

## AIR QUALITY PERMIT

**Permit No.**  
**4911-303-0040-P-01-0**

**Effective Date**  
**Nov 9, 2001**

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 or in effect under that Act,

**Duke Energy Sandersville, L.L.C.**  
5400 Westheimer Court  
Houston, Texas 77056-5310

Is issued a Permit for the following: The construction and operation of a peaking power plant consisting of eight simple cycle General Electric combustion turbines T1, T2, T3, T4, T5, T6, T7, and T8, nominally rated at 80 Megawatts; four storage tanks TK1, TK2, TK3, and TK4; and one emergency fire water pump P1.

Facility location: Sandersville Generating Station  
1600 Mills Lindsey School Road  
Warthen, GA 31094

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 or 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 the application dated **October 13, 2000 (Application No. 12594)** and additional information submitted on **dates identified in Note A**, 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, which 18 pages are a part of this Permit.

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Director  
Environmental Protection Division

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**NOTE A**

Date	Description
February 1, 2001	Additional Modeling Analysis
May 16, 2001	Response to EPD Information Request
June 5, 2001	Clarification of Modeling Analysis

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**NOTE B**

**FACILITY DESCRIPTION**

Emission Units		Air Pollution Control Devices	
ID No.	Description	ID No.	Description
T1	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC1 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T2	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC2 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T3	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC3 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T4	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC4 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T5	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC5 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T6	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC6 WI	Dry low NOx combustor Water Injection (fuel oil firing)
T7	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC7 WI	Dry Low NOx combustor Water Injection (fuel oil firing)
T8	General Electric Model 7EA simple cycle combustion turbine equipped with inlet air fogging	LC8 WI	Dry Low NOx combustor Water Injection (fuel oil firing)
TK1	Low-Sulfur Fuel Oil Storage Tank (2 Million gallon)	N/A	N/A
TK2	Low-Sulfur Fuel Oil Storage Tank (2 Million gallon)	N/A	N/A
TK3	Low-Sulfur Fuel Oil Storage Tank (2 Million gallon)	N/A	N/A
TK4	Low-Sulfur Fuel Oil Storage Tank (2 Million gallon)	N/A	N/A
P1	Low-Sulfur Fuel Oil Emergency Fire Water Pump	N/A	N/A

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**1.0 General Requirements**

- 1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall to the extent practicable 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 of the source. [40 CFR 60.11(d)]
- 1.2 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The test results shall be submitted to the Division within 30 days of the completion of the testing. Any tests shall be performed and conducted using methods and procedures, which have been previously approved by the Division.
- 1.3 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.

**2.0 Allowable Emissions**

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any Emission 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. Approval to construct this facility shall become invalid if construction is not commenced by that date. 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 gas turbines T1, T2, T3, T4, T5, T6, T7, and T8, firewater pump P1 shall be completed by December 30, 2003. The construction of fuel oil storage tanks TK1, TK2, TK3, and TK4 shall be completed by October 1, 2005. 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)]

