AIR QUALITY PERMIT

Permit No. **Effective Date**
4911-127-0075-P-02-0

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name: **Live Oaks Power Plant**

Mailing Address: 1314 Independence Way
Marietta, GA 30062-6257

is issued a Permit for the following:

The construction and operation of a natural gas-fired combined-cycle electric generating plant with a nominal rating of 600 MW. This plant includes two combustion turbines (200 MW each), two duct fired heat recovery steam generators, one steam turbine, one fuel gas heater, one emergency diesel fired generator, one diesel firewater pump, and evaporative cooling.

Facility Location: Green Swamp Road
Sterling, Georgia 31525 (Glynn County)

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 18569 dated November 18, 2008 any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **18** pages.

Director
Environmental Protection Division

Table A

			Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**ID No.**	**Description**
CT1	Combustion Turbine Unit 1 Siemens SGT6-5000F	40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK 40 CFR 52.21 391-3-1-.02(2)(b) and (g) Acid Rain	DLN1 SC1 CO1	Dry Low NO_x Combustor SCR Catalytic Oxidation
DB1	HRSG, for Combustion Turbine CT1, supplementary fired by Duct Burner Unit 1 Rated at 359 MMBtu/hr	40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK 40 CFR 52.21 391-3-1-.02(2)(d) and (g) Acid Rain	LN1 SC1 CO1	Low NO_x Burner SCR Catalytic Oxidation
CT2	Combustion Turbine Unit 2 Siemens SGT6-5000F	40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK 40 CFR 52.21 391-3-1-.02(2)(b) and (g) Acid Rain	DLN2 SC2 CO2	Dry Low NO_x Combustor SCR Catalytic Oxidation
DB2	HRSG, for Combustion Turbine CT2, supplementary fired by Duct Burner Unit 2 Rated at 359 MMBtu/hr	40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK 40 CFR 52.21 391-3-1-.02(2)(d) and (g) Acid Rain	LN2 SC2 CO2	Low NO_x Burner SCR Catalytic Oxidation
FH1	Fuel Heater rated at 10 MMBtu/hr	40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 40 CFR 52.21 391-3-1-.02(2)(d) and (g)	FHB	Low NO_x Burner
EG1	Emergency Generator rated at 600 kW (diesel)	40 CFR 60 Subpart A 40 CFR 60 Subpart IIII 40 CFR 52.21 391-3-1-.02(2)(b) and (g)		None
FP1	Emergency Fire Water Pump rated at 310 HP (diesel)	40 CFR 60 Subpart A 40 CFR 60 Subpart IIII 40 CFR 52.21 391-3-1-.02(2)(b) and (g)		None

General Requirements

1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.

1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.

1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.

1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.

1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

1.6 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart KKKK - "Standards of Performance for Stationary Combustion Turbines," for operation of each of the combustion turbines (Source Codes: CT1/DB1 and CT2/DB2).
[40 CFR 60 Subparts A and KKKK]

1.7 The Permittee shall comply with all applicable provisions of the Acid Rain Program as found in 40 CFR Part 72 “Permit Regulations”, 40 CFR Part 73 “Sulfur Dioxide Allowance System”, 40 CFR Part 75 “Continuous Emissions Monitoring”, and 40 CFR Part 77 “Excess Emissions” for operation of each Combustion Turbine, and its corresponding duct burner. (Source Codes: CT1/DB1 and CT2/DB2).
[40 CFR Parts 72, 73, 75, and 77]

1.8 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A – "General Provisions" and 40 CFR 60 Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," as it relates to the fuel heater (emission unit ID No. FH1).
[40 CFR 60 Subpart A, 40 CFR 60 Subpart Dc]

1.9 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60, Subpart A – "General Provisions" and 40 CFR 60 Subpart IIII - "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," for the operation of the diesel fired Emergency Generator (Source Code EG1) and emergency Firewater Pump (Source Code FP1).
[40 CFR 60 Subparts A and IIII]

