

Facility Name: **Allen B. Wilson Combustion Turbine Plant**
City: Waynesboro
County: Burke
AIRS #: 04-13-033-00008

Application #: TV-579495
Date Application Received: July 6, 2021
Permit No: 4911-033-0008-V-05-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The 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. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The 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:

Allen B. Wilson Combustion Turbine Plant

2. Parent/Holding Company Name

Southern Company/Georgia Power Company

3. Previous and/or Other Name(s)

No previous or other names were identified.

4. Facility Location

8803 River Road
Waynesboro, Georgia 30830
Burke County

5. Attainment, Non-attainment Area Location, or Contributing Area

The facility is located in Burke County which is an attainment area for all pollutants regulated under the National Ambient Air Quality Standards (NAAQS).

B. Site Determination

The Allen B. Wilson Combustion Turbine Plant (AIRS No. 033-00008) and the Alvin W. Vogtle Electric Generating Plant (AIRS No. 033-00030) comprise the same Title V Site. The companies are located on adjacent property, operate under common control, and have the same first 2-digit SIC code (49). Plant Wilson was originally named Plant Vogtle. However, with the construction of the nuclear facility on the site, the combustion turbine plant was renamed Plant Wilson in 1982. This Title V Permit will cover only Plant Wilson (AIRS No. 033-00008).

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/Effectiveness	Purpose of Issuance
4911-033-0008-V-04-0	1/26/2017	Title V Renewal

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 Allen B. Wilson Combustion Turbine Plant generates electricity for sale.

3. Overall Facility Process Description

Allen B. Wilson Combustion Turbine Plant has six simple cycle combustion turbines and one black start diesel generator. Each combustion turbine burns only No. 2 diesel fuel and is connected to its own generator rated at approximately 60 MW (@ 58°F). Each combustion turbine has its own exhaust which is 50 feet tall. Actual heat input and load may vary. The diesel generator is rated at approximately 2.5 MW output. The generator has its own exhaust which is 20 feet tall. This description should not be construed as a limit on heat input or load.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

The facility is a major source under PSD because it has potential emissions of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, and CO greater than 250 tpy (it is not one of the 28 named source categories under PSD). The facility was originally constructed before the PSD regulations were effective.

2. Title V Major Source Status by Pollutant

Table 2: 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	Y	✓		
PM ₁₀	Y	✓		
PM _{2.5}	Y	✓		
SO ₂	Y	✓		
VOC	Y	✓		
NO _x	Y	✓		
CO	Y	✓		
TRS	Y			✓
H ₂ S	N			✓
Individual HAP	Y	✓		
Total HAPs	Y	✓		

3. MACT Standards

40 CFR 63 Subpart YYYY – “National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines”

The facility is considered major source of hazardous air pollutants (HAP). Therefore, the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) is subject to the Major Source MACT 40 CFR 63 Subpart YYYY for Stationary Combustion Turbines under 40 CFR 63.6085(a) and (b). However, existing stationary combustion turbines (on or before January 14, 2003) in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part.

No initial notification is necessary for any existing stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification, per 40 CFR 63.6090(b)(4).

40 CFR Part 63 Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”

The emergency black start diesel generator (Source Code: CBSD), is subject to 40 CFR 63 Subpart ZZZZ (RICE MACT) because it is an existing (commenced construction before June 12, 2006) stationary reciprocating internal combustion engines with a site rating more than 500 brake HP located at major source of HAP emissions. According to 40 CFR 63.6600(c) this engine does not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart.

Per 40 CFR 63.6590(b)(3)(iii), the existing emergency engines with a site rating more than 500 brake HP located at major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) does not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	no
Program Code 8 – Part 61 NESHAP	no
Program Code 9 - NSPS	no
Program Code M – Part 63 NESHAP	yes
Program Code V – Title V	yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

Not applicable.

C. Compliance Status

The facility permit application did not indicate any non-compliance issue.

D. Permit Conditions

Not applicable.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
Equipment Group EGCT	No. 2 fuel oil fired six Simple Cycle Combustion Turbines (972 MMBtu/hr maximum heat input rate per turbine) (Units CT1A – CT1F)	Rule 391-3-1-.02(2)(b) Rule 391-3-1-.02(2)(g) 40 CFR 63, Subpart A 40 CFR 63, Subpart YYYY	None	None
CBSD	Emergency Black Start Diesel Generator (2.5 MW maximum power output)	Rule 391-3-1-.02(2)(b) Rule 391-3-1-.02(2)(g) 40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None

B. Equipment & Rule Applicability

Emission and Operating Caps –

Not applicable.

Applicable Rules and Regulations –

The Equipment Group EGCT (Source Codes: CT1A – CT1F) consists of six simple cycle combustion turbines. Each of these turbines is rated at 972 MMBtu/hr @ 0°F and was constructed before January 1, 1972. Georgia Rule 391-3-1-.02(2)(d) does not define the allowable PM emission rate from each turbine because the turbines do not meet the definition of “fuel burning equipment” in Georgia Rule 391-3-1-.01(cc). Thus, there is no applicable PM emissions standard or rule for each turbine.

The allowable fuel sulfur content is specified by Georgia Rule 391-3-1-.02(2)(g). Georgia Rule (g) establishes a 3.0 weight percent limit since these units exceed 100 MMBtu/hr each and they were constructed before January 1, 1972. Permit No. 4911-063-6952 established a 0.5 weight percent limit in order to exempt the turbines from the stack height provisions that were once a part of Georgia Rule (g).

