PERMIT AMENDMENT NO. 4911-263-0013-V-07-1
ISSUANCE DATE: 03/26/2024

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name: **Talbot Energy Facility**

Facility Address: **9125 Cartledge Road**
Box Springs, Georgia 31801, Talbot County

Mailing Address: **2100 East Exchange Place**
Tucker, Georgia 30084

Parent/Holding Company: **Oglethorpe Power Company**

Facility AIRS Number: **04-13-263-00013**

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:
Modification of Turbines T1, T2, T3, and T4 to add fuel oil combustion, and add other support equipment including two fuel oil storage tanks and a fire pump engine.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment 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 Amendment and Permit No. **4911-263-0013-V-07-0**. Unless modified or revoked, this Amendment expires upon issuance of the next Part 70 Permit for this source. This Amendment 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 App No. **767450** dated **September 7, 2023**; any other applications upon which this Amendment or Permit No. **4911-263-0013-V-07-0** are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **22** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

Jeffrey W. Cown

Jeffrey W. Cown, Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Existing simple-cycle turbines T1, T2, T3, and T4, which currently combust only natural gas, will be modified to add the capability of fuel oil combustion. The total allowed operating time on each of those turbines will also increase. To support the modified turbines, two new fuel oil storage tanks, with a capacity of 1,580,000 gallons each, will be installed. A 455-horsepower diesel-fired fire pump engine and water tank will provide water for fire suppression in case of emergency. The fire pump engine is limited to 500 hours per year of operating time. The Modified and New Permit Conditions within this Permit take effect following modification of each combustion turbine (Source Codes T1, T2, T3, and T4) for use of fuel oil.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

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.

3.1.1 Modified and Additional Emission Units

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
T1	Combustion Turbine 1 Siemens-Westinghouse V84.2 Simple Cycle Combustion Turbine (108 MW)	40 CFR 52.21(j) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK Acid Rain Regulations CSAPR	LNB1 WI10	Low NOx Burner (Water Injection for NOx control while firing ultra-low sulfur diesel fuel)
T2	Combustion Turbine 2 Siemens-Westinghouse V84.2 Simple Cycle Combustion Turbine (108 MW)	40 CFR 52.21(j) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK Acid Rain Regulations CSAPR	LNB2 WI20	Low NOx Burner (Water Injection for NOx control while firing ultra-low sulfur diesel fuel)
T3	Combustion Turbine 3 Siemens-Westinghouse V84.2 Simple Cycle Combustion Turbine (108 MW)	40 CFR 52.21(j) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK Acid Rain Regulations CSAPR	LNB3 WI30	Low NOx Burner (Water Injection for NOx control while firing ultra-low sulfur diesel fuel)
T4	Combustion Turbine 4 Siemens-Westinghouse V84.2 Simple Cycle Combustion Turbine (108 MW)	40 CFR 52.21(j) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart KKKK Acid Rain Regulations CSAPR	LNB4 WI40	Low NOx Burner (Water Injection for NOx control while firing ultra-low sulfur diesel fuel)
ST2	Fuel Oil Storage Tank 2 (1,580,000 gal. capacity)	40 CFR 52.21(j)	N/A	None
ST3	Fuel Oil Storage Tank 3 (1,580,000 gal. capacity)	40 CFR 52.21(j)	N/A	None
FP1	Fire Pump Engine (455 horsepower)	40 CFR 52.21(j) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart IIII 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ	N/A	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

3.3 Equipment Federal Rule Standards

NEW CONDITIONS

Turbines

3.3.16 Upon startup of the combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow for fuel oil combustion, the emission limits in Conditions 3.3.7 and 3.3.9 and the hours of operation limit in Condition 3.3.4 no longer apply to the modified turbine. Upon startup of the modified turbine, the requirements in Conditions 3.3.17 through 3.3.25 shall apply.
[40 CFR 52.21(j)]

3.3.17 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart A – "General Provisions," and Subpart KKKK – "Standards of Performance for Stationary Combustion Turbines," for the operation of the combustion turbines with ID Nos. T1, T2, T3, and T4.
[40 CFR 60 Subparts A and KKKK]

