

Facility Name: **Washington County Power, LLC**
 City: Sandersville
 County: Washington
 AIRS #: 04-13-303-00039

Application #: TV-14963
 Date Application Received: January 9, 2004
 Date Application Deemed
 Administratively Complete:
 Date of Draft Permit:
 Permit No: 4911-303-0039-V-05-0

Program	Review Engineers	Review Managers
SSPP	Dan Abrams	Jimmy Johnston
ISMP	Bradley Belflower	Ross Winne
SSCP	Tennille Slapkus	James Eason
Toxics	n/a	n/a

Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Washington County Power, LLC** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Facility Identification**

1. Facility Name: Washington County Power, LLC
2. Parent/Holding Company Name: Washington County Power, LLC
3. Previous and/or Other Name(s)

The facility was previously known as LG&E Power Tiger Creek, LLC.

4. Facility Location

1177 County Line Road
Sandersville, Georgia 31082 (Washington County)

5. Attainment or Non-attainment Area Location

The facility location is designated as an attainment area for all criteria pollutants.

6. Class I Area Impacts

The facility is not located within 100 km of a Class I area.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits**Table 1: List of Current Permits as Amended**

Permit Number and/or Purpose of Issuance	Date of Issuance and Date of Amendments (if any)	Comments	
		Yes	No
4911-303-0039-E-03-0	July 16, 2002	X	
4911-303-0039-E-03-1	April 1, 2003	X	
4911-303-0039-E-04-0	July 16, 2002	X	

Table 2: Comments on Specific Permits

Permit Number	Comments
4911-303-0039-E-03-0	Initial permit for the construction of 5 simple cycle turbines and legal owner change
4911-303-0039-E-03-1	To reflect the actual sizes of on-site equipment
4911-303-0039-E-04-0	Initial Acid Rain permit

D. Process Description

1. SIC Codes(s)

4911

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility generates electricity for sale.

3. Overall Facility Process Description

This facility has five simple cycle combustion turbines each capable of generating 169 MW of electricity. Each combustion turbine can only burn natural gas. There are also two 10.1 MMBtu/hr natural gas heaters and one diesel fired emergency generator used onsite.

4. Overall Process Flow Diagram (optional)

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

The facility is a minor source under PSD regulations because it has potential emissions of NO_x and SO₂ less than 250 tons per year (it is not one of the 28 named source categories).

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓			✓
PM ₁₀	✓			✓
SO ₂	✓			✓
VOC	✓			✓
NO _x	✓	✓		
CO	✓	✓		
TRS				
H ₂ S				
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

The facility is not subject to any MACT standards.

4. Program Applicability

Program Code	Applicable (y/n)
Program Code 6 - PSD	N
Program Code 8 – Part 61 NESHAP	N
Program Code 9 - NSPS	Y
Program Code M – Part 63 NESHAP	N
Program Code V – Title V	Y

Regulatory Analysis**II. Facility Wide Requirements****A. Emission and Operating Caps:**

The facility has a facility wide 250 tons per year NO_x limit to avoid PSD review. Data from the NO_x CEMS on each turbine and record keeping from the other sources must be used to calculate emissions to determine compliance with this limit.

B. Applicable Rules and Regulations

None Applicable

C. Compliance Status

None Applicable

D. Operational Flexibility

None Applicable

E. Permit Conditions

Condition No. 2.1.1 limits the facility wide NO_x emissions to less than 250 tons per any twelve consecutive month period. This limit is included in the permit to ensure the facility is a PSD minor source. Condition No. 2.2 of the SIP Permit (No. 4911-303-0039-E-03-0) has already limited the NO_x emissions to less than 250 tpy.