2. Allowable Emissions

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

2.1 The Permittee shall commence construction within 18 months of the date of issuance of this Permit. In the event that construction of any of these units has not commenced in the time frame specified, and absent approval by the Division for an extension of the commencement date, this Permit shall become null and void with respect to that unit and all units yet to be constructed. For purposes of this Permit, the definition of "commence" is given in 40 CFR 52.21(b)(9).
[40 CFR 52.21(r)]

2.2 The construction of CT1/DB1, CT2/DB2, FH1, EG1, and FP1 shall be completed no later than June 1, 2014. In the event that construction of any of these units is not completed by the date specified, and absent approval by the Division for an extension of the completion date, this Permit shall become null and void with respect to that unit and all units yet to be constructed. The Permit will remain in full force and effect with regard to any units for which construction has been completed by the applicable construction deadline.
[40 CFR 52.21(r)(2)]

2.3 The Permittee shall install and operate, as BACT for NO_x on each Combustion Turbine and its paired Duct Burner (Source Codes: CT1/DB1 and CT2/DB2) Dry Low NO_x combustors and Selective Catalytic Reduction.
[40 CFR 52.21(j)]

2.4 The Permittee shall install and operate, as BACT for CO and VOC on each Combustion Turbine and its paired Duct Burner (Source Codes: CT1/DB1 and CT2/DB2), Catalytic Oxidation.
[40 CFR 52.21(j)]

2.5 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from each Combustion Turbine and its paired Duct Burner (Source Codes: CT1/DB1 and CT2/DB2):

a. Nitrogen Oxides (NO_x) emissions, including emissions occurring during startup, shutdown, and malfunction, in excess of 87 tons during any twelve consecutive months on a per unit basis.
[40 CFR 52.21(j)]

b. Carbon Monoxide (CO) emissions, including emissions occurring during startup, shutdown, and malfunction in excess of 208 tons during any twelve consecutive months on a per unit basis.
[40 CFR 52.21(j)]

2.6 The Permittee shall not cause to be discharged into the atmosphere from any of the Combustion Turbines and their paired Duct Burners (Source Codes: CT1/DB1 and CT02/DB2), any gases which contain NO_x in excess of 15 parts per million volumetric dry (ppmvd) at 15 percent oxygen (O_2) and 0.43 pounds per megawatt-hour (lbs/MW-hr) (54 nanograms per joule [ng/J] of useful output), on a 30 day rolling average, excluding periods of startup and shutdown.
[Table 1 of 40 CFR 60 Subpart KKKK and 40 CFR 60.4320]

2.7 The Permittee shall not cause to be discharged into the atmosphere from any of the Combustion Turbines and their paired Duct Burners (Source Codes: CT1/DB1 and CT2/DB2) any gases which contain sulfur dioxide in excess of 0.9 pounds per megawatt-hour (lbs/MW-hr) (110 nanograms per Joule [ng/J] gross output), excluding periods of startup and shutdown.
[40 CFR 60.4330(a)(1)]

2.8 The Permittee shall only fire pipeline quality natural gas as BACT for PM_{10}, and as BACT avoidance for SO_2 and Sulfuric Acid Mist, in each Combustion Turbine and its paired Duct Burner (Source Codes: CT1/DB1 and CT2/DB2). Sulfur content of pipeline quality natural gas shall not exceed 0.5 grains per 100 standard cubic feet.
[40 CFR 52.21(j); 40 CFR 60.4330(a)(subsumed) and 391-3-1-.02(2)(g)(subsumed)]

2.9 The Permittee shall only fire pipeline quality natural gas in Fuel Heater FH1. Sulfur content of pipeline quality natural gas shall not exceed 0.5 grains per 100 standard cubic feet.
[40 CFR 52.21(j) and 391-3-1-.02(2)(g)(subsumed)]

2.10 Ultra low sulfur diesel fuel fired in Emergency Generator EG1 and Firewater Pump FP1 shall meet the specification for Ultra Low Sulfur No. 1-D S15 or Low Sulfur No. 2-D S15 as defined by the American Society for Testing and Materials (ASTM) in ASTM D975 – "Standard Specifications for Diesel Fuel Oils." The Permittee shall not fire any fuel oil in the said equipment that contains more than 0.0015 percent sulfur by weight.
[40 CFR 52.21(j); 40 CFR 60.4330(a)(subsumed) and 391-3-1-.02(2)(g) (subsumed)]