3.3.18 The Permittee shall not discharge or cause the discharge into the atmosphere from combustion turbines with ID Nos. T1, T2, T3, and T4, excluding periods of startup or shutdown, when combusting natural gas, any gases which:
[40 CFR 52.21(j) and 391-3-1-.02(2)(a)7]

a. Contain nitrogen oxides (NOx) in excess of 12 ppmvd, corrected to 15% oxygen, on a 3-hour average.
[40 CFR 52.21(j)]

b. Contain carbon monoxide in excess of 8.0 ppmvd, corrected to 15% oxygen, on a 3-hour average.
[40 CFR 52.21(j)]

c. Contain particulate matter in excess of 0.0137 pounds per million Btu heat input. [Note: equivalent to a BACT limit of 16.2 lb/hr.]
[40 CFR 52.21(j)]

d. Contain volatile organic compounds in excess of 2.0 ppmvd, corrected to 15% oxygen
[40 CFR 52.21(j)]

e. Exhibit greater than 10 percent opacity.
[40 CFR 52.21(j) (subsumed) and 391-3-1-.02(2)(b) (subsumed)]

3.3.19 The Permittee shall not discharge or cause the discharge into the atmosphere from the combustion turbines with ID Nos. T1, T2, T3, and T4, excluding periods of startup or shutdown, when combusting ultra-low sulfur fuel oil, any gases which:
[40 CFR 52.21(j) and 391-3-1-.02(2)(a)7]

a. Contain nitrogen oxides (NOx) in excess of 42 ppmvd, corrected to 15% oxygen, on a 3-hour average.
[40 CFR 52.21(j)]

b. Contain carbon monoxide in excess of 15 ppmvd, corrected to 15% oxygen, on a 3-hour average.
[40 CFR 52.21(j)]

c. Contain particulate matter in excess of 0.017 pounds per million Btu heat input. [Note: equivalent to a BACT limit of 23.2 lb/hr.]
[40 CFR 52.21(j)]

d. Contain volatile organic compounds in excess of 5.0 ppmvd, corrected to 15% oxygen
[40 CFR 52.21(j)]

e. Exhibit greater than 10 percent opacity.
[40 CFR 52.21(j) (subsumed) and 391-3-1-.02(2)(b) (subsumed)]

3.3.20 The Permittee shall not discharge or cause the discharge into the atmosphere from each of the combustion turbines with ID Nos. T1, T2, T3, and T4, including emissions occurring during startup, shutdown, and malfunction, as follows:
[40 CFR 52.21(j)]

a. Contain nitrogen oxides (NOx) in excess of 156.8 tons per combustion turbine during any twelve consecutive months.

b. Contain carbon monoxide in excess of 97.1 tons per combustion turbine during any twelve consecutive months.

c. Contain greenhouse gas (GHG) emissions in excess of 313,253 tons carbon dioxide equivalent (CO_2e) per combustion turbine during any twelve consecutive months.

3.3.21 The Permittee shall not operate the combustion turbines with ID Nos. T1, T2, T3, and T4 more than the hours limits specified in this condition during any twelve consecutive months.
[40 CFR 52.21(j)]

a. 4,200 hours per combustion turbine during any twelve consecutive months while combusting any fuel.

b. 450 hours per combustion turbine during any twelve consecutive months while combusting ultra-low sulfur fuel oil.

3.3.22 The Permittee shall fire only pipeline natural gas or ultra-low sulfur fuel oil in the combustion turbines with ID Nos. T1, T2, T3, and T4
[40 CFR 52.21(j), 40 CFR 60.4330(a), and 391-3-1-.02(2)(g) (subsumed)]

3.3.23 Ultra-low sulfur fuel oil fired in combustion turbines (Source Codes: T1, T2, T3 and T4) shall not contain more than 0.0015 percent sulfur by weight [equivalent to 15 ppm] and shall meet the specifications for Ultra-Low Sulfur No. 1-D S-15A or Ultra-Low Sulfur No. 2-D S-15A as defined by the American Society for Testing and Materials (ASTM) in ASTM D975 – "Standard Specifications for Diesel Fuel Oils."
[40 CFR 52.21(j), 40 CFR 60.4330(a)2 (subsumed), and 391-3-1-.02(2)(g) (subsumed)]

3.3.24 The Permittee shall implement the following as BACT on the combustion turbines with ID Nos. T1, T2, T3, and T4.
[40 CFR 52.21(j)]

a. For nitrogen oxides (NOx) while burning natural gas, install and operate low NOx burners and use good combustion and operating practices.

b. For nitrogen oxides (NOx) while burning fuel oil, install and operate water injection and use good combustion and operating practices.

c. For particulate matter, use low sulfur fuels and use good combustion and operating practices.

d. For carbon monoxide and volatile organic compounds, use combustion process design and use good combustion and operating practices.

e. For greenhouse gases, use efficient turbine operation and use good combustion, operating, and maintenance practices.

Determination of whether good combustion, operating, and/or maintenance practices are being used will be based on information available to the Division, upon request, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the sources.