III. Regulated Equipment Requirements

A. Brief Process Description

This facility has five simple cycle combustion turbines each capable of generating 169 MW of electricity. Each combustion turbine can only burn natural gas. There are also two 10.1 MMBtu/hr natural gas heaters, an auxiliary generator and a firewater pump engine used onsite.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
T1	Combustion Turbine General Electric 7FA	40 CFR 60 Subpart A 40 CFR 60, Subpart GG 391-3-1-.02(2)(b) and (g) Acid Rain	3.3.1, 3.3.2, 3.3.3, 3.3.4, 5.2.1, 5.2.2, 5.2.3, 6.2.2, 6.2.3	LNB1	Low Nox Burners
T2	Combustion Turbine General Electric 7FA	40 CFR 60 Subpart A 40 CFR 60, Subpart GG 391-3-1-.02(2)(b) and (g) Acid Rain	3.3.1, 3.3.2, 3.3.3, 3.3.4, 5.2.1, 5.2.2, 5.2.3, 6.2.2, 6.2.3	LNB1	Low Nox Burners
T3	Combustion Turbine General Electric 7FA	40 CFR 60 Subpart A 40 CFR 60, Subpart GG 391-3-1-.02(2)(b) and (g) Acid Rain	3.3.1, 3.3.2, 3.3.3, 3.3.4, 5.2.1, 5.2.2, 5.2.3, 6.2.2, 6.2.3	LNB1	Low Nox Burners
T4	Combustion Turbine General Electric 7FA	40 CFR 60 Subpart A 40 CFR 60, Subpart GG 391-3-1-.02(2)(b) and (g) Acid Rain	3.3.1, 3.3.2, 3.3.3, 3.3.4, 5.2.1, 5.2.2, 5.2.3, 6.2.2, 6.2.3	LNB1	Low Nox Burners
T5	Combustion Turbine General Electric 7FA	40 CFR 60 Subpart A 40 CFR 60, Subpart GG 391-3-1-.02(2)(b) and (g) Acid Rain	3.3.1, 3.3.2, 3.3.3, 3.3.4, 5.2.1, 5.2.2, 5.2.3, 6.2.1, 6.2.2, 6.2.3	LNB1	Low Nox Burners
H1	10.1 MMBtu/hr Natural Gas fired Fuel Preheater	40 CFR 60 Subpart A 40 CFR 60, Subpart Dc 391-3-1-.02(2)(d) and (g)	3.4.1, 3.4.2, 3.4.3, 5.2.2, 6.2.3, 6.2.4	n/a	n/a
H2	10.1 MMBtu/hr Natural Gas fired Fuel Preheater	40 CFR 60 Subpart A 40 CFR 60, Subpart Dc 391-3-1-.02(2)(d) and (g)	3.4.1, 3.4.2, 3.4.3, 5.2.2, 6.2.3, 6.2.4	n/a	n/a
G1	519 HP Diesel Fired Auxiliary Generator	391-3-1-.02(2)(b) and (g)	3.3.5, 3.3.6, 3.4.4, 5.2.2, 5.2.4, 6.2.3, 6.2.4	n/a	n/a
P1	110-hp Diesel Fired Fire Water Pump Engine	391-3-1-.02(2)(b) and (g)	3.3.6, 3.4.4, 5.2.2, 5.2.4, 6.2.3, 6.2.4	n/a	n/a

C. Equipment & Rule Applicability

Combustion Turbines T1, T2, T3, T4, and T5

The facility has four GE Frame 7FA simple cycle combustion turbines (Source Code T1, T2, T3 and T4), each nominally rate at a generating capacity of 169 MW (at ISO conditions). They are capable of firing only pipeline quality natural gas. The fifth turbine (Source Code T5) has not been constructed (future plans). The Frame 7FA combustion turbines are capable of operating in either normal mode or with evaporative cooling.

Emissions from each Frame 7FA is controlled through the use of advanced burner technology, which controls emissions of carbon monoxide (CO), volatile organic compounds (VOC) and oxides of nitrogen (NOx) through combustion controls. The turbines dry low NOx burners has achieved emission levels of 9 parts per million (ppm) on a dry volume basis.

Each combustion turbine is subject to the requirements of 40 CFR 60, Subpart GG - "Standard of Performance for Stationary Gas Turbines" because each has a heat input at peak load equal to or greater than 10.7 giga-joules per hour [10.14 MMBtu/hr], based on the lower heating value of the fuel fired; and because the turbines were constructed after October 3, 1977. The NSPS General Provisions [40 CFR 60, Subpart A] also apply to each turbine.

The Acid Rain Program regulates sulfur dioxide emissions from the turbines. Washington County Power must obtain, in the open market, the number of SO₂ allowances that correspond to their annual SO₂ emissions.

Visible emissions from each turbine cannot exceed forty (40) percent in agreement with Georgia Rule 391-3-1-.02(2)(b). Since these combustion turbines can only burn natural gas, compliance will occur at all times.