2.11 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from each combined Combustion Turbine and Duct Burner stack (Source Codes: CT1/DB1 and CT2/DB2), excluding startup and shutdown periods, any gases which:

a. Contain nitrogen oxides (NO_x) in excess of 2.5 ppmvd, corrected to 15% oxygen, on a 3-hour rolling average.
[40 CFR 52.21(j) and 40 CFR 60.4320(a) for the Combustion Turbines (subsumed)]

b. Contain carbon monoxide (CO) in excess of 3.2 ppmvd corrected to 15% oxygen, on a 3-hour rolling average while the duct burner is being fired.
[40 CFR 52.21(j)]

c. Contain carbon monoxide (CO) in excess of 2.0 ppmvd corrected to 15% oxygen, on a 3-hour rolling average while the duct burner is not being fired.
[40 CFR 52.21(j)]

d. Contain volatile organic compounds (VOC) in excess of 2.0 ppmvd corrected to 15% oxygen, as methane, on a 3-hour rolling average.
[40 CFR 52.21(j)]

2.12 The Permittee shall limit the hours of operation of Generator EG1 and Pump FP1 such that the total hours of operation of each unit does not equal or exceed 500 hours during any twelve consecutive months.
[40 CFR 52.21(j)]

2.13 For the purposes of this permit, the following definitions of startup and shutdown shall apply:
[40 CFR 52.21(j)]

a. Cold startup is defined as a startup to combined cycle operation following a complete shutdown lasting at least 72 hours. Minutes allocated to a cold startup are no more than 215 minutes or until the unit reaches steady state load operation. Steady state operation shall be reached when the combustion turbine reaches minimum load (70%) and the steam turbine is declared available for load changes.

b. Warm startup is defined as a startup to combined cycle operation following a complete shutdown lasting 8 hours or more, but less than 72 hours. Minutes allocated to a warm startup are no more than 125 minutes or until the unit reaches steady state load operation. Steady state operation shall be reached when the combustion turbine reaches minimum load (70%) and the steam turbine is declared available for load changes.

c. Hot startup is defined as a startup to combined cycle operation following a complete shutdown lasting less than 8 hours. Minutes allocated to a hot startup are no more than 65 minutes or until the unit reaches steady state load operation. Steady state operation shall be reached when the combustion turbine reaches minimum load (70%) and the steam turbine is declared available for load changes.

d. Unit shutdown is defined as the period of time from steady state operation to cessation of combustion turbine firing. This period shall not exceed 60 minutes for planned shutdown.

2.14 The Permittee shall prepare and submit an initial Title V Operating Permit Application for the operation of the Live Oaks Power Plant in accordance with 40 CFR 70.5 within 12 months after commencing operation.
[40 CFR Part 70]

2.15 The Permittee shall not discharge or cause the discharge into the atmosphere from any Combustion Turbine and Duct Burner stack (Source Codes: CT1/DB1 and CT2/DB2) any gases which exhibit opacity equal to or greater than 40 percent.
[391-3-1-.02(2)(b)]

3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions with any operation, process, handling, transportation, or storage facilities to prevent fugitive emissions of air contaminants.

4. Process & Control Equipment

Not applicable.

5. Monitoring

5.1 Any continuous monitoring system required by the Permit shall be in continuous operation and data recorded as set forth in this Permit during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data shall be recorded during calibration checks and zero and span adjustments. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1]