3.3.25 Upon startup of the combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow for fuel oil combustion, the Permittee shall not discharge, or cause the discharge, into the atmosphere from the combustion turbine (ID Nos. T1, T2, T3, and T4), any gases which contain nitrogen oxides in excess of the following emission standards on a 4-hour rolling average basis.
[40 CFR 60.4320, 40 CFR 60.4350(g), 40 CFR 60.4380(b)(3)]

a. 15 ppmvd, corrected to 15% oxygen, when operating on natural gas at or above 75 percent of peak load; and

b. 42 ppmvd, corrected to 15% oxygen, when operating on ultra-low sulfur fuel oil at or above 75 percent of peak load; and

c. 96 ppmvd, corrected to 15% oxygen, when operating at less than 75 percent of peak load.

d. For any 4-hour operating period during which multiple emission standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

Emergency Fire Pump

3.3.26 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart A – "General Provisions," and Subpart IIII – "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," for the operation of the emergency fire pump engine with ID No. FP1.
[40 CFR 60 Subparts A and IIII]

3.3.27 The Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as found in 40 CFR Part 63, in Subpart A – "General Provisions," and Subpart ZZZZ – "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" for the operation of the emergency fire pump engine with ID No. FP1.
[40 CFR 63 Subparts A and ZZZZ]

3.3.28 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the emergency fire pump engine with ID No. FP1, any gases which:
[40 CFR 52.21 and Table 4 of 40 CFR 60 Subpart IIII]

a. Contain nonmethane hydrocarbons and nitrogen oxides, combined, (NMHC + NOx) in excess of 4.0 grams per kilowatt-hour (3.0 grams per horsepower-hour).

b. Contain particulate matter (PM) in excess of 0.20 grams per kilowatt-hour (0.15 grams per horsepower-hour).

c. Contain carbon monoxide (CO) in excess of 3.5 grams per kilowatt-hour (2.6 grams per horsepower-hour).

3.3.29 The Permittee shall operate the emergency fire pump engine with ID No. FP1 with diesel fuel that has a maximum sulfur content of 15 parts per million (ppm) (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent.
[40 CFR 60.4207(b) and 391-3-1-.02(2)(g) (subsumed)]

3.3.30 For the emergency fire pump engine with ID No. FP1, the Permittee shall purchase an engine certified to meet the applicable requirements in 40 CFR 60 Subpart IIII. The engine shall each be installed and configured according to the specifications and instructions provided by the manufacturers.
[40 CFR 60.4211(c)]

3.3.31 The emergency fire pump engine with ID No. FP1 shall each be operated and maintained according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the generator manufacturer. The Permittee may only change those settings that are permitted by the manufacturer.
[40 CFR 60.4211(a)]

3.3.32 The Permittee shall not operate the emergency fire pump engine with ID No. FP1 for more than 500 hours per twelve-consecutive months.
[40 CFR 52.21(j)]

3.3.33 The Permittee shall use good combustion practices, limit the hours of operation, and use clean fuels as BACT on the emergency fire pump engine with ID Nos. FP1. Determination of whether good combustion practices are being used will be based on information available to the Division, upon request, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. Clean fuels shall mean a fuel that meets the requirements of Condition 3.3.29.
[40 CFR 52.21(j)]

Fuel Oil Storage Tanks

3.3.34 The Permittee shall implement the following as BACT on the fuel oil storage tanks with ID Nos. ST2 and ST3.
[40 CFR 52.21(j)]

a. Install submerged fill pipes.

b. Use paint colors with low solar absorptance.

c. Use good operating and maintenance practices. Determination of whether good operating and maintenance practices are being used will be based on information available to the Division, upon request, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the sources.

3.3.35 The Permittee shall commence construction within 18 months of the effective date this permit. In the event construction is not commenced within that 18 months, is discontinued for a period of 18 months or more, or is not completed within a reasonable time, and absent approval by the Division for an extension, approval to construct the equipment shall become null and void. For purposes of this Permit, the definition of the term "commence" is provided at 40 CFR 52.21(b)(9).
[40 CFR 52.21(r)]

3.4 Equipment SIP Rule Standards

NEW CONDITION

3.4.1 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from the emergency fire pump engine with ID No. FP1, any gases which exhibit visible emissions, the opacity of which is equal to or greater than 40 percent.
[391-3-1-.02(2)(b)1.]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

MODIFIED CONDITION

4.1.3 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 Sections 3.2, 3.3, 3.4 and 3.5 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 5, 17, **and/or 201A in conjunction with Method 202** 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 pollutant emission rates (i.e., lb/MMBtu).

k. Method 20 shall be used for the determination of nitrogen oxide concentration from the combustion turbines for 40 CFR 60 Subpart GG purposes only.

l. Method 25A shall be used for the determination of volatile organic compound emissions as methane. The sampling time for each run shall be one hour.

m. ASMT Test Methods D129, D1552, D2622, or D4294 shall be used for the determination of fuel sulfur content of the diesel fuel.

n. ASTM D4057 shall be used for the collection of fuel oil samples.