There is no allowable PM, PM₁₀, CO, or VOC emission rate from these turbines specified by a rule, regulation, or permit condition.

Natural Gas Pre-Heaters

Each auxiliary boiler is subject to 40 CFR Part 60 Subpart Dc because the boilers were constructed after June 9, 1989 and have a heat input capacity greater than or equal to 10 MMBtu/hr but less than 100 MMBtu/hr. Subpart Dc requires the facility to maintain records of each fuel combusted in each boiler (natural gas only).

Particulate Matter and Visible emissions from each boiler are regulated by Georgia Rule 391-3-1-.02(2)(d). Georgia Rule (d) specifies a visible emissions limit of twenty (20) percent, not to exceed twenty-seven (27) percent for one six-minute period in any one hour. Georgia Rule (d) also specifies a particulate matter limitation equation for new boilers.

Sulfur dioxide emissions from each boiler are regulated by Georgia Rule 391-3-1-.02(2)(g)2. Georgia Rule (g)2 specifies a fuel sulfur content limit of 2.5 weight percent since each boiler is a fuel-burning source with a maximum heat input less than 100 MMBtu/hr. Since natural gas is the only fuel burned in the pre-heaters, compliance with this standard will occur at all times.

Engines

Diesel Fired Auxiliary Generator G1, and Diesel Fired Fire-Water Pump Engine P1, are subject to Georgia Rules 391-3-1-.02(2)(b) and (g) for visible emissions and fuel sulfur content. Georgia Rule (b) limits the visible emissions to no more than forty (40) percent. Georgia Rule (g)2 limits the fuel sulfur content to no more than 2.5 weight percent. The permit limits these engines to less than 0.5 percent sulfur in the fuel oil.

D. Compliance Status

There are no compliance related issues for the combustion turbines.

E. Operational Flexibility

None Applicable

F. Permit Conditions

Conditions 3.2.1 through 3.2.2 and 3.3.2 through 3.3.8 are all PSD avoidance requirements and are discussed further below.

Condition 3.3.1 specifies that the General Provisions of 40 CFR Part 60 Subpart A are applicable for the turbines and that 40 CFR Part 60 Subpart GG also applies to the turbines.

Condition 3.3.2 specifies the NO_x limit for all turbines based on the formula listed in NSPS Subpart GG.

Condition 3.3.3 specifies that the turbines can only burn natural gas.

Condition 3.3.4 limits the sulfur contained within the natural gas to less than 0.8% by weight.

Condition 3.3.5 limits the operation of the diesel generator to only be used when the electric power from the local grid is not available or during times of routine testing, maintenance, and repair.

Condition 3.3.6 limits the sulfur content of fuel oil fired in the diesel generator to less than 0.5% by weight.

Condition 3.4.1 limits the particulate matter emissions from both Natural Gas Fuel Pre-Heaters to less than the following equation:

$$P = 0.5(10/R)^{0.5}$$

Where P is the allowable weight of emissions of fly ash and/or other particulate matter in pounds per millions Btu heat input and R is the heat input of fuel burning equipment in million Btu per hour.

Condition 3.4.2 limits the opacity from both Natural Gas Fuel Pre-Heaters to less than 20 percent, except for one six minute period per hour of not more than 27 percent.

Condition 3.4.3 limits the sulfur content of the fuel fired from both Pre-Heaters to less than 2.5% by weight.

Condition 3.4.4 limits the opacity from the diesel generator and the firewater pump engine to less than 40 percent.

IV. Testing Requirements (with Associated Record Keeping and Reporting)**A. General Testing Requirements**

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

The facility has completed all necessary initial compliance testing. No other testing is required by the permit.

V. Monitoring Requirements (with Associated Record Keeping and Reporting)**A. General Monitoring Requirements**

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

The Permittee is required to install a NO_x CEMS and Oxygen monitor to determine their NO_x emissions. Since Washington County Power installed the monitor and with the recent changes to NSPS Subpart GG, monitoring for sulfur content and nitrogen content of natural gas are no longer necessary, assuming the natural gas meets the definition as defined in 40 CFR 60.331(u) and the facility does not claim an allowance for fuel-bound nitrogen (F-value is equal to zero).