5.2 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated pollutants on the following equipment. Each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

a. A Continuous Emissions Monitoring System (CEMS) for measuring NO_x concentration and diluent (either oxygen or carbon dioxide) discharge to the atmosphere from each combustion turbine and duct burner combined stack (Source Codes: CT1/DB1 and CT2/DB2). The one-hour average nitrogen oxides emission rates shall also be recorded in pound per million Btu heat input, and ppm, corrected to 15 percent oxygen on a dry basis. The diluent concentration shall be expressed in percent. Each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B of 40 CFR Part 60, except that the 7-day calibration drift is based on unit operating days, not calendar days. For purposes of this condition, each one-hour average shall be calculated from at least four data points, each representing a different quadrant of the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For hours during which quality assurance and maintenance to the CEMS is performed, a valid hour must have at least two valid data points (one in each of two quadrants of the hour). For the purposes of this condition, each clock hour begins a new one-hour period. The quadrants of the hour begin at 0, 15, 30, and 45 minutes past the hour.
[40 CFR 52.21; 391-3-1-.02(6)(b)1; 40 CFR 60.13; and 40 CFR 60.4335(b)]

b. A Continuous Emissions Monitoring System (CEMS) for measuring carbon monoxide concentration and diluent (either oxygen or carbon dioxide) discharge to the atmosphere from each combustion turbine and duct burner combined stack (Source Codes: CT1/DB1 and CT2/DB2). The one-hour average carbon monoxide emission rates shall also be recorded in pound per million Btu heat input, and ppm corrected to 15 percent oxygen on a dry basis. The diluent concentration shall be expressed in percent. In addition to the applicable provisions of 40 CFR 60.13, each CO CEMS must be installed and certified in accordance with Performance Specification 4A of 40 CFR Part 60, Appendix B, except (1) the 7-day calibration drift shall be based on unit operating days, not calendar days, (2) the high-level value on the low-range scale shall be 10 ppm, and (3) the high-level value on the high-range scale shall be 1000 ppm. For purposes of this condition, each one-hour average shall be calculated from at least four data points, each representing a different quadrant of the hour. For partial unit operating hours, at least one valid data point must be obtained for each quadrant of the hour in which the unit operates. For hours during which quality assurance and maintenance to the CEMS is performed, a valid hour must have at least two valid data points (one in each of two quadrants of the hour). For the purposes of this condition, each clock hour begins a new one-hour period. The quadrants of the hour begin at 0, 15, 30, and 45 minutes past the hour.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

5.3 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

a. The quantity of natural gas, in cubic feet, burned in each of the Combustion Turbines CT1 and CT2. Data shall be recorded monthly.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

b. The quantity of natural gas, in cubic feet, burned in each of the Duct Burners DB1 and DB2. Data shall be recorded monthly.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

c. The quantity of natural gas, in cubic feet, burned in Fuel Heater FH1. Data shall be recorded monthly.
[391-3-1-.02(6)(b)1, 40 CFR 52.21 and 40 CFR 60.48(c)]

d. The cumulative total hours of operation, during all periods of operation, for each of the following: Emergency Generator EG1 and Firewater Pump FP1. Data shall be recorded monthly.
[40 CFR 60.4209; 391-3-1-.02(6)(b)1; and 40 CFR 52.21]

5.4 The sulfur content of the pipeline quality natural gas burned in Combustion Turbines CT1 and CT2, Duct Burners DB1 and DB2, and Fuel Heater FH1, shall be verified by the submittal of a semiannual analysis of the gas contained in a current valid purchase contract, tariff sheet or transportation contract from the supplier.
[40 CFR 60.4365(a)]

5.5 The Permittee shall, using the procedures of Appendix F, Procedure 1 (Quality Assurance Requirements for Gas Continuous Emissions Monitoring Systems Used for Compliance Determination) contained in the Division's *Procedures for Testing and Monitoring Sources of Air Pollutants*, assess the quality and accuracy of the data acquired by the carbon monoxide CEMS required by Condition No. 5.2.b. The Permittee shall maintain records specifying the results of the daily CEMS drift tests and quarterly accuracy assessments under Appendix F, Procedure 1. In addition, the Permittee shall maintain records which identify the Out-of-Control Periods (as defined in Appendix F, Procedure 1) for the CO CEMS during each calendar quarter. The following exceptions to Appendix F, Procedure 1 are allowed:
[391-3-1-.02(6)(b)1]

a. The cylinder gas audit (CGA) is only required to be conducted in a calendar quarter if the turbine is operated during the quarter.

b. A Relative Accuracy Test Audit (RATA) shall be conducted annually or every four operating quarters (not to exceed eight calendar quarters) whichever is greater. For the purpose of this condition, an operating quarter is defined as any calendar quarter during which the turbine is operated.

c. The CGA is only required on the high-range scale of a dual-range analyzer. The zero and high-level calibration drift results for the low-range scale conducted on the day of the CGA shall be submitted in lieu of the low-range scale CGA.