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)]

4.2 Specific Testing Requirements

NEW CONDITIONS

Turbine Firing Natural Gas

4.2.1 Within 60 days after achieving the maximum production rate at which each combustion turbine with ID Nos. T1, T2, T3, and T4 will be operated on natural gas following modification to allow for fuel oil combustion, but not later than 180 days after the initial startup of each turbine following modification, the Permittee shall conduct the following performance tests when the combustion turbine is fired with natural gas and furnish to the Division a written report of the results of each performance tests:

a. Performance tests on each turbine for nitrogen oxide (NOx) emissions in accordance with 40 CFR 60.4400 to verify compliance with Condition 3.3.18a. If the NOx CEMS specified in Permit Condition 5.2.1a is used as the initial compliance method, the initial performance test for each NOx CEMS specified in Permit Condition 5.2.1a for each turbine must be performed in accordance with 40 CFR 60.4405.
[40 CFR 52.21, 40 CFR 60.4400, 40 CFR 60.4405, 391-3-1-.02(6)(b)1.(i)]

b. Performance tests on each turbine for carbon monoxide emissions, at base load and at approximately seventy (70) percent load, to verify compliance with Condition 3.3.18b.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

c. Performance tests on each turbine for particulate matter (PM) emissions, at base load, to verify compliance with Condition 3.3.18c.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

d. Performance tests on each turbine for volatile organic compounds, at base load and at approximately seventy (70) percent load, to verify compliance with Condition 3.3.18d.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

The performance tests for carbon monoxide and volatile organic compounds shall be conducted concurrently.

4.2.2 Following the initial performance tests required by Condition 4.2.1 on combustion turbine with ID Nos. T1, T2, T3, and T4, the Permittee shall conduct subsequent emission testing for PM and VOC from each turbine at 5-year intervals (no more than 62 months). The tests shall be conducted at base load while firing natural gas. The CO emissions during each VOC tests, determined using the device required by Condition 5.2.1b., shall be included with the test report.
[391-3-1-02(6)(b)1.(i)]

Turbine Firing Fuel Oil

4.2.3 Within 60 days after achieving the maximum production rate at which each combustion turbine with ID Nos. T1, T2, T3, and T4 will be operated on fuel oil following modification to allow for fuel oil combustion, but not later than 180 days after the initial startup of each turbine following modification, the Permittee shall conduct the following performance tests when the combustion turbine is fired with fuel oil and furnish to the Division a written report of the results of each performance tests:

a. Performance tests on each turbine for NOx emissions in accordance with 40 CFR 60.4400 to verify compliance with Condition 3.3.19a. If the NOx CEMS specified in Permit Condition 5.2.1a is used as the initial compliance method, the initial performance test for each NOx CEMS specified in Permit Condition 5.2.1a for each turbine must be performed in accordance with 40 CFR 60.4405.
[40 CFR 52.21, 40 CFR 60.4400, 40 CFR 60.4405, 391-3-1-.02(6)(b)1.(i)]

b. Performance tests on each turbine for carbon monoxide emissions, at base load and at approximately seventy (70) percent load, to verify compliance with Condition 3.3.19b.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

c. Performance tests on each turbine for particulate matter (PM) emissions, at base load, to verify compliance with Condition 3.3.19c.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

d. Performance tests on each turbine for volatile organic compounds, at base load and at approximately seventy (70) percent load, to verify compliance with Condition 3.3.19d.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

e. Performance tests on each turbine for visible emissions at base load to verify compliance with Condition 3.3.19e.
[40 CFR 52.21 and 391-3-1-.02(6)(b)1.(i)]

The performance tests for carbon monoxide and volatile organic compounds shall be conducted concurrently. The performance tests for particulate matter and visible emissions shall be conducted concurrently.