Compliance with the NSPS Subpart GG NO_x emissions standard is tracked by using the NO_x CEMS for each turbine. This will ensure compliance at all times.

Compliance with the rolling annual NO_x emissions cap will be tracked by a CEMS on each turbine stack and a monitoring system that tracks the hours of operation of the heaters, fire pump, and diesel generator to ensure the overall NO_x emissions are less than 250 tpy.

Visible emissions from each combustion turbine are regulated by Georgia Rule (b). Natural gas is a clean burning fuel and the likelihood of violating the established limit is minimal. Thus no additional periodic monitoring is prescribed for visible emissions.

The two Natural Gas Fuel Pre Heaters (Source Codes H1 and H2) are subject to Georgia Rule (d) for particulate matter and opacity and Rule (g) for sulfur content. Since these sources only burn natural gas and natural gas is considered a clean, low ash fuel, the opacity, particulate matter, and sulfur will be minimal. Therefore, there is no need to monitor the opacity, particulate matter, and sulfur content of the fuel fired from these sources.

The Generator and Fire Water Pump Engine (Source Codes G1 and P1) are subject to Georgia Rule (b) for opacity and Rule (g) for sulfur content. The applicant must verify and document that each shipment of diesel fuel oil received for combustion in these units complies with this fuel sulfur limit using the fuel oil receipts and/or documented analyses. The likelihood of an opacity violation while burning this fuel is small; therefore, no periodic monitoring is necessary.

VI. Other Record Keeping and Reporting Requirements**A. General Record Keeping and Reporting Requirements**

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a quarterly basis.

B. Specific Record Keeping and Reporting Requirements

Condition 6.1.4 outlines the quarterly reporting requirements, which includes other reporting requirements that required in their previous permit.

Exceedances are defined in Conditions 6.1.7.b.i and ii for excess NO_x emissions, and for the sulfur content of the fuel oil burned in the generator or firewater pump engine.

Since not all of the turbines are constructed yet, the condition for notification of actual startup date was included.

The permit sets the maximum sulfur content for diesel fuel use in the ancillary engines at 0.5 weight percent. The applicant must verify and document that each shipment of diesel fuel oil received for combustion in the ancillary engines complies with this fuel sulfur limit by fuel oil receipts and/or documented analyses.

VII. Specific Requirements

A. Operational Flexibility

Not Applicable

B. Alternative Requirements

Not Applicable

C. Insignificant Activities

refer to §4.10 of the Title V permit application

D. Temporary Sources

Not Applicable

E. Short-Term Activities

Not Applicable

F. Compliance Schedule/Progress Reports

Not Applicable

G. Emissions Trading

Not Applicable

H. Acid Rain Requirements

This facility is subject to requirements in Title IV of the Clean Air Act. They are subject to 40 CFR 72 (permits), 73 (sulfur dioxide), and 75 (monitoring). They are not subject to the nitrogen oxide provisions (40 CFR 76) of the Acid Rain regulations. 40 CFR 76 only applies to affected units that burn coal.

40 CFR 72.50(a)(1) allows a complete Phase II Permit Application to be attached to the Title V Permit as part of the Permit. Washington County's Phase II Permit Application is attached to the Title V Permit as part of the Permit to ensure that all Acid Rain applicable requirements are incorporated into the Title V Permit.

I. Prevention of Accidental Releases

Not Applicable

J. Stratospheric Ozone Protection Requirements

Not Applicable

K. Pollution Prevention

Not Applicable

L. Specific Conditions

Not Applicable

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Addendum to Narrative

The 30-day public review started on September 29, 2004 and ended on October 29, 2004. The Permittee submitted comments on the draft permit on October 27, 2004. EPD's response to the comments is as follows:

Comment 1: Permit Front Page - Request that references in the subparagraph of "300 kW auxiliary generator" and "2,000 gpm diesel fired water pump" be changed to "350 kW auxiliary generator" and "1,000 gpm diesel fired water pump" respectively. This change would be consistent with Air Quality Permit amendment 4911-303-0039-E-03-1.

Response: References to the "300 kW auxiliary generator and 2000 gpm diesel fired water pump" is changed to "350 kW auxiliary generator and 1000 gpm diesel fired water pump" to make the draft permit consistent with the facility's existing permit.

