CO emissions shall not exceed 595 lb/hour at and below 75% load. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 2(d), as well as an exceedance of Condition 11(a)(i).

[3] Limits based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO and VOM, which does not apply at and below 75% load. CO and VOM emissions at and below 75% load shall not exceed 456 and 169 lb/hour, respectively. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 2(d), as well as an exceedance of Condition 11(a)(i).

Table 1C: Annual Emissions (Ton/Yr) for CT/HRSG

Pollutant	Contribution (Each) Natural Gas	Contribution (Each) Fuel Oil	Natural Gas Limit (Total)[1]	Fuel Oil Limit (Total)[2]
NO_X	157.7	100.1	630.7	400.3
CO	899.8	186.5	3,599.4	746.1
PM/PM_{10}	201.9	61.2	807.7	244.8
VOM	178.3	49.0	713.1	196.1
SO_2	68.3	86.3	273.3	345.3

[1] The annual limits for NO_X, PM/PM_{10}, VOM, and SO_2 are based on continuous operation at the maximum hourly emission rate. The CO annual limit was determined based on maximum emissions considering operation at reduced load (50% load) for 15% of the time.

[2] The annual limits for NO_X, PM/PM_{10}, and SO_2 are based on 60 days of operation at the maximum hourly emission rate. The CO and VOM annual limit was determined based on maximum emissions considering operation at reduced load (50% load) for 15% of the time.

Table 2A: Emission Limits for Each CT (Simple Cycle Operation)

Pollutant	Natural Gas (Lb/mmBtu[1])	Natural Gas (Lb/Hr[2])	Fuel Oil (Lb/mmBtu[1])	Fuel Oil (Lb/Hr[3])
NO_X	0.0936	188.7	0.1709	365.2
CO	0.0471	87.8	0.1036	190.6
PM/PM_{10}	0.0191	38.6	0.0163	85.0
VOM	0.0104	19.4	0.0151	27.8
SO_2	0.006	12.5	0.0556	119.6

Emission limits are per unit

[1] Limit based on vendor/manufacture data and information provided in the permit application. These limits only apply at the maximum load of the CT.

[2] Limit based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO and VOM, which does not apply at and below 75% load. CO and VOM emissions at and below 75% load shall not exceed 585 and 34 lb/hour, respectively. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 3(f), as well as an exceedance of Condition 11(a)(ii).

[3] Limit based on modeling data and information provided in the permit application. These limits apply at all times, except the limit on CO and VOM, which does not apply at and below 75% load. CO and VOM emissions at and below 75% load shall not exceed 890 and 170 lb/hour, respectively. If the applicable limits for CO, VOM, or PM/PM_{10} are not met by a turbine, it shall also be presumed to constitute failure to use good combustion practice as required by Condition 3(f), as well as an exceedance of Condition 11(a)(ii).

Table 2B: Annual Emissions (Ton/Yr) for CT's Firing Natural Gas (Simple Cycle Operation)

Pollutant	Limit[1] (Total)	(Each)[2]	Limit[2] (Total)
NO_X	231	113.2	452.9
$CO^{(3)}$	108	163.3	649.3
PM/PM_{10}	47	38.6	154.4
$VOM^{(3)}$	24	21.5	86.2
SO_2	15	12.5	49.8

Annual limits based on hourly limits from Table 2A

[1] Based on operation of 2,453 hours/year natural gas and complying with Condition 9.

[2] Based on operation for 2,000 hours/year per CT and complying with Condition 3.

[3] The limits for CO and VOM were determined based on maximum emissions considering operation at reduced load for 15% of the time.

Table 2C: Annual Emissions (Ton/Yr) for CT's Firing Fuel Oil (Simple Cycle Operation)

Pollutant	Limit[1] (Total)	(Each)[2]	Limit[2] (Total)
NO_X	18	262.9	1,051.8
CO[(3)]	9	212.7	850.9
PM/PM_{10}	4	61.2	244.8
VOM[(3)]	1	35.3	141.2
SO_2	6	86.1	344.5

Annual limits based on hourly limits from Table 2A

[1] Based on operation for 96 hours/year and complying with Condition 9.

[2] Based on operation for 1,440 hours/year per CT and complying with Condition 3.

[3] The limits for CO and VOM were determined based on maximum emissions considering operation at reduced load for 15% of the time.

Table 3: Emissions from Other Significant Units (Ton/Yr)

Unit	NO_x	CO	PM	VOM	SO_2
Fuel Heater	3.3	2.7	0.2	1.3	1.0
Cooling Towers	---	---	30.2	---	---
Totals:	3.3	2.7	30.2	1.3	1.0

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