4.2.4 Following the initial performance tests required by Condition 4.2.4 on combustion turbine with ID Nos. T1, T2, T3, and T4, the Permittee shall conduct subsequent emission testing for PM and VOC from each turbine at 5-year intervals (no more than 62 months). The tests shall be conducted at base load while firing fuel oil. The CO emissions during each VOC tests, determined using the device required by Condition 5.2.1b., shall be included with the test report. For any turbine that has not fired fuel oil since the most recent performance test, the Permittee may delay the test while firing fuel oil for an additional year.
[391-3-1-02(6)(b)1.(i)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

MODIFIED CONDITIONS

5.2.1 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. [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. A Continuous Emissions Monitoring System (CEMS) for measuring NOx concentration and diluent (either oxygen or carbon dioxide) discharged to the atmosphere from each simple cycle combustion turbine **with ID Nos. T1, T2, T3, T4, T5, and T6**. The one-hour average nitrogen oxide emission rate shall also be recorded in pounds per million Btu heat input and ppm, corrected to 15 percent oxygen on a dry basis. For the purposes of verifying compliance with Conditions 3.3.7a, 3.3.8a, **3.3.18a, and 3.3.19a**, each one-hour average shall be calculated from at least four data points (or more if the Division deems the turbine's associated control device performance requires more frequent monitoring to ensure compliance with applicable limits), with each data point representing a different quadrant of the hour. For hours where 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.

b. A Continuous Emissions Monitoring System (CEMS) for measuring carbon monoxide concentration and diluent (either oxygen or carbon dioxide) discharged to the atmosphere from each simple cycle combustion turbine **with ID Nos. T1, T2, T3, T4, T5, and T6**. The one-hour average carbon monoxide emission rate shall also be recorded in pounds per million Btu heat input. For the purposes of verifying compliance with Conditions 3.3.7b, 3.3.8b, **3.3.18b, and 3.3.19b**, each one-hour average shall be calculated from at least four data points (or more if the Division deems the turbine's associated control device performance requires more frequent monitoring to ensure compliance with applicable limits), with each data point representing a different quadrant of the hour. For hours where 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.

5.2.2 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. 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 70.6(a)(3)(i)]

a. The volume of natural gas in cubic feet, burned in each combustion turbine **with ID Nos. T1, T2, T3, T4, T5, and T6** for the previous one-hour period, shall be recorded each hour for each combustion turbine in operation firing natural gas.

b. The volume of ultra-low sulfur diesel fuel burned in each combustion turbine **with ID Nos. T1, T2, T3, T4,** and low sulfur fuel oil burned in each combustion turbine **with ID Nos. T5, and T6** for the previous one-hour period shall be recorded each hour on a per turbine basis.

c. The cumulative total hours of operation, for all periods of operation, for each combustion turbine **with ID Nos. T1, T2, T3, T4, T5, and T6**. Data shall be recorded monthly.

d. The cumulative total hours of operation, on a per turbine basis, during periods the combustion turbines (Source Codes: T5 and T6) are fired with low sulfur diesel fuel from May 1 to September 30 each year. Data shall be recorded monthly.

NEW CONDITION

5.2.9 The Permittee shall install a non-resettable hour meter on the emergency fire pump engine with ID No. FP1 and record the number of hours of operation of the engine each calendar month.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

MODIFIED CONDITION

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, 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. Following the completion of the modification to allow the combustion of fuel oil, for each combustion turbine (ID Nos. T1, T2, T3, and T4), any unit operating hour in which the 4-hour rolling average NOx concentration exceeds the limit established in Condition 3.3.25. For the purposes of 40 CFR Part 60, Subpart KKKK, a "4-hour rolling average NOx emission rate" is the arithmetic average of the average NOx emission rate in ppm measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NOx emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NOx emission rate is obtained for at least 3 of the 4 hours.
[40 CFR 60.4380 and Table 1 to 40 CFR Subpart KKKK]

ii. Following the completion of the modification to allow the combustion of fuel oil, for each combustion turbine, any unit operating hour in which the total potential sulfur emissions of the fuel being burned in the combustion turbines (Source Codes: T1, T2, T3 and T4) exceed 0.060 lb SO2/MMBtu heat input (equivalent to 20 grains sulfur per 100 scf).
[40 CFR 60.4385 and 40 CFR 60.4330(a)2]

