217/782-2113

CONSTRUCTION PERMIT - PSD - NSPS - REVISED

PERMITTEE

Holland Energy, LLC
c/o Constellation Companies
Attn: Donald B. Walters
111 Market Place, Suite 200
Baltimore, Maryland 21202

Application No.: 99100022 I.D. No.: 173807AAG
Applicant's Designation: HOLLAND ENERGY, LLC
Subject: Electric Generation Facility
Date Originally Issued: April 5, 2000
Date Revision Requested: May 14, 2001
Date Revision Issued: December 3, 2001
Location: Holland Energy, Rural Route #2, County Line Road, Holland Township

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of 2 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. Holland Energy LLC (Holland Energy) has requested a permit for a electric generation facility that would include up to 2 "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 680 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 fuel.

2. The project would be located on a 260-acre parcel of property in Holland Township in Shelby 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 Holland Energy, 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, Holland Energy must hold calendar year allowances for each ton of SO_2 that is emitted.

6. The air quality analysis submitted by Holland Energy 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) and HRSG is subject to the following requirements:

   a. Each CT shall be equipped, operated, and maintained with dry low NO_X combustors for natural gas firing, water injection (WI) 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 3, the emissions of NO_X from each CT/HRSG when firing natural gas shall not exceed 4.5 ppmvd @ 15% O_2 on an hourly average and 3.5 ppmvd @ 15% O_2 on a twenty four hour average, which includes emissions due to duct firing.

ii. Except during startup, malfunction or shutdown as addressed by Condition 3, the emissions of NO_X from each CT/HRSG when firing backup fuel shall not exceed 16 ppmvd @ 15% O_2 on an hourly average and 10 ppmvd @ 15% O_2 on a twenty four hour average.

c. The CT shall not be fired with distillate oil with a 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.

3a. Each CT and HRSG shall be operated in a manner consistent with good air pollution control practice to minimize emissions 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;

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), 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 infrequent, sudden, 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.

4a. The auxiliary boiler shall be equipped with low-NO_X burners designed to emit no more than 0.05 lb NO_X/million Btu heat input (HHV) on an hourly average.

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

5a. 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 0.0005% 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 3,000 mg/L, composite daily sample.

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

6a. 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 NSPS for Electric Utility Steam Generating Units, 40 CFR 60, Subpart A and Da.

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 auxiliary boiler is subject to the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart A and Dc. Although the auxiliary boiler is not subject to any emission standards pursuant to the NSPS because it will only fire natural gas, the Permittee is subject to recordkeeping and reporting requirements for the auxiliary boiler pursuant to the NSPS.

d. The fuel oil storage tank is subject to the NSPS for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart A and Kb. Although the storage tank is not subject to any emission standards pursuant to the NSPS because it will only store fuel oil, the Permittee is subject to recordkeeping and reporting requirements for the storage tank pursuant to the NSPS.

e. 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).

7a. The emission of smoke or other particulate matter from a CT 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).

8a. 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 auxiliary boiler shall only be fired with natural gas, as defined in 40 CFR 60.41c.

iii. Each duct burner firing shall not exceed 1,500 hours per year.

b. i. For the purpose of this permit, backup fuel is distillate oil with a sulfur content no greater than 0.05% by weight.

ii. Backup fuel shall not be fired more than 1,000 hours per year per CT, based on a running total of 12 months of data.

9a. Emissions from CT/HRSG's shall not exceed the limits in Table 1A, 1B, and 1C.

b. i. The design heat input of the auxiliary boiler should not exceed 63 million Btu per hour.

ii. The emissions of the auxiliary boiler shall not exceed the limits in Table 2A.

iii. The emissions from the combination of the auxiliary boiler and the CT/HRSG shall not exceed the limits in Table 2B.

c. Emissions of PM from the cooling towers, in total, shall not exceed 8.3 tons/yr.

d. Emissions of VOM from the storage and handling of distillate oil shall not exceed 0.7 ton/year.

10a. 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.

11a. 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 two intermediate load levels for NO_X and CO, 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);

B. Firing rate (million Btu/hr);

C. Turbine/Generator output rate (MW); and

D. Turbine burner settings, e.g., burner excess air and pressure settings.

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

2009 Mall Street
Collinsville, Illinois 62234

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

Telephone: 217/782-5811 Facsimile: 217/782-6348

12a. 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:

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).

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

13. 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 USEPA, for the determination of these values based on the design and operation of the source and the characteristics of the fuel supply.

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

15a. The Permittee shall maintain files of the following items:

i. The written Operating Procedures maintained for the CT and HRSG in accordance with Condition 3(a).

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

iii. The sulfur and nitrogen content of fuel oil and the sulfur content of natural gas used as fuel at the source;

iv. The design heat input of the auxiliary boiler; and

v. The dimensions of the oil storage tank and an analysis showing its capacity.

b. The Permittee shall maintain the following daily records

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

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

iii. Operating hours for each CT/HRSG;

iv. Operating hours for each duct burner; and

v. The quantity of fuel used by the auxiliary boiler, as required by the NSPS, 40 CFR 60.48c(g).