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- 2.3 The Permittee shall fire only pipeline quality natural gas or very low sulfur fuel oil, which meets the specifications defined in Condition 2.4, in combustion turbines T1, T2, T3, T4, T5, T6, T7, and T8. [40 CFR 52.21(j); 40 CFR 60.333(b)(subsumed) and 391-3-1-.02(2)(g) (subsumed)]
- 2.4 Fuel oil fired in combustion turbines T1, T2, T3, T4, T5, T6, T7, and T8 and in firewater pump P1 shall meet the specifications for Low Sulfur No. 1-D or Low Sulfur No. 2-D as defined by the American Society for Testing and Materials (ASTM) in ASTM D975-01 – “Standard Specifications for Diesel Fuel Oils.” The Permittee shall not fire any fuel oil in the said equipment that contains more than 0.05 weight percent sulfur, by weight. [40 CFR 52.21(j)]
- 2.5 The Permittee shall not operate any combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 for more than 2,500 hours during any twelve consecutive month period. [40 CFR 52.21(j)]
- 2.6 The Permittee shall not operate any combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 for more than 500 hours each on fuel oil during any twelve consecutive month period. [40 CFR 52.21(j)]
- 2.7 The Permittee shall install and operate, as BACT for NO<sub>x</sub> on each combustion turbine, (T1, T2, T3, T4, T5, T6, T7, and T8) dry low NO<sub>x</sub> combustors for natural gas combustion and water/steam injection for fuel oil combustion. [40 CFR 52.21(j)]
- 2.8 The Permittee shall not discharge or cause the discharge into the atmosphere from any combustion turbine, when burning natural gas in the turbine, excluding startup and shutdown periods, any gases which:  
[40 CFR 52.21(j)]
- a. contain nitrogen oxides in excess of 10 ppmvd, corrected to 15% oxygen.  
[40 CFR 52.21(j); 40 CFR 60.332(a)(1) (subsumed)]
  - b. contain carbon monoxide in excess of 0.0592 pounds per million Btu heat input.  
[Note: equivalent to a BACT limit of 25 ppmvd.]  
[40 CFR 52.21(j)]
  - c. contain particulate matter in excess of 0.01067 pounds per million Btu heat input.  
[Note: equivalent to 11 lb/hr at full load] [40 CFR 52.21(j)]
  - d. exhibit greater than 10 percent opacity. [40 CFR 52.21(j) and 391-3-1-.02(2)(b) (subsumed)]

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- 2.9 The Permittee shall not discharge or cause the discharge into the atmosphere from any combustion turbine, when burning very low sulfur fuel oil in the turbine, excluding startup and shutdown periods, any gases which: [40 CFR 52.21(j)]
- a. contain nitrogen oxides in excess of 42 ppmvd, corrected to 15% oxygen. [40 CFR 52.21(j); 40 CFR 60.332(a)(1) (subsumed)]
  - b. contain carbon monoxide in excess of 0.0445 pounds per million Btu heat input. [Note: equivalent to a BACT limit of 20 ppmvd.]
  - c. contain particulate matter in excess of 0.0127 pounds per million Btu heat input. [Note: equivalent to 14 lb/hr at full load] [40 CFR 52.21(j)]
  - d. exhibit greater than 10 percent opacity. [40 CFR 52.21(j); and 391-3-1-.02(2)(b) (subsumed)]
- 2.10 The Permittee shall limit the hours of operation of emergency fire water pump P1 such that the total hours of operation of the unit does not exceed 500 hours during any twelve consecutive months. The total hour limit applies to operation of the pump for the purpose of routine maintenance and testing and to assure its dependability and availability during emergencies. [40 CFR 52.21(j)]
- 2.11 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from any combustion turbine, T1, T2, T3, T4, T5, T6, T7, or T8, nitrogen oxides emissions, including emissions occurring during startup and shutdown, in excess of 90.5 tons during any twelve consecutive months. [40 CFR 52.21(j)]
- 2.12 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from any combustion turbine, T1, T2, T3, T4, T5, T6, T7, or T8, carbon monoxide emissions, including emissions occurring during startup and shutdown, in excess of 76.25 tons during any twelve consecutive months. [40 CFR 52.21(j)]
- 2.13 The following definitions of startup and shutdown as used in Condition Nos. 1.1, 2.11, 2.12, and 8.7 shall apply to each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8: [40 CFR 52.21(j)]
- The time allocated to a startup are zero to 30 minutes or the time for reception of a signal from the turbine control system designating that the turbine load is equal to or greater than 50 percent load, whichever is less. Time allocated to a shutdown is zero to 30 minutes.
- For purposes of this permit, the word “startup” refers to a cold startup, warm startup, and/or hot startup.
- 2.14 The Permittee shall only fire fuel oil in fire water pump P1 that meets the specifications of Condition 2.4. [40 CFR 52.21(j)]

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**3.0 Process and Control Equipment**

Not applicable.