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, 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. Except during periods of startup or shutdown, any three-hour rolling average NOx emission rate, determined in accordance with Condition 5.2.6, which exceeds 12 ppmvd at 15 percent oxygen for a combustion turbine when fired with natural gas.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), 40 CFR 52.21, 40 CFR 60.334(e) (subsumed), and 40 CFR 60 Subpart KKKK (subsumed)]

ii. Except during periods of startup or shutdown, any three-hour rolling average NOx emission rate, determined in accordance with Condition 5.2.6, which exceeds 42 ppmvd at 15 percent oxygen for a combustion turbine when fired with ultra-low sulfur diesel fuel or low sulfur fuel oil.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), 40 CFR 52.21, 40 CFR 60.334(e) (subsumed), and 40 CFR 60 Subpart KKKK]

iii. Except during periods of startup or shutdown, any three-hour rolling average CO emission rate, determined in accordance with Condition 5.2.8, which exceeds 8.0 ppmvd at 15 percent oxygen for a combustion turbine when fired with natural gas.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

iv. Except during periods of startup or shutdown, any three-hour rolling average CO emission rate, determined in accordance with Condition 5.2.8, which exceeds 15 ppmvd at 15 percent oxygen for a combustion turbine when fired with ultra-low sulfur diesel fuel or low sulfur fuel oil.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

v. Except during special testing periods, any startup or any shutdown period which exceeds 30 minutes in duration.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

vi. Any twelve consecutive months total hours of operation (on a per turbine basis) for a combustion turbine, when fired with ultra-low sulfur diesel fuel or low sulfur fuel oil exceeding 450 hours.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

vii. Any twelve consecutive months total hours of operation (on a per turbine basis) for a combustion turbine with ID Nos. T1, T2, T3, or T4, exceeding 3,750 hours. **After the startup of the combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow for fuel oil combustion, any twelve consecutive months total hours of operation (on a per turbine basis), exceeding 4,200 hours**.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

viii. Any twelve consecutive months total hours of operation (on a per turbine basis) for a combustion turbine (Source Code: T5 or T6), exceeding 4,200 hours, including low sulfur diesel fuel-fired operation.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

ix. Any May 1 through September 30 period total low sulfur diesel fuel-fired hours of operation (on a per turbine basis) of a combustion turbine (Source Code: T5 or T6), exceeding 100 hours.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

x. Any twelve consecutive month period in which the rolling sum of NOx emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 106.6 tons for a combustion turbine with ID Nos. T1, T2, T3, or T4. **After the startup of the combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow for fuel oil combustion, any twelve consecutive month period in which the rolling sum of NOx emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 156.8 tons**.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

xi. Any twelve consecutive month period in which the rolling sum of NOx emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 160.6 tons for a combustion turbine (Source Code: T5 or T6).
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

xii. Any twelve consecutive month period in which the rolling sum of CO emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 34.2 tons for a combustion turbine with ID Nos. T1, T2, T3, or T4. **After the startup of the combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow for fuel oil combustion, any twelve consecutive month period in which the rolling sum of CO emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 97.1 tons**.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

xiii. Any twelve consecutive month period in which the rolling sum of CO emissions, on a per turbine basis including startup, shutdown, and malfunction, exceeds 42 tons for a combustion turbine (Source Code: T5 or T6).
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

xiv. Any time low sulfur diesel fuel combusted in the combustion turbines (Source Codes: T5 and T6) exceeds 0.05 percent sulfur by weight.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

xv. Any twelve consecutive month period in which the total number of startup/shutdown cycles for any combustion turbine exceeds 254.
[40 CFR 52.21]

xvi. Any special testing period which exceeds 240 additional minutes beyond each of the times allowed in Conditions 3.3.14.a and 3.3.14.b.

xvii. Any twelve consecutive month period in which the total duration of special testing periods exceeds 10 hours per unit.

xviii. Any time ultra-low sulfur diesel fuel combusted in the combustion turbines (Source Codes: T1, T2, T3, and T4) exceeds 0.0015 percent sulfur by weight. [391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), 40 CFR 52.21]

xix. For combustion turbines with ID Nos. T1, T2, T3, or T4, any twelve-month total greenhouse gas emissions that exceed 313,253 tons CO_2e.

xx. Any twelve-month total hours of operation of fire pump engine with ID No. FP1 that exceeds 500 hours.