Comment 2: Section 6.1.7(a) - Please reference the requirements under "Excess Emissions" to be defined in 40 CFR 60.334(j)(1)(iii). This would provide clarification regarding applicability of "excess emissions" only as defined in NSPS and is not applicable to 391-3-1-.02(2)(a)(7), which is not applicable for sources subject to NSPS. This would additionally define excess emissions as those emissions exceeding the hourly permitted limits based on a 4-hour rolling average.

Response: The citation of 40 CFR 60.334(j)(1)(iii) was added to Condition 6.1.7(a) i. in response to Permittee's comments. In addition, the requirements of 40 CFR 60.334(j)(1)(iii) have been included in this condition to clarify the definition of excess emission.

Comment 3: Section 6.2.6 - The end of the second sentence reads "equal or exceeds 20.8". This should be changed to read "equal or exceeds 250 tons/year".

Response: The requested change was made to Condition 6.2.6 in order to be consistent with Condition 2.1.1.

Comment 4: Section 6.2.7 - The condition requires that the quantity of natural gas be recorded monthly for the natural gas fuel preheaters (H1 and H2). Since the facility currently records operating hours for both preheaters, as well as the standby generator and firewater pump for monthly NOx emissions (see Section 6.2.5), it is unclear why the preheaters require additional monitoring. Under the current air quality permit, the combustion turbines are required to measure natural gas usage. Since the requirement for recording natural gas usage for the combustion turbines is not included in the draft Title V permit, we would be agreeable to have the monthly natural gas quantity requirement applicable to the combustion turbines only.

Response: The natural gas fuel preheaters (H1 and H1) are subject to NSPS Subpart Dc and Subpart A (general provisions). 40 CFR 60.48c(g) requires the owner or operator of each affected facility to record and maintain records of the amounts of each fuel combusted during each day. EPA has determined that for fuel burning equipment burning natural gas it is adequate for the Permittee to retain monthly records of natural gas consumption in the affected units. Hence no change is made to Condition 6.2.7.

Changes to the draft permit not requested by the Permittee

Conditions 3.3.5, 3.3.6 and 3.3.3 in the draft permit were renumbered to final permit Conditions 3.2.1, 3.2.2 and 3.2.3 respectively since draft permit Conditions 3.3.5 and 3.3.3 are PSD avoidance conditions and draft permit Condition 3.3.6 is the fuel sulfur limit SIP permit condition. Section 3.3 of the permit should only have conditions that have federal regulations as the underlying applicable requirement.

New permit Condition 3.3.2 specifies that the new fuel preheaters with source codes H1 and H2 are subject to NSPS Subpart A (general provisions) and Subpart Dc.

Draft permit Condition 3.3.2 is renumbered as Condition 3.3.3 in the final permit. The definitions of STD and Y in this condition is expanded to be in line with the definitions in NSPS Subpart GG (40 CFR 60.332)

In Draft permit Condition 3.3.4 the word “total” is added before sulfur to fully reflect the underlying applicable regulations.

The dash “-“ is removed after 2.5 in permit Condition 3.4.3.

In Condition 4.1.3 the word “and” is added at the end of item i.

In Condition 4.1.3 i. the words “ for each combustion turbine T1, T2, T3, T4, and T5 in accordance with 40 CFR Part 60 GG” are added to make this condition applicable to the combustion turbines.

A new Condition 4.1.3 j is added designating Method 7E as the method for determining NO_x concentrations for the purposes of determining compliance with the emission limitation in Condition 2.1.1.

The citation of 40 CFR 60.334(b) is added to Condition 5.2.1 a. in order to reflect the subpart GG requirements.

The correct template language is added to Condition 5.2.2 and it replaces the existing language in the draft permit. Draft permit Condition 5.2.2 a. is deleted since the July 8, 2004 amendments to 40 CFR 60.334(b) does not require measuring the quantity of gas burned in the turbine for the purpose of determination of NO_x emissions when the same is monitored using CEMS.

Draft permit Condition 5.2.2 b. is renumbered as Condition 5.2.2 a. and the word “A monitoring system” is replaced by the word “Devices”. The sentence “ Data shall be recorded monthly” is added to the end of this condition to reflect the recordkeeping requirements for the generator G1 and the Gas Heaters H1 and H2.