**4.0 Performance Testing**

- 4.1 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 which pertain to the emission units listed in Note B are as follows:
- a. Method 1 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,
  - e. Method 4 shall be used for the determination of stack gas moisture,
  - f. Method 5T shall be used for the determination of particulate matter concentration. The minimum sampling time for each run shall be one hour.
  - g. Method 7E shall be used for the determination of nitrogen oxide emissions. The sampling time for each run shall be one hour.
  - h. Method 9 and the procedures contained in Section 1.3 of the above referenced document shall be used for the determination of opacity,
  - i. Method 10 shall be used for the determination of carbon monoxide concentration. The sampling time for each run shall be one hour.
  - j. Method 19 shall be used, when applicable, to convert particulate matter, carbon monoxide, and nitrogen oxides concentrations (i.e. grains/dscf for PM, ppm for gaseous pollutants), as determined using other methods specified in this section, to emission rates (i.e., lb/MMBtu);
  - k. Method 20 shall be used for the determination of nitrogen oxides concentration from the combustion turbines for 40 CFR 60 Subpart GG purposes only,
  - l. Method 25 shall be used for the measurement of volatile organic compounds as total gaseous nonmethane organics as carbon. The Permittee shall convert the Method 25 measurements using a conversion factor, acceptable to the Division. The sampling time for each run shall be one hour,

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- m. ASTM Test Method D129, D1552, D2622 or D4294 shall be used for the determination of fuel sulfur content, and
- n. Method 0011 from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA publication SW-846 for the determination of formaldehyde concentrations. The sampling time for each run shall be one hour.

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, which, in his opinion, render those methods or procedures, or portions thereof, more reliable.

[391-3-1-.02(3)(a); and 40 CFR 60.335(c) and (d) for combustion turbines (subsumed)]

- 4.2 Within 60 days after achieving the maximum production rate at which each simple cycle combustion turbine will be operated, but not later than 180 days after initial startup of each turbine, the Permittee shall conduct the following performance tests on each combustion turbine to demonstrate compliance with BACT emission limits listed in Section 2.0 of this permit and furnish to the Division a written report of the results of such performance tests. Fuel oil source tests shall be conducted within 60 days after achieving the maximum production rate at which each combustion turbine will be operated on fuel oil, but no later than 180 days after the first firing of fuel oil:

- a. Performance tests on each simple cycle combustion turbine for nitrogen oxides emissions while burning natural gas, to demonstrate compliance with the nitrogen oxides emission standard in Condition 2.8a.  
[40 CFR 52.21, 40 CFR 60.13, (subsumed); 40 CFR 60.335 (subsumed), 391-3-1-.02(6)(b)1.(i), and Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards Approved by U.S. EPA, May 26, 2000]
- b. Performance tests on each simple cycle combustion turbine for nitrogen oxides while burning fuel oil to demonstrate compliance with the nitrogen oxides emission standard in Condition 2.9a.  
[40 CFR 52.21, 40 CFR 60.13, (subsumed); 40 CFR 60.335 (subsumed), 391-3-1-.02(6)(b)1.(i), and Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards Approved by U.S. EPA, May 26, 2000]
- c. Performance tests on each simple cycle combustion turbine for carbon monoxide while burning natural gas, to demonstrate compliance with the carbon monoxide emission standard in Condition 2.8b.  
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]
- d. Performance tests on each simple cycle combustion turbine for carbon monoxide while burning fuel oil, to demonstrate compliance with the carbon monoxide emission standard in Condition 2.9b. [40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