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, 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 semiannual analysis of the natural gas burned in any combustion turbine whose sulfur content exceeds 0.16 grains per 100 scf.
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 52.21]

d. In addition to the excess emissions, exceedances, and excursions specified above, the following shall also be included with the report required in Condition 6.1.4:

i. The hours of operation of each turbine (Source Code: T1, T2, T3, T4, T5, and T6).
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

ii. The hours of operation while burning ultra-low sulfur diesel fuel or low sulfur fuel oil, for each turbine with ID Nos. T1, T2, T3, T4, T5, and T6.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

iii. The hours of operation for the combustion turbine (Source Code: T5 and T6) while burning low sulfur diesel, on a per turbine basis, from May 1 to September 30.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

iv. The hours of operation and twelve-month total hours of operation for each month in the reporting period of the fire pump engine with ID No. FP1

6.2 Specific Record Keeping and Reporting Requirements

MODIFIED CONDITIONS

6.2.1 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, 40 CFR 60.334(b)(subsumed), and **40 CFR 60.4365 (subsumed)**]

6.2.3 The Permittee shall monitor the sulfur content of the low sulfur diesel fuel burned in the combustion turbines **(Source Codes: T5 and T6)** by either of the following methods:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Obtaining from the fuel supplier, a low sulfur diesel fuel receipt, certifying that the fuel is low sulfur diesel and contains less than or equal to 0.05 percent sulfur, by weight; or

b. Analyses of the sulfur content of the low sulfur diesel fuel in the storage tank after each shipment or transfer of fuel to the tank, conducted by sampling and analysis methods specified or approved by the Division, which demonstrate that the sulfur content of all low sulfur diesel fuel fired was less than or equal to 0.05 percent sulfur, by weight.

Multiple truckloads of low sulfur diesel fuel may constitute a single shipment, provided such trucks arrive at the facility contemporaneously. No determination of the nitrogen content of the low sulfur diesel fuel shall be required. [Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated under New Source Performance Standards, U.S. EPA, May 26, 2000 and 40 CFR 60.334(h)(subsumed)]

6.2.4 The Permittee shall retain monthly records of the natural gas consumption (in million cubic feet) and ultra-low sulfur diesel fuel or low sulfur fuel oil consumption (in gallons), on a per turbine basis, in the combustion turbines **with ID Nos. T1, T2, T3, T4, T5, and T6**.
[391-3-1-.02(6)(b)1.(i), 40 CFR 52.21, and 40 CFR 70.6(a)(3)(i)]

6.2.5 The Permittee shall use the hour meters required by Conditions 5.2.2c. and 5.2.2d. to determine and record the following:
[391-3-1-.02(6)(b)1, 40 CFR 52.21, 40 CFR 60.7(b), and 40 CFR 70.6(a)(3)(i)]

a. The occurrence and duration (in minutes) of any startup and shutdown for each combustion turbine (Source Code: T1, T2, T3, T4, T5, and T6).

b. The net operating hours for each combustion turbine (Source Code: T1, T2, T3, T4, T5, and T6) during every calendar month.

c. The total operating hours for each combustion turbine (Source Code: T1, T2, T3, T4, T5, and T6) for the twelve consecutive month period ending with each calendar month.

d. The net operating hours, on a per turbine basis, for the combustion turbines **with ID Nos. T1, T2, T3, T4, T5, and T6** when fired with ultra-low sulfur diesel fuel or low sulfur fuel oil during every calendar month.

e. The total operating hours, on a per turbine basis, for the combustion turbines **with ID Nos. T1, T2, T3, T4, T5, and T6** when fired with ultra-low sulfur diesel fuel or low sulfur fuel oil for the twelve consecutive month period ending with each calendar month.

f. The total operating hours, on a per turbine basis, for the combustion turbines (Source Codes: T5 and T6) when fired with low sulfur diesel fuel from May 1 to September 30 each year.

g. The Permittee shall compile these monthly records within thirty (30) days of the last day of the month of record.

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

NEW CONDITIONS

6.2.13 The permittee shall monitor the sulfur content of the low sulfur fuel oil burned in the combustion turbines (Source Codes T1, T2, T3, and T4) by either of the following methods: [391-3-1-.02(6)(b)1 and 40 CFR 70.6 (a)(3)(i)]

a. Obtaining from the fuel supplier, a low sulfur diesel fuel receipt, certifying that the fuel is low sulfur diesel and contains less than or equal to 0.0015 percent sulfur, by weight; or

b. Analyses of the sulfur content of the low sulfur diesel fuel in the storage tank after each shipment or transfer of fuel to the tank, conducted by sampling and analysis methods specified or approved by the Division, which demonstrate that the sulfur content of all low sulfur diesel fuel fired was less than or equal to 0.0015 percent sulfur, by weight.

