

Facility Name: **MPC Generating, LLC**
 City: Monroe
 County: Walton
 AIRS #: 04-13-297-00040

Application #: TV-779265
 Date Application Received: September 29, 2023
 Permit No: 4911-297-0040-V-10-0

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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: MPC Generating, LLC

2. Parent/Holding Company Name

MPC Generating, LLC

3. Previous and/or Other Name(s)

Previous Names: Carolina Power & Light - Walton County Peaking Project
Carolina Power & Light – Monroe Power Plant

Ownership Change: Carolina Power & Light to MPC Generating, LLC effective February 1, 2002.

4. Facility Location

208 Cherry Hill Road
Monroe, Georgia 30655

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

The facility is located within the limits of Walton County, which is considered attainment area for all criteria air pollutants. As of October 17, 2022, EPA redesignated the Atlanta Area to attainment area for the 2015 8-hour ozone NAAQS.

B. Site Determination

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

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
4911-297-0040-V-09-0	June 7, 2019	Titel V Renewal Permit
4911-297-0040-V-09-1	November 29, 2023	Acid Rain Renewal 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 produces electricity for sale.

3. Overall Facility Process Description

MPC Generating, LLC burns fossil fuel to generate electricity for sale. The facility consists of two Westinghouse 501F combustion turbines (EUIDs: CT1 and CT2), each with a base load rating of 1,978 MMBtu/hr @ 20 °F for natural gas and 1,946 MMBtu/hr @ 20 °F for No. 2 fuel oil. Both turbines fire natural gas and No. 2 fuel oil as the primary fuels and low-sulfur distillate fuel oil as backup fuel. These turbines are equipped with water injection for NO_x control. Each turbine exhausts through its own 50-ft stack. The facility has two [2] above ground storage tanks (ASTs) (EUIDs: TK1 and TK2) with affixed roofs containing No. 2 fuel oil with a capacity of 635,000 gallons each. Both ASTs are equipped with a submerged fill pipe and a pressure/vacuum conservation vent.

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 was permitted for construction with PSD avoidance limits on July 15, 1999. The facility became major source for NO_x due to rule change in 1999. The facilities has not gone through PSD Review.

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	n			
H ₂ S	n			
Individual HAP	y			✓
Total HAPs	y			✓

3. MACT Standards

The facility is a minor for HAPs and therefore will not be subject to any proposed or final MACT standard.

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	Yes
Program Code M – Part 63 NESHAP	No
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 did not indicate any non-compliance issues in the application.

D. Permit Conditions

None 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
CT01	Combustion Turbine Unit 1	391-3-1-.02(2)(b) 391-3-1-.02(2)(g)(1)(i) 391-3-1-.02(2)(nnn) 40 CFR 60 Subpart GG Acid Rain	WAT01	Water Injection
CT02	Combustion Turbine Unit 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(g)(1)(i) 391-3-1-.02(2)(nnn) 40 CFR 60 Subpart GG Acid Rain	WAT02	Water Injection

* 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.

B. Equipment & Rule Applicability

Emission and Operating Caps:

Combustion turbines, CT01 and CT02, are limited to a combined total consumption of 60 million gallons of fuel oil. Both combustion turbines combined cannot emit nitrogen oxides (NOx) nor carbon monoxide (CO) in amounts equal to or in excess of 250 tons during any twelve consecutive month period.

Rules and Regulations Assessment:

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) applies to each turbine. Combustion Turbines, CT01 and CT02, were constructed and in operation since 1999 thus classifying the units as existing combustion turbines. Sulfur dioxide (SO₂) emissions from each turbine are regulated by Georgia Rules for Air Quality Control (GRAQC) 391-3-1-.02(2)(g)1. Georgia Rule (g) regulates fuel burning sources capable of firing fossil fuel(s) at a rate exceeding 250 million BTUs per hour heat input, constructed or extensively modified after January 1, 1972, excluding kraft pulp mill recovery furnaces, may not emit sulfur dioxide equal to or exceeding:

- (i) 0.8 pounds of sulfur dioxide per million BTUs of heat input derived from liquid fossil fuel or derived from liquid fossil fuel and wood residue.
- (ii) 1.2 pounds of sulfur dioxide per million BTUs of heat input derived from solid fossil fuel or derived from solid fossil fuel and wood residue;

- (iii) When different fossil fuels are burned simultaneously in any combination, the applicable standard expressed as pounds of sulfur dioxide per million BTUs of heat input shall be determined by proration using the following formula:

$$a = \frac{y(0.80) + z(1.2)}{y + z}$$

where:

y = percent of total heat input derived from liquid fossil fuel;

z = percent of total heat input derived from solid fossil fuel;

a = the allowable emission in pounds per million BTUs.