The fuel sulfur limit imposed by Permit No. 4911-063-6952 is not considered federally enforceable; thus, increasing the fuel sulfur limit to that allowed by Georgia Rule (g) would not trigger PSD because the change is not prohibited under a federally enforceable permit condition. This approach is consistent with that taken with Plant McManus.

The emergency black start diesel generator (Source Code: CBSD) is subject to Georgia Rule 391-3-1-.02(2)(g) and (b). The emergency generator is rated at 24.9 MMBtu/hr and was constructed after January 1, 1972. Therefore, it is subject to the fuel sulfur limit specified in Georgia Rule 391-3-1-.02(2)(g)2., which is 2.5 weight percent. The emergency generator is also subject to Georgia Rule 391-3-1-.02(2)(b) because it is subject to another emission limitation under 391-3-1-.02(2). Rule (b) limits visible emissions to 40 percent opacity.

40 CFR 63 Subpart YYYY – “National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines”

The facility is considered major source of hazardous air pollutants (HAPs). Therefore, the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) is subject to the Major Source MACT 40 CFR 63 Subpart YYYY for Stationary Combustion Turbines under 40 CFR 63.6085(a) and (b). However, existing stationary combustion turbines (on or before January 14, 2003) in all subcategories do not have to meet the requirements of this subpart and of subpart A of this part.

No initial notification is necessary for any existing stationary combustion turbine, even if a new or reconstructed turbine in the same category would require an initial notification, per 40 CFR 63.6090(b)(4).

40 CFR Part 63 Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”

The emergency black start diesel generator (Source Code: CBSD), is subject to 40 CFR 63 Subpart ZZZZ (RICE MACT) because it is an existing (commenced construction before June 12, 2006) stationary reciprocating internal combustion engines with a site rating more than 500 brake HP located at major source of HAP emissions. According to 40 CFR 63.6600(c) this engine does not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart.

Per 40 CFR 63.6590(b)(3)(iii), the existing emergency engines with a site rating more than 500 brake HP located at major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) does not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements.

C. Permit Conditions

Permit Condition 3.3.1 incorporates the applicability of the Major Source MACT 40 CFR 63 for National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines for the operation of the existing Equipment Group EGCT (Source Codes: CT1A – CT1F).

Permit Condition 3.3.2 incorporates the applicability of the Major Source MACT 40 CFR 63 Subpart ZZZZ for National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [RICE]” for the operation of the emergency black start diesel generator (Source Code: CBSD).

Permit Condition 3.4.1 limits the opacity from the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) and the emergency black start diesel generator (Source Code: CBSD) in accordance with Georgia Air Quality Rule 391-3-1-.02(2)(b).

Permit Condition 3.4.2 defines the sulfur content limit of 3.0 percent by weight for the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) in accordance with Georgia Air Quality Rule 391-3-1-.02(2)(g)2.

Permit Condition 3.4.3 allows the facility to fire only distillate fuel oil in the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) and the emergency black start diesel generator (Source Code: CBSD).

Permit Condition 3.4.4 defines the sulfur content limit of 2.5 percent by weight for the emergency black start diesel generator (Source Code: CBSD) in accordance with Georgia Air Quality Rule 391-3-1-.02(2)(g)2.

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 (or sixty (60) days for tests required by 40 CFR Part 63) 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

Not applicable.

V. Monitoring Requirements**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

Not applicable.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

VI. 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 semiannual basis

Permit Condition 6.1.7 b. i. defines exceedance for the fuel oil fired in the emergency black start diesel generator (Source Code: CBSD) has a sulfur content which exceeds 2.5 percent by weight.

Permit Condition 6.1.7 b. ii. defines exceedance for the fuel oil fired in the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) has a sulfur content which exceeds 3.0 percent sulfur by weight.

B. Specific Record Keeping and Reporting Requirements

Permit Conditions 6.2.1 and 6.2.2 require the facility to submit semiannual report and maintain fuel supplier certifications, which verify that the oil fired in the existing Equipment Group EGCT (Source Codes: CT1A – CT1F) and the emergency black start diesel generator (Source Code: CBSD) is of the type specified in Permit Condition 3.4.3. This condition has remained unchanged since the last renewal.

VII. Specific Requirements**A. Operational Flexibility**

The applicant did not include any alternative operating scenarios in their Title V Application or request any specific operational flexibility conditions.

B. Alternative Requirements

There are no alternative requirements that need to be incorporated into the Title V Permit.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

The facility did not apply for a permit for any temporary sources.

E. Short-Term Activities

No short-term activities were identified for this facility.

F. Compliance Schedule/Progress Reports

The facility did not indicate noncompliance in the application, therefore, no compliance schedule or progress reports are necessary.

G. Emissions Trading

The facility is not involved in any emissions trading programs.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

The facility is subject to the Stratospheric Ozone Protection Requirements under Title VI of the CAAA of 1990. The facility has stated in their application that they are not subject to 40 CFR 82, Subpart A "Production and Consumption Controls", Appendix A Class I Controlled Substances and Appendix B Class II Controlled Substances.

J. Pollution Prevention

Not applicable.

K. 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.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//