6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.

b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.

c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.

d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

6.2 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's *Procedures for Testing and Monitoring Sources of Air Pollutants*. The methods for the determination of compliance with emission limits listed under Section 2.0 of this permit which pertain to the emission units listed in Table A are as follows:

a. Method 1 or 1A shall be used for the determination of sample point locations.

b. Method 2 shall be used for the determination of stack gas flow rate.

c. Method 3 or 3A shall be used for the determination of stack gas molecular weight.

d. Method 3B shall be used for the determination of the emissions rate correction factor or excess air; Method 3A may be used as an alternative to Method 3B.

e. Method 4 shall be used for the determination of stack gas moisture.

f. Method 5 or Method 17, as applicable, shall be used for the determination of particulate matter concentration from all emission units except stacks serving a combustion turbine and its paired duct burner.

g. Method 5T shall be used for the determination of the particulate matter concentration from each combined cycle combustion turbine system; the sampling time for each run shall be one hour.

h. Method 6 or 6C shall be used for the determination of sulfur dioxide concentration.

i. Method 7E and the procedures contained in Section 2.121 of the above-referenced document shall be used for the determination of nitrogen oxides emissions; the sampling time for each run shall be one hour.

j. Method 9 and the procedures contained in Section 1.3 of the above referenced document shall be used for the determination of opacity.

k. Method 10 shall be used for the determination of carbon monoxide concentration; the sampling time for each run shall be one hour.

l. Method 19 shall be used for the determination of particulate matter, carbon monoxide, and nitrogen oxides emission rates.

m. Method 20 shall be used for the determination of nitrogen oxides concentration from the Combustion Turbines for 40 CFR 60 Subpart KKKK purposes only.

n. Method 25A shall be used for the determination of concentrations of volatile organic compounds (VOC). The concentration of formaldehyde measured using Method 320 shall be added to the results of Method 25A to determine the VOC concentration. If data from Method 320 is not available, a value of 0.091 ppm formaldehyde may be used. The Permittee may use Method 18 for determining methane and ethane concentrations to subtract from the results of Method 25A. The sampling time for each run shall be one hour.

o. ASTM Test Method D129, D1552, D2622, or D4294 shall be used for the determination of fuel sulfur content.

p. Compliance with the nitrogen oxide limits in Condition 2.11.a and 2.5.a shall be determined using the CEMS required by Condition 5.2.a.

q. Compliance with the carbon monoxide limits in Condition 2.11.b, 2.11.c, and 2.5.b shall be determined using the CEMS required by Condition 5.2.b.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

6.3 Within 60 days after achieving the maximum production rate at which each combined cycle combustion turbine system will be operated, but not later than 180 days after the initial startup of each turbine (Source Codes: CT1 and CT2), the Permittee shall conduct the following performance tests and furnish to the Division a written report of the results of such performance tests:

a. Performance testing, on each affected facility at a load condition within plus or minus 25 percent of 100 percent of peak load, for nitrogen oxides emissions, to verify compliance with Condition 2.11.a. Each performance test shall consist of three separate test runs. The minimum time per run is 60 minutes.
[40 CFR 52.21, 40 CFR 60.18, and 40 CFR 60.4400]

b. Performance testing on each affected facility for volatile organic compounds at base load with the duct burner firing, and at 60 percent load without the duct burner firing, to verify compliance with Condition 2.11d.
[40 CFR 52.21, 391-3-1-.02(3), and 391-3-1-.03(2)(c)]

c. For purposes of this condition, the term “affected facility” is defined as a combination of each combustion turbine and its paired duct burner (DB).