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- e. Performance tests on each simple cycle combustion turbine for volatile organic compounds at 100 percent load and at 50 percent load while burning natural gas. [40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]
  - f. Performance tests on each simple cycle combustion turbine for volatile organic compounds at 100 percent load and at 50 percent load while burning fuel oil. [40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]
  - g. Performance test on each simple cycle combustion turbine for particulate matter while burning fuel oil to demonstrate compliance with condition 2.9c. [40 CFR 52.21; and 391-3-1-.02(6)(b)1.(i)]
  - h. Visible emission tests on each simple cycle combustion turbine while burning fuel oil to demonstrate compliance with condition 2.9e. [40 CFR 52.21; and 391-3-1-.02(6)(b)1.(i)]
  - i. Performance tests for particulate matter and visible emissions shall be conducted concurrently while the turbine is fired with fuel oil. The concurrent particulate matter and visible emissions tests will be at 100 percent load. No particulate matter or visible emissions tests are required to be conducted below 100 percent load or when the combustion turbine is fired with natural gas. [40 CFR 52.21; and 391-3-1-.02(6)(b)1.(i)]
  - j. Performance tests for formaldehyde on one combustion turbine while burning natural gas at 100 percent load and at 50 percent load. [40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]
  - k. Performance tests for formaldehyde on one combustion turbine while burning fuel oil at 100 percent load and at 50 percent load. [40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]
- 4.3 The Permittee may submit emission test results for formaldehyde for an identical or similar unit at 100 percent load and at 50 percent load if such data becomes available before the testing deadline noted in Condition 4.2. Such emission test results may only be used to comply with the applicable testing requirements noted in Condition 4.2.j and 4.2.k upon written approval by the Division. [391-3-1-.02(6)(b)1.(i)]

**5.0 Monitoring Requirements**

- 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]

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- 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 nitrogen oxides concentration, and diluent (either oxygen or carbon dioxide) discharge to the atmosphere from each simple cycle combustion turbine. The one-hour average nitrogen oxides emissions rates shall also be recorded in pound per million Btu heat input, on a lower heating value basis (LHV), and ppm, corrected to 15 percent oxygen on a dry basis. [40 CFR 52.21; 391-3-1-.02(6)(b)1, 40 CFR 60.13, and 40 CFR 60.334]
  - 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 simple cycle combustion turbine. The one-hour average carbon monoxide emissions rates shall also be recorded in pound per million Btu heat input. [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. [391-3-1-.02(6)(b)1 and 40 CFR 52.21]
- a. The cumulative total hours of operation, during all periods of operation, for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1.
  - b. The cumulative total hours of operation for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8, during periods of combustion with very low sulfur fuel oil. Data shall be recorded monthly.
- 5.4 The sulfur content of the natural gas burned in the combustion turbines shall be monitored by the submittal of a semiannual analysis of the gas by the supplier or by the Permittee.  
[391-3-1-.02(6)(b)1.; Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards Approved by U.S. EPA, May 26, 2000 and 40 CFR 60.334(b)(subsumed)]

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- 5.5 No determination of the nitrogen content of the natural gas burned in the combustion turbines shall be required.  
[Authority for Approval of Custom Fuel Monitoring Schedules under NSPS GG Approved by U.S. EPA August 14, 1987 and 40 CFR 60.334(b)(subsumed)]
- 5.6 The Permittee shall monitor the sulfur content of the very low sulfur fuel oil burned in the turbines and emergency fire water pump to assure compliance with Condition 2.4 by either of the following methods:
- a. Fuel oil receipts obtained from the fuel supplier certifying that the oil is Low Sulfur No. 1-D or Low Sulfur No. 2-D as defined in ASTM D975-01 and contains less than or equal to 0.05 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 very low sulfur fuel oil contains less than or equal to 0.05 percent sulfur, by weight, and meets the specifications for Low Sulfur No. 1-D or Low Sulfur No. 2-D, as defined in ASTM D975-01.

No determination of the nitrogen content of the very low sulfur fuel oil shall be required. For the purpose of demonstrating compliance using method (b), multiple truckloads of very low sulfur fuel oil may constitute a single shipment, provided such trucks arrive at the facility in a contemporaneous manner.

[Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards Approved by U.S. EPA, May 26, 2000 and 40 CFR 60.334(b)(subsumed)]

- 5.7 For each hour of operation of the combustion turbines (T1, T2, T3, T4, T5, T6, T7, and T8), the Permittee shall measure and record the combustor inlet absolute pressure on each combustion turbine in operation, as well as the ambient temperature (°F) and absolute humidity (grams water/grams air) at the facility. In lieu of measuring the ambient temperature and absolute humidity, the Permittee may obtain from the nearest National Weather Service station hourly records of the ambient temperature, relative humidity, and barometric pressure for the hours of operation during that calendar day.  
[391-3-1-.02(6)(b)1, and Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated Under New Source Performance Standards Approved by U.S. EPA Region 4, May 26, 2000]

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- 5.8 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 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) which ever is greater. For the purpose of this condition an operating quarter is defined as any calendar quarter during which the turbine is operated.
- 5.9 The Permittee shall obtain CO emissions data for at least 75 percent of the operating hours for each turbine during each calendar month that a turbine is operated. If this minimum data requirement is not met using the CO CEMS required by Condition 5.2.b, the Permittee may supplement the emissions data with data obtained by conducting sampling using the methods prescribed in Condition 4.1. The Permittee shall maintain records which identify periods during each calendar month for which CO emissions data have not been obtained for 75 percent of the turbine operating hours during the month, including reasons for not obtaining sufficient data and a description of corrective actions taken. [391-3-1-.02(6)(b)1]

**6.0 Ambient Monitoring**

Not applicable

**7.0 Fugitive Emissions**

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

**8.0 Notification, Reporting, and Record Keeping**

***General Record Keeping and Reporting Requirements***

- 8.1 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 to the EPA. The records shall be retained for at least five (5) years following the date of entry. [391-3-1-.02(6)(b)1(i)]

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- 8.2 The Permittee shall furnish the Division written notification as follows:  
[40 CFR 52.21; 40 CFR 60.7]
- a. A notification of the actual date of initial startup of each combustion turbine, fuel oil storage tank, and emergency fire water pump defined in Note B 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.
  - b. Certification that a final inspection has shown that construction of each combustion turbine, fuel oil storage tank, and the emergency fire water pump defined in Note B has been completed in accordance with the application, plans, specifications and supporting documents submitted in support of this permit.
- 8.3 The Division may allow excess emissions in certain cases as described below.
- a. Excess emissions resulting from startup, shutdown, malfunction of any source which occur though ordinary diligence is employed shall be allowed provided that:  
[391-3-1-.02(2)(a)7(i)]
    - i. The best operational practices to minimize emissions are adhered to;
    - ii. All associated air pollution control equipment is operated in a manner consistent with good air pollution control practice for minimizing emissions; and
    - iii. The duration of excess emissions is minimized.
  - b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited and are violations of this Permit. [391-3-1-.02(2)(a)7(ii)]
  - c. Paragraphs (a) and (b) of this condition shall not apply if precluded by any other State or Federal regulation or specifically excluded in paragraph (d) of this condition. [391-3-1-.02(2)(a)7(iii)]
  - d. Paragraphs (a) and (b) of this condition do not apply to Condition Nos. 2.11 and 2.12 [tpy NO<sub>x</sub> and CO limits] regarding startup and shutdown emissions. Emissions during startup and shutdown shall be counted toward the mass emission limits in these permit conditions. [391-3-1-.02(a)7(iii)]
- 8.4 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.

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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)]

8.5 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 quarterly period ending March 31, June 30, September 30, and December 31 of each year. All reports shall be postmarked by the 30<sup>th</sup> day following the end of each reporting period, April 30, July 30, October 30, and January 30, respectively. 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 and 40 CFR 60.7(c)]

- 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.