The Acid Rain Program regulates SO₂ emissions from the combustion turbines. MPC Generating, LLC 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) and compliance is expected from Combustion Turbines, CT01 and CT02.

The Combustion Turbines are subject to GRAQC 391-3-1-.02(2)(nnn) because they are stationary gas turbines with a nameplate capacity greater than 25 megawatts (MW). Both CT01 and CT02 are subject to a limit of NO_x emissions to 30 ppm @ 15% O₂ dry basis. Requirements of this subsection shall apply during the period May 1 through September 30 of each year.

40 CFR 60 Subpart Kb completely exempts the following classes of tanks greater than 151 m³ (39,894 gallons) in capacity with a content vapor pressure less than 3.5 kiloPascals (kPa) (0.51pounds per square inch absolute [psia], 26.4 millimeters of mercury [mmHg]).

In addition, GRAQC 391-3-1-.3(6)(c)(1) exempts all petroleum liquid storage tanks storing a liquid with a true vapor pressure of equal to or less than 0.50 psia as stored. Oil Storage Tanks 1 and 2 store No. 2 fuel oil and have a capacity of 635,000 gallons each. No. 2 fuel oil has a liquid total vapor pressure of 0.009 psia at 70°F (AP-42), therefore ruling them exempt from the aforementioned regulation.

C. Permit Conditions

Permit Condition 3.2.1 limits NO_x emissions, including emissions occurring during startup and shutdown, to not equal or exceed 250 tons during any twelve consecutive months.

Permit Condition 3.2.2 limits fuel oil consumption to 60,000,000 gallons pursuant to PSD avoidance for SO₂.

Permit Condition 3.2.3 limits the fuel sulfur content of fuel oil burned in any combustion turbine to 0.05%, by weight.

Permit Condition 3.2.4 limits opacity from the turbines to not equal or exceed 40%.

Permit Condition 3.2.5 limits CO emissions, including emissions occurring during startup and shutdown, to not equal or exceed 250 tons during any twelve consecutive months.

Permit Condition 3.3.1 prohibits NOx emissions in excess of that allowed by 40 CFR 60 Subpart GG.

Permit Condition 3.3.2 prohibits combustion of natural gas in the combustion turbines which contain sulfur in excess of 0.8%, by weight.

Permit Condition 3.3.3 subjects the Permittee to the provisions of New Sources Performance Standards (NSPS) as found in 40 CFR Part 60, in particular Subpart A - "General Provisions" and Subpart GG - "Standards of Performance for Stationary Gas Turbines" for Combustion Turbines CT01 and CT02.

Permit Condition 3.4.1 prohibits the Permittee from allowing NOx emissions from the combustion turbines in excess of 30 ppm at 15% oxygen, dry basis from May 1 through September 30 of each year.

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

Permit Condition 5.2.1 outlines the required Continuous Emission Monitoring System (CEMS) to monitor NO_x and CO emissions.

Permit Condition 5.2.2 requires the Permittee to calibrate, maintain, and operate a system to continuously monitor and record quantity of natural gas combusted, quality of fuel oil combusted and total hours of operation for the combustion turbines.

Permit Condition 5.2.3 requires the Permittee to comply with 40 CFR 64 Compliance Assurance Monitoring (CAM) Rule for NO_x emissions on combustion turbines CT01 and CT02.

Permit Condition 5.2.4 outlines the performance criteria the Permittee is required to follow for NO_x emissions from the combustion turbines.

Permit Condition 5.2.5 outlines the equation the Permittee must use to correct NO_x emissions to 15% oxygen.

Permit Condition 5.2.6 requires the Permittee to obtain NO_x and CO emissions data for at least 90% of the operating hours for each combustion turbine during each calendar month that the combustion turbine is operated.

Permit Condition 5.2.7 requires the Permittee to assess the quality and accuracy of the data acquired by the carbon monoxide CEMS required by Condition No. 5.2.1.b.