In Permit Condition 5.2.3 a. the word “and” is replaced with “or” in the citation to accurately reflect the requirements of 40 CFR 60.334(h)(3). The language “otherwise the Permittee shall determine and record the sulfur and nitrogen content of the natural gas in accordance with 40 CFR 60.334(i)” is added to the end of this condition.

In Condition 5.2.4 the Condition No. 3.3.6 is changed to 3.2.2 due to renumbering.

Condition 6.1.7 a. i.: The existing language is replaced with “Any unit operating hour in which the 4-hour rolling average NOx concentration exceeds that allowed by Condition 3.3.3. For the purpose of this condition, a “4-hour rolling average NOx concentration” is the arithmetic average of the average NOx concentration measured by the NOx CEMS for a given hour (corrected to 15 percent O₂) and the three unit operating hour average NOx concentrations immediately preceding that unit operating hour. For purposes of this condition, a “unit operating hour” is defined in 40 CFR 60.331(s).” to fully reflect the requirements of NSPS Subpart GG.

Condition 6.1.7 b. i.: The citation of PSD avoidance was added to this condition to reflect the underlying applicable requirement.

Condition 6.2.3: The words “ in tons per month” is added to the end of this condition.

Condition 6.2.6: The word “consecutive” is added after “12” for sake of clarity. The PSD avoidance citation is added to the existing citation.

New Condition 6.2.8 is added in order to reflect the recordkeeping requirements of subpart GG.

Modified Permit Conditions for The Title V Draft Permit in response to Comments

Note: The underlined portions in the permit represents changes/additions to the draft permit in response to comments. The strikethrough lines represent wording in the draft permit that was deleted in response to comments.

Permit Cover Page Changes:

The operation of an electrical generating plant providing approximately 850 megawatts of electricity using five General Electric (GE) Frame 7FA combustion turbines, a ~~300 KW~~ 350 KW auxiliary generator, a ~~2000 gpm~~ 1,000-gpm diesel engine firewater pump and two 10.1 MMBtu/hr natural gas fuel heaters. The turbines will only fire natural gas.

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)(i)]

- 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. ~~Any one hour period during which the nitrogen oxides concentration exceeds that allowed by Condition 3.3.2.~~
 - i. Any unit operating hour in which the 4-hour rolling average NOx concentration exceeds that allowed by Condition 3.3.3. For the purpose of this condition, a "4-hour rolling average NOx concentration" is the arithmetic average of the average NOx concentration measured by the NOx CEMS for a given hour (corrected to 15 percent O₂) and the three unit operating hour average NOx concentrations immediately preceding that unit operating hour. For purposes of this condition, a "unit operating hour" is defined in 40 CFR 60.331(s).

[40 CFR 60.334(j)(1)(iii)]

6.2.6 The Permittee shall use the monthly NOx emission data required in Conditions 6.2.3 and 6.2.5 to calculate the combined 12 consecutive month rolling total of NOx emissions from the combustion turbines, the generator, the gas heaters, and the firewater pump for each calendar month. The Permittee shall notify the Division in writing if the combined 12 consecutive month rolling total of NOx emissions from the combustion turbines, the generator, gas heaters, and the firewater pump equals or exceeds ~~20.8~~ 250 tons. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition No. 2.1.1.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

Changes to the draft permit not requested by the Permittee

New Conditions 3.2.1, 3.2.2 and 3.2.3 are as below (Draft Permit Conditions 3.3.5, 3.3.6 and 3.3.3):

- 3.2.1 The Permittee shall only operate diesel generator G1 when electric power from the local utility is not available and during periods of routine testing, maintenance, and repair. [Avoidance of 40 CFR 52.21]
- 3.2.2 Fuel oil fired in the diesel generator and the firewater pump engine (Source Codes G1 and P1) shall be distillate fuel oil and shall not contain more than 0.5 percent sulfur by weight. Distillate fuel oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396, "Standard Specification for Fuel Oils." [Any firing of fuel oils with other names, such as numbers 1 or 2 diesel fuel oil, highway diesel fuel oil, low sulfur fuel oil or very low sulfur fuel oil, etc., is acceptable only in so far as such fuels meet the requirements listed above.] [391-3-1-.03(2)(c) and 391-3-1-.02(2)(g) (subsumed)]
- 3.2.3 The Permittee shall not fire any fuel other than natural gas in the turbines (source codes T1, T2, T3, T4, and T5). [Avoidance of 40 CFR 52.21]
- 3.3.2 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR Part 60, in particular Subpart A "General Provisions" and Subpart Dc – "Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units," for the construction and operation of the fuel preheaters with Source Codes H1 and H2.