7. Notification, Reporting and Record Keeping Requirements

7.1 The Permittee shall retain monthly records of pipeline quality natural gas usage in each Combustion Turbine, CT1 and CT2, each Duct Burner, DB1 and DB2, and Fuel Heater FH1.
[391-3-1-.02(6)(b)1.(i), 40 CFR 52.21 and 40 CFR 60, Subpart KKKK]

7.2 The Permittee shall use the hour meters required by Condition No. 5.3 to determine and record the following:

a. The net operating hours for each of the following during every calendar month: Emergency Generator EG1 and Firewater Pump FP1.

b. The total operating hours for each of the following for the twelve consecutive month period ending with each calendar month: Emergency Generator EG1 and Firewater Pump FP1.

These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[391-3-1-.02(2)(6)(b)1 and 40 CFR 52.21]

7.3 Using the readings obtained from the NO_x CEMS required in Condition 5.2.a, the Permittee shall determine and record the mass emission rate (lb/hr) of nitrogen oxides from each combustion turbine and its paired duct burner for each hour or portion of each hour of operation. This emission rate shall include emissions from all periods of operation, including startup and shutdown. The hourly mass emission rate shall be calculated by multiplying the total NO_x emissions in units of pound per million Btu, determined in accordance with the procedures of 40 CFR Part 75, Section 3 of Appendix F, by the total heat input for that hour determined in accordance with the procedures of 40 CFR Part 75, Section 5.5 of Appendix F. These records (including calculations) shall be maintained in a form suitable for inspection or submittal.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

7.4 The Permittee shall calculate a 3-hour, and 30-day rolling average NO_x emission rate (in ppmvd corrected to 15 percent oxygen) for each combustion turbine and its paired duct burner, using the NO_x hourly emission rate determined in accordance with Condition 5.2.a, in accordance with the following:

a. After the first 3-hour average, a new 3-hour rolling average shall be calculated after each operating hour.

b. The 30-day average shall be the average of all valid hours of NO_x emissions data for any 30 successive operating days.

c. After the first 30-day average, a new 30-day rolling average shall be calculated after each operating day.

d. For the purpose of this Permit, an operating day is a 24-hour period between 12:00 midnight and the following midnight, during which any fuel is combusted at any time. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[40 CFR 60.4350 and 40 CFR 60.4380]

7.5 The Permittee shall use the records required by Condition No. 7.3 to determine and record the monthly mass emission rate, in tons per month, of NO_x from each combustion turbine, and its paired duct burner. These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

7.6 The Permittee shall use the records required by Condition No. 7.5 to determine and record the twelve consecutive month total of NO_x emissions (in tons) from each combustion turbine, and its paired duct burner, for each month. A twelve consecutive month total shall be the total for a calendar month in the reporting period plus the totals for the previous 11 consecutive months. These records (including calculations) shall be maintained as part of the monthly record suitable for inspection or submittal.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

7.7 Using the readings obtained from the CO CEMS required in Condition 5.2.b, the Permittee shall determine and record the mass emission rate (lb/hr) of carbon monoxide from each combustion turbine and its paired duct burner for each hour or portion of each hour of operation. This emission rate shall include emissions from all periods of operation, including startup, shutdown and malfunction. The hourly mass emission rate shall be calculated by multiplying the total CO emissions in units of pound per million Btu, by the total heat input for that hour, determined in accordance with the procedures of 40 CFR Part 75, Section 5.5 of Appendix F. These records (including calculations) shall be maintained in a form suitable for inspection or submittal.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

7.8 The Permittee shall calculate a three-hour average CO emission rate (in ppm at 15% oxygen) for each combustion turbine and its paired duct burner, using the CO emission rates determined in accordance with Condition 5.2.b. After the first 3-hour average, a new 3-hour rolling average shall be calculated after each operating hour.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

7.9 The Permittee shall use the records required by Condition No. 7.7 to determine and record the monthly mass emission rate, in tons per month, of CO from each combustion turbine, and its paired duct burner. These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[391-3-1-.02(6)(b)1 and 40 CFR 52.21]

7.10 Each month the Permittee shall use the records required by Condition No. 7.9 to determine and record the twelve consecutive month total of carbon monoxide emissions (in tons) from each combustion turbine and its paired duct burner. A twelve consecutive month total shall be the total for a month in the reporting period plus the totals for the previous eleven consecutive months. These records (including calculations) shall be maintained as part of the monthly record, suitable for inspection or submittal.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