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 turbine combustors and duct burners;

ii. Each SCR system;

iii. The SCR reagent storage system;

iv. Auxiliary boiler; 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; and

ii. Sulfur content of fuel (weight %).

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

   i. Operating hours of each CT during May through September with backup fuel;

   ii. Operating hours of each CT during January through April and October through December with backup fuel; and

   iii. Operating hours of the duct burner in each HSRG.

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;

   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. 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;

   ii. Monthly emissions of NO_X, CO, SO_2, VOM, and PM from each CT, each CT/HRSG and the auxiliary boiler (ton/month). NO_X emissions from the CT/HRSG 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. Records showing the dimensions of the fuel oil storage tanks and an analysis showing the capacity of the storage tanks.

16. 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.

17a. 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

18a. 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 Section 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:

The hours of operation of each CT with backup fuel.

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 Unit (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/524-4710

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
2009 Mall Street
Collinsville, Illinois 62234

Telephone: 618/346-5120

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 than 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.

Please note that this permit has been revised to address a larger auxiliary boiler, which the Permittee indicates will allow faster startup of the CT, without any increase in the permitted emissions of the source and to make other related clarifications to the provisions of the permit.

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

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

DES:CRR:jar

cc: Region 3
FOIA

Attachment A: Emission Units

Unit I.D.	Description	Number	Rated Heat Input1 (HHV) (mmBtu/hr)	Rated Electrical Output1 (MWe)	Control
Unit 1 – 2	Combustion Turbine (CT)	2	1,762	168	Selective Catalytic Reduction and Low NO_X Combustors
Duct Burners 1-2	Duct Burners	2	776	---	Selective Catalytic Reduction
HRSG 1 – 2	Heat Recovery Steam Generator	2	---	---	Selective Catalytic Reduction
	Auxiliary Boiler	1	63	---	Low NO_X Burner and Flue Gas Recirculation
	Backup Diesel Fire Pump(175 Hp Maximum)[2]	1	---	---	None
	Cooling Towers	11 Cells	---	---	Drift Eliminators

[1] Nominal ratings per unit.

[2] Unit operated on a limited basis for backup purposes. As a result, detailed provisions are not established addressing this unit.

Attachment B

Project Emissions (Ton/Yr)

Pollutant	Potential Emissions
NO_X	345
CO	446
PM/PM_{10}	265
VOM	42
SO_2	128

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	0.02	31.8	0.04	80.8
CO	0.02	31.0	0.04	71.0
PM/PM_{10}	0.01	19.4	0.04	88.4
VOM	0.002	3.0	0.01	3.2
SO_2	0.001	2.6	0.06	105.6

[1] Limit based on vendor/manufacture data and information provided in the permit application. These limits apply to all times except during startup, malfunction and shutdown as addressed by Condition 3.

[2] Limit based on modeling data and information provided in the permit application. These limits apply at all times except startup, malfunction and shutdown as addressed by Condition 3. 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 9(a).

[3] Limit based on modeling data and information provided in the permit application. These limits apply at all times, except during startup, malfunction and shutdown as addressed by Condition 3, provided however that the above CO limit shall not apply at and below 75% load. CO emissions at and below 75% load shall not exceed 76 lb/hour. 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 9(a).

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

Pollutant	Natural Gas[3] (Lb/mmBtu[1])	Natural Gas[3] (Lb/hr[2])
NO_X	0.02	41.7
CO	0.065	108.6
PM/PM_{10}	0.012	31.0
VOM	0.022	12.3
SO_2	0.001	3.7

[1] Limits based on vendor/manufacture data and information provided in the permit application. These limits apply at all times except during startup, malfunction and shutdown as addressed by Condition 3.

[2] Limit based on modeling data and information provided in the permit application. These limits apply at all times except during startup and shutdown as addressed by Condition 3. 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 9(a).

[3] Fuel oil does not have duct burner option.

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

Pollutant	Limit (Total)
NO_X	342
CO	433
PM/PM_{10}	256
VOM	40
SO_2	127

Table 2A: Emission Limits for the Auxiliary Boiler (Lb/Hr)

Pollutant	Limit
NO_X	3.2
CO	23.3
PM/PM_{10}	0.48
VOM	2.7
SO_2	0.4

Table 2B: Combined Annual Emission Limits for Both CT/HRSG and the Auxiliary Boiler (Ton/Yr)[1]

Pollutant	Limit
NO_X	344
CO	445
PM/PM_{10}	257
VOM	41.8
SO_2	127.6

1 These limits account for the additional emissions that are allowed for "overlapping" operation of the auxiliary boiler and the CT/HRSG. In this regard, the permit conservatively provides for overlapping operation of the auxiliary boiler for as many as 1,000 hours per year at full load while both of the CT are operating.

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

Unit	NO_X	CO	PM	VOM	SO_2
Fire Water Pump	0.5	0.1	0.03	0.1	0.1
Cooling Towers	---	---	8.3	---	---

Totals:	0.5	0.1	8.33	0.1	0.1

CRR:jar