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

8.6 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 submission to the Division, 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-.02(2)(6)(b)1(i) and 40 CFR 60.8(f)]

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***Specific Record Keeping and Reporting Requirements***

8.7 The Permittee shall maintain the following records as they relate to the startup and shutdown of each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8:  
[391-3-1-.02(6)(b)1(i), 40 CFR 52.21, and 40 CFR 60.7(b)]

- a. The time (minutes) attributed to the startup and the time (minutes) attributed to shutdown. If the turbine was not in operation on any given day, the records shall so note.

***Record Keeping For Verification of the Operational Limits***

8.8 The Permittee shall use the hour meters required by Condition 5.3a and 5.3b to determine and record the following: [391-3-1-.02(2)(6)(b)1 and 40 CFR 52.21]

- a. The net operating hours for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1 for each calendar month.
- b. The total operating hours for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1 for the twelve consecutive month period ending with each calendar month.
- c. The net operating hours for each calendar month for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump combusting very low sulfur fuel oil.
- d. The total operating hours of combusting very low sulfur fuel oil for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1 for the twelve consecutive month period ending with each calendar month.

These records (including calculations) shall be maintained as part of the monthly record suitable for inspection or submittal.

***Record Keeping for NSPS Kb Purposes***

8.9 The Permittee shall retain records of the dimension of and an analysis showing the capacity of each fuel oil storage tank (source codes TK1, TK2, TK3, and TK4). This information shall be available for inspection or submittal to the Division for the life of each storage tank. [40 CFR 70.6(a)(3)(i), 40 CFR 60.116b(a) and 40 CFR 60.116b(b)]

***Record Keeping for Verification of NOx Mass Emissions Limit***

8.10 The Permittee shall use the records required by Condition 5.2.a to determine the monthly mass emission rate, in tons per month, of nitrogen oxides, from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8. 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]

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- 8.11 The Permittee shall use the records required by Condition 8.10 to determine the twelve consecutive month total of nitrogen oxides emissions (in tons) from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8, for each month. 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 and 40 CFR 52.21]

***Record Keeping for Verification of CO Mass Emissions Limit***

- 8.12 The Permittee shall, using the hourly heat input rate (million Btu per hour), determined in accordance with the procedures of Appendix F, 40 CFR Part 75, and the one-hour average carbon monoxide (CO) emission rate (pound per million Btu), determined in accordance with Condition 5.2.b, calculate the hourly carbon monoxide mass emission rate (pounds per hour) for each hour of operation of each turbine. Only the one-hour average carbon monoxide emission rates (pound per million Btu) that have been determined, in accordance with the procedures required by Condition 5.9, to be valid hourly emission rates shall be used to calculate hourly mass emission rates. [391-3-1-.02(6)(b)1 and 40 CFR 52.21]

- 8.13 The Permittee shall use the valid hourly CO mass emission rates (pounds per hour), determined in accordance with the requirements of Condition 8.12, and all hourly mass emissions rates acquired in order to meet the minimum data requirement of Condition 5.9 to determine the monthly mass emission rate, in tons per month, of carbon monoxide, from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8. The carbon monoxide mass emission rate from each turbine shall be calculated as follows:

$$\text{CO emissions (tons/month)} = \text{ECO} * (\text{TOT/TGD}) / 2000$$

where, ECO equals the total carbon monoxide mass emissions (sum of the valid hours of mass emissions including all hourly mass emissions data acquired to meet the minimum data requirement) for the month, TOT equals the total operating time (hours) of the combustion turbine during the month, and TGD equals the number of hours of valid emissions data including all hourly emissions data acquired to meet the minimum data requirement contained in Condition 5.8. 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]

- 8.14 The Permittee shall use the records required by Condition 8.13 to determine the twelve consecutive month total of carbon monoxide emissions (in tons) from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8, for each month. 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 and 40 CFR 52.21]

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***Specific Reporting Requirements***