7.11 The Permittee shall maintain the following records as they relate to the startup and shutdown of each combined cycle system: The type of startup initiated, per day; the minutes attributed to the startup, and the minutes attributed to shutdown. If the turbine was not in operation on any given day, the records shall so note.
[391-3-1-.02(6)(b)1(i) and 40 CFR 52.21]

7.12 The Permittee shall verify and document that each shipment of ultra low sulfur diesel fuel oil received for combustion in Emergency Generator EG1 and Firewater Pump FP1 complies with the requirements of Condition 2.10 of the Permit by either of the following means:

a. Fuel oil receipts obtained from the fuel supplier certifying that the oil is diesel fuel oil and contains less than or equal to 0.0015 percent sulfur, by weight.

b. Analysis of the fuel oil conducted by methods of sampling and analysis which have been specified or approved by the Division which demonstrates that the diesel fuel oil contains less than or equal to 0.0015 percent sulfur, by weight.

7.13 The Permittee shall maintain files of all measurements, including continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices. These files shall be kept in a permanent form suitable for inspection and shall be maintained for a period of at least five (5) years following the date of such measurements, reports, maintenance and records.
[391-3-1-.03(2)(c)]

Reporting Requirements

7.14 The Permittee shall furnish the Division written notification as follows:
[40 CFR 52.21 and 40 CFR 60.7]

a. A notification of the actual dates of commencement of construction of each combined cycle combustion turbine system postmarked within 15 days after such date. For purposes of this permit, the definition of "commence" is given in 40 CFR 52.21(b)(9).

b. A notification of the actual date of initial startup of each combined cycle combustion turbine system, postmarked within 15 days after such date. For purposes of this permit, "startup" shall mean the setting in operation of an affected facility for any purpose.

c. Certification that a final inspection has shown that construction of each combined cycle combustion turbine system has been completed in accordance with the application, plans, specifications and supporting documents submitted in support of this permit. The certification shall be included with the notification in paragraph b of this condition.

7.15 In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emission control equipment for a period of four hours or more which results in excessive emissions.

The Permittee shall submit a written report which shall contain the probable cause of the deviation(s), duration of the deviation(s), and any corrective actions or preventive measures taken.
[391-3-1-.02(6)(b)1.(iv)]

7.16 The Permittee shall submit a written report containing excess emissions, exceedances, and/or excursions as described in this permit and any monitor malfunctions for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by the 30th day following the end of each reporting period, July 30, and January 30, respectively. Reporting required by this condition shall begin at the end of the semiannual period in which initial startup is completed. In the event that there have not been any excess emissions, exceedances, excursions or malfunctions during a reporting period, the report should so state. Otherwise, the contents of each report shall be as specified by the Division's Procedures for Testing and Monitoring Sources of Air Pollutants and shall contain the following:
[391-3-1-.02(6)(b)1]

a. A summary report of excess emissions, exceedances and excursions, and monitor downtime, in accordance with Section 1.5(c) and (d) of the above referenced document, including any failure to follow required work practice procedures.

b. Total operating time during each reporting period.

c. The magnitude of all excess emissions, exceedances and excursions computed in accordance with the applicable definitions as determined by the Director, and any conversion factors used, and the date and time of the commencement and completion of each time period of occurrence.

d. Specific identification of each period of such excess emissions, exceedances, and excursions that occur during startups, shutdowns, or malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

e. The date and time identifying each period during which any required monitoring system or device was inoperative (including periods of malfunction) except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

f. Certification that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

7.17 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition No. 7.16, the following excess emissions, exceedances, and excursions shall be reported:
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

a. Excess emissions: (means for the purpose of this Condition and Condition No. 7.16, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. Any operating period in which the the 30-day rolling average NO_x emissions rate from any Combustion Turbine and its paired Duct Burner (Source Codes CT1/DB1 and CT2/DB2) exceeds 15 ppmvd, corrected to 15% oxygen.

ii. Any time natural gas combusted in Combustion Turbine CT1 or CT2, contains total potential sulfur emissions in excess of 0.060 lb SO_2/MMBtu heat input.