Multiple truckloads of low sulfur diesel fuel may constitute a single shipment, provided such trucks arrive at the facility contemporaneously. No determination of the nitrogen content of the low sulfur diesel fuel shall be required. [Approval of Routine Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated under New Source Performance Standards, U.S. EPA, May 26, 2000 and 40 CFR 60.4365 (subsumed)]

6.2.14 The Permittee shall use the records kept in accordance with Condition 6.2.4 of natural gas and fuel oil consumed in the combustion turbines with ID Nos. T1, T2, T3, and T4 and the following procedures to determine the monthly and twelve-month total greenhouse gas (GHG) emissions for each turbine.
[40 CFR 52.21]

a. For each calendar month, determine and record the emissions of CO_2, CH_4, and N_2O (in tons) emitted from each turbine while firing natural gas using the following equation:

$$E = Q_{NG} \times HHV_{NG} \times EF_{NG} \times \left(\frac{ton}{2000\ lb}\right)$$

Where:
E = Emissions of CO_2, CH_4, and N_2O (tons/month)
Q_{NG} = Quantity of natural gas fired during the month from Condition 6.2.4 (MMscf)
HHV_{NG} = Heating value of natural gas, determined in accordance with the procedures of 40 CFR 75, Section 5.5 of Appendix F.
EF_{NG} = Emission factor for CO_2, CH_4, and N_2O while firing natural gas (lb/MMBtu)
= 118.86 lb/MMBtu for CO_2
= 2.20×10^{-3} lb/MMBtu for CH_4
= 2.20×10^{-4} lb/MMBtu for N_2O

b. For each calendar month, determine and record the emissions of CO_2, CH_4, and N_2O (in tons) emitted from each turbine while firing fuel oil using the following equation:

$$E = Q_{FO} \times HHV_{FO} \times EF_{FO} \times \left(\frac{ton}{2000\ lb}\right)$$

Where:
E = Emissions of CO_2, CH_4, and N_2O (tons/month)
Q_{FO} = Quantity of fuel oil fired during the month from Condition 6.2.4 (thousand gallons; 10^3 gal)
HHV_{FO} = Heating value of fuel oil, determined in accordance with the procedures of 40 CFR 75, Section 5.5 of Appendix F.
EF_{FO} = Emission factor for CO_2, CH_4, and N_2O while firing fuel oil (lb/MMBtu)
= 162.29 lb/MMBtu for CO_2
= 6.61 x 10^{-3} lb/MMBtu for CH_4
= 1.32 x 10^{-3} lb/MMBtu for N_2O

c. For each calendar month, determine and record the greenhouse gas emissions (in tons CO_2e) emitted from each turbine using the following equation:

$$GHG = E_{CO2} \times GWP_{CO2} + E_{CH4} \times GWP_{CH4} + E_{N2O} \times GWP_{N2O}$$

Where:
GHG = Greenhouse gas emissions (tons CO_2e/month)
E_{CO2} = Emissions of CO_2 from natural gas and fuel oil combustion combined
E_{CH4} = Emissions of CH_4 from natural gas and fuel oil combustion combined
E_{N2O} = Emissions of N_2O from natural gas and fuel oil combustion combined
GWP_{CO2} = Global warming potential for CO_2 = 1
GWP_{CH4} = Global warming potential for CH_4 = 25
GWP_{N2O} = Global warming potential for N_2O = 298

d. For each calendar month, determine and record the twelve-month total greenhouse gas emissions. A twelve-month total is the total emissions for the calendar month plus the totals from the previous eleven consecutive months.

e. The records (including calculations) required by this condition shall be maintained as part of the monthly record suitable for inspection or submittal.

6.2.15 The Permittee shall keep records of the following.
[40 CFR 60.4214(a)(2)]

a. All notifications submitted to comply with 40 CFR 60 Subpart IIII and this permit and all documentation supporting any notification.

b. Maintenance conducted on emergency fire pump engine with ID No. FP1.

c. Documentation from the engine manufacturer that emergency fire pump engine with ID No. FP1 is certified to meet the emission standards of 40 CFR 60 Subpart IIII. The generator manufacturer certifications shall be kept for the life of the engine.

6.2.16 The Permittee shall use the records required by Condition 5.2.9 to determine the twelve-month total hours of operation of the fire pump engine with ID No. FP1. A twelve-month total is the total hours for the calendar month plus the totals from the previous eleven consecutive months. The records (including calculations) required by this condition shall be maintained as part of the monthly record suitable for inspection or submittal.
[40 CFR 52.21]

6.2.17 The Permittee shall furnish the Division a written notification that indicates the actual date of initial startup of combustion turbines with ID Nos. T1, T2, T3, and T4 following modification of the turbine to allow fuel oil combustion, initial startup of emergency fire pump engine with ID No. FP1, and initial startup of fuel oil storage tanks with ID Nos. ST2 and ST3 within 15 days after such date.
[40 CFR 60.7(a)(3) and 391-3-1-.02(6)(b)1]