- 8.15 The Permittee shall submit a report of the following information for each quarterly period ending March 31, June 30, September 30, and December 31 of each year. The reports shall be postmarked by the 30<sup>th</sup> day following the end of the quarterly period (April 30, July 30, October 30, and January 30, respectively).
- a. The net operating hours for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1 for each calendar month in the quarterly reporting period;
  - b. The total operating hours for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 and for firewater pump P1 for the twelve consecutive month period ending with each calendar month in the quarterly reporting period;
  - c. The net operating hours for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 combusting very low sulfur fuel oil for each calendar month in the quarterly reporting period;
  - d. The total operating hours of combusting very low sulfur fuel oil for each combustion turbine T1, T2, T3, T4, T5, T6, T7, and T8 for the twelve consecutive month period ending with each calendar month in the quarterly reporting period;
  - e. The rolling twelve month total NO<sub>x</sub> emissions from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8 for each month in the quarterly reporting period;
  - f. The rolling twelve month total CO emissions from each combustion turbine, T1, T2, T3, T4, T5, T6, T7, and T8 for each month in the quarterly reporting period.
- 8.16 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 8.5, 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 8.5, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)  
  
None required to be reported in accordance with Condition 8.5.
  - b. Exceedances: (means for the purpose of this Condition and Condition 8.5, 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<sub>x</sub> emission rate, excluding startup and shutdown, which exceeds 10 ppmvd at 15% oxygen for each combustion turbine when it is fired with natural gas;

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- ii. Any three hour rolling average NO<sub>x</sub> emission rate, excluding startup and; shutdown, which exceeds 42 ppmvd at 15% oxygen for each combustion turbine when it is fired with low sulfur fuel oil;
  - iii. Any startup episode which exceeds the time allocated in Condition 2.13;
  - iv. Any shutdown episode which exceeds the time allocated in Condition 2.13.
  - v. Any three hour rolling average carbon monoxide emission rate, which exceeds 0.0592 pounds per million Btu for each combustion turbine when it is fired with natural gas;
  - vi. Any three hour rolling average carbon monoxide emission rate, which exceeds 0.0445 pounds per million Btu for each combustion turbine when it is fired with fuel oil;
  - vii. Any twelve consecutive month total hours of operation of the emergency firewater pump P1 which exceeds 500 hours;
  - viii. Any twelve consecutive month total hours of operation, for each combustion turbine, which exceeds 2500.
  - ix. Any twelve consecutive month total hours of operation from burning very low sulfur fuel oil, for each combustion turbine, which exceeds which 500.
  - x. Any time very low sulfur fuel oil combusted in any combustion turbine, or in the firewater pump P1 exceeds 0.05 percent sulfur by weight.
  - xi. Any twelve consecutive month total nitrogen oxides emissions (tons) from each combustion turbine T1, T2, T3, T4, T5, T6, T7, or T8, which exceeds 90.5 tons.
  - xii. Any twelve consecutive month total carbon monoxide emissions (tons) from each combustion turbine T1, T2, T3, T4, T5, T6, T7, or T8, which exceeds 76.25 tons.
- c. Excursions: (means for the purpose of this Condition and Condition 8.5, 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, which exceeds 2 grains per 100 standard cubic foot.
- 8.17 The Permittee shall submit to the Division the results of the Relative Accuracy Test Audits (RATA), required by Condition 5.7 for the CO CEMS, within thirty (30) days of the completion of the RATA. [40 CFR 52.21 and 391-3-1-.02(6)(b)1]

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**9.0 Modifications**

9.1 Prior to any source commencing a modification as defined in Georgia Rule 391-3-1-.01(pp), which may result in air pollution and not exempted by Georgia Rule 391-3-1-.03(6), the Permittee shall submit a Permit application to the Division. The 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. Such application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity of the plant before and after the change, and the anticipated completion date of the change. The application shall be in the form of a Georgia air quality Permit application to construct or modify (otherwise known as a SIP application) and shall be submitted on forms supplied by the Division, unless otherwise notified by the Division.

**10.0 Special Condition**

10.1 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.