b. Exceedances: (means for the purpose of this Condition and Condition No. 7.16, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any three hour rolling average NO_x emission rate, excluding startup and shutdown periods, which exceeds 2.5 ppmvd at 15% oxygen for each Combustion Turbine and its paired Duct Burner (Source Codes CT1/DB1 and CT2/DB2).

ii. Any three hour rolling average CO emission rate, excluding startup and shutdown periods, which exceeds 3.2 ppmvd at 15% oxygen while the duct burner is being fired for each Combustion Turbine and its paired Duct Burner (Source Codes CT1/DB1 and CT2/DB2).

iii. Any three hour rolling average CO emission rate, excluding startup and shutdown periods, which exceeds 2.0 ppmvd at 15% oxygen while the duct burner is not being fired for each Combustion Turbine and its paired Duct Burner (Source Codes CT1/DB1 and CT2/DB2).

iv. Any twelve consecutive month total NO_x emissions (tons) from any Combustion Turbine and Duct Burner stack (Source Codes CT1/DB1 and CT2/DB2), including emissions resulting from startup, shutdown and malfunction which exceeds 87 tons.

v. Any twelve consecutive month total CO emissions (tons) from any Combustion Turbine and Duct Burner stack (Source Codes CT1/DB1 and CT2/DB2), including emissions resulting from startup, shutdown, and malfunction which exceeds 208 tons.

vi. Any twelve consecutive month period during which hours of operation of Emergency Generator EG1 or Firewater Pump FP1 equal or exceed 500 hours.

c. Excursions: (means for the purpose of this Condition, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. Any value of the natural gas sulfur content, as determined by Condition No. 5.4, which exceeds 0.5 grains per 100 standard cubic foot.

ii. Any time fuel oil combusted in Emergency Generator EG1 or Firewater Pump FP1 exceeds 0.0015 percent sulfur by weight.

7.18 The Permittee shall submit a written report containing the following information for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by the 30th day following the end of each reporting period, July 30, and January 30, respectively. Reporting required by this condition shall begin at the end of the semiannual period in which initial startup is completed.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1]

a. The twelve consecutive month total NO_x emissions (tons) from each combustion turbine and its paired duct burner for each month in the reporting period.

b. The twelve consecutive month total CO emissions (tons) from each combustion turbine and its paired duct burner for each month in the reporting period.

c. The twelve consecutive month total hours of operation of Emergency Generator EG1 and Firewater Pump FP1, each, for each month in the reporting period.

d. The records of startups and shutdowns as kept according to Condition 7.11 that do not meet the definitions in Condition 2.13.

e. Identification of each calendar month for which CO emissions data have not been obtained for 75 percent of the combustion turbine operating hours during the months in the reporting period, including reasons for not obtaining sufficient data and a description of corrective actions taken.

f. Identification of the Out-of-Control Periods (as defined in Appendix F, Procedure 1) for the CO CEMS during the reporting period.

g. Results of any failed daily CO CEMS drift tests and subsequent passed drift tests and quarterly accuracy assessments under Appendix F, Procedure 1, during the reporting period.

7.19 The Permittee shall demonstrate compliance with the NSPS Subpart IIII emission limits for the Emergency Diesel Generator EG1 by purchasing certified engines. The engines shall be installed and configured according to the manufacturers' specifications. These records shall be maintained in a format suitable for inspection or submittal.
[40 CFR 60.4211(c)]

7.20 The Permittee shall demonstrate compliance with the NSPS Subpart IIII emission limits for the Emergency Fire Water Pump EP1 according to one of the following methods:
[40 CFR 60.4211(b)]

a. Purchasing engines certified according to 40 CFR 89 for the same model year and maximum engine power. The engines shall be installed and configured according to the manufacturers' specifications;

b. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test shall have been conducted using the same methods specified in 40 CFR 60, Subpart IIII and those methods shall have been followed correctly;

c. Keeping records of engine manufacturer data indicating compliance with the standards;

d. Keeping records of control device vendor data indicating compliance with the standards.

8. Special Conditions

8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.

8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Fees."