Renumbered Condition 3.3.3 (Draft Permit Condition 3.3.2)

- 3.3.3 The Permittee shall not discharge or cause the discharge into the atmosphere from each combustion turbine, T1, T2, T3, T4, and T5, nitrogen oxides in excess of that allowed by the following equation:
[40 CFR 60.332(a)(1)]

$$STD = 0.0075 * (14.4/Y)$$

Where: STD = allowable NO_x emission Concentration (percent by volume at 15 percent Oxygen and on a dry basis)

Y = Manufacturer's rated heat rate at manufacturer's rated load (Kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 Kilojoules per watt hour.

Note: The allowable NO_x emission concentration defined by the parameter STD does not have to be corrected to ISO conditions.

- 3.3.4 The Permittee shall not burn in any combustion turbine (Source Code T1, T2, T3, T4, and T5) any natural gas, which contains total sulfur in excess of 0.80 percent by weight.
[40 CFR 60.333 and 391-3-1-.02(2)(g) (subsumed)]

Condition 4.1.3 i.

- i. Method 20 or 7E for the concentration of nitrogen oxides for each combustion turbine T1, T2, T3, T4 and T5 in accordance with 40 CFR Part 60 GG; and

New Condition 4.1.3. j.

- j. Method 7E for determining the concentration of nitrogen oxides for the purposes of determining compliance with the emission limitation in Condition 2.1.1

Condition 5.2.1 a.

- 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 Emission Monitoring System (CEMS) for measuring NO_x concentration (in ppm) and oxygen concentration (in percent) discharged to the atmosphere from each combustion turbine.
[40 CFR 60.334(b)]

Condition 5.2.2

- 5.2.2 The Permittee shall install, calibrate, maintain, and operate ~~a system to continuously monitor and record the indicated parameters~~ 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 70.6(a)(3)(i)]
- ~~a. A device on each turbine for measuring the quantity of natural gas, in cubic feet, burned in that turbine.~~
- a. ~~A monitoring system~~ Devices to record the accumulation of hours of operation on Generator G1, Gas Heaters H1 and H2, and the Firewater Pump P1, which shows all periods of operation of each unit. Data shall be recorded monthly.

Condition 5.2.3

- 5.2.3 The Permittee is not required to monitor the total sulfur or nitrogen content of the natural gas fired in the turbines provided the Permittee:
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 60.334(h) (2) and (3)]

- a. Demonstrates that the natural gas meets the definition in 40 CFR 60.331(u) using either of the sources of information specified in 40 CFR 60.334(h)(3)(i) ~~and~~ or (ii), otherwise the Permittee shall determine and record the sulfur and nitrogen content of the natural gas in accordance with 40 CFR 60.334(i); and
- b. Does not claim an allowance for fuel bound nitrogen.

Condition 5.2.4

- 5.2.4 The Permittee shall verify that each shipment of distillate fuel oil received for combustion in the diesel generator and the firewater pump engine (Source Codes G1 and P1) complies with the requirements of Condition No. ~~3.3.6~~ 3.2.2. Verification shall consist of either of the following:
- a. Fuel oil receipts obtained from the fuel supplier certifying that the oil is distillate oil.
 - a. Analysis of the fuel oil conducted by methods of sampling and analysis, which have been specified or approved by the Division.

Condition 6.1.7 b. i.:

- 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. Any twelve consecutive month total NOx emissions from T1, T2, T3, T4, T5, G1, H1, H2, and P1 combined, that equals or exceeds 250 tons.
[Avoidance of 40 CFR 52.21]
 - ii. Any period of time that the sulfur content of the fuel oil burned in the diesel generator or the firewater pump engine (Source Codes G1 and P1) exceeds 0.5 percent by weight.
- 6.2.3 The Permittee shall use the records required in Condition 6.2.2 to calculate the combined total monthly NOx emissions from the combustion turbines in tons per month.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- 6.2.8 The Permittee shall retain records of the demonstration found in Condition 5.2.3.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]