Permit Condition 5.2.8 requires the Permittee to record the one-hour average NO_x concentration, the percent CO₂ and the three-hour rolling average NO_x concentration (in ppm, corrected to 15% O₂, dry basis).

C. Compliance Assurance Monitoring (CAM)

The Water Injection Control Devices meet the definition of a control device as defined in 40 CFR 64.1. The 40 CFR 64 applicability thresholds for NO_x and CO emissions are 100 tons per year. Potential pre-control device emissions of NO_x and CO do exceed 100 tons per year, so the turbines are Pollutant-Specific Emission Units (PSEU) for nitrogen oxide emissions and carbon monoxide. The water injection systems are needed to comply with emission limitations for NO_x and CO. However, measuring NO_x with CEMS is an acceptable, alternate continuous compliance determination method over CEMS for Part 64 applicability under 64.2(b)(1)(vi). The PSEUs have NO_x and CO CEMS.

The term “continuous compliance determination method” is defined in § 64.1 of the rule. A continuous compliance determination method is a method, which (1) is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard, and (2) either provides data in units of the standard or is correlated directly with the compliance limit.

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 quarterly basis.

B. Specific Record Keeping and Reporting Requirements

Permit Condition 6.2.1 requires the sulfur content of the natural gas burned in combustion turbines CT01 and CT02 be monitored by the submittal of a semiannual analysis of the gas by the supplier.

Permit Condition 6.2.2 exempts the Permittee from the requirement to determine the nitrogen content of the natural gas or fuel oil burned in the combustion turbines CT01 and CT02.

Permit Condition 6.2.3 requires the Permittee to verify and document that each shipment of fuel oil received for combustion in turbines CT01 and CT02 complies with the requirements of Condition 3.2.3.

Permit Condition 6.2.4 requires the Permittee to retain monthly records of natural gas and fuel oil usage in each combustion turbine, CT01 and CT02.

Permit Condition 6.2.5 requires the Permittee to determine and record the net operating hours for each combustion turbine, CT01 and CT02, during every calendar month and the total operating hours for the combustion turbines combined, for the twelve consecutive month period ending with each calendar month. The records must be maintained as part of the monthly record suitable for inspection or submittal.

Permit Condition 6.2.6 requires the Permittee to determine the twelve consecutive month total fuel oil usage, in gallons, for each month. These records (including calculations) shall be maintained as part of the monthly record suitable for inspection or submittal.

Permit Condition 6.2.7 requires the Permittee to determine and record the mass emission rate (lb/hr) of nitrogen oxides from each combustion turbine.

Permit Condition 6.2.8 requires the Permittee to use the records required by Condition 6.2.7 to determine the monthly mass emission rate, in tons per month, of NO_x from combustion turbines, CT01 and CT02, combined.

Permit Condition 6.2.9 requires the Permittee to use the records required by Condition 6.2.8 to determine the twelve consecutive month total of nitrogen oxides emissions (in tons) from CT01 and CT02, combined, for each month.

Permit Condition 6.2.10 requires the Permittee to submit quarterly reports for twelve consecutive month total NO_x emissions (tons) from the combustion turbines, combined, for each month in the quarterly reporting period, twelve consecutive month total CO emissions (tons) from the combustion turbines, combined, for each month in the quarterly reporting period, combined total distillate fuel usage for the combustion turbines, combined, for each month in the quarterly reporting period and fuel oil supplier certifications for each shipment of fuel oil received during the reporting period and a statement signed by a responsible official that the records of fuel oil supplier certifications submitted represent all of the fuel oil received during the reporting period.

Permit Condition 6.2.11 requires the Permittee to calculate and record (including calculations) the hourly carbon monoxide mass emission rate (pounds per hour) for each hour of operation of each combustion turbine, CT01 and CT02.

Permit Condition 6.2.12 requires the Permittee to determine the monthly mass emission rate, in tons per month, of carbon monoxide, from each combustion turbine, CT01 and CT02.

Permit Condition 6.2.13 requires the Permittee to determine the twelve consecutive month total of carbon monoxide emissions (in tons) from the combustion turbines, on a combined basis, for each month.

VII. Specific Requirements

A. Operational Flexibility

- The permit contains standard provisions for operational flexibility under Section 502(b)(10) of the Clean Air Act.

B. Alternative Requirements

- None Applicable

C. Insignificant Activities

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

D. Temporary Sources

- None Applicable

E. Short-Term Activities

- None Applicable

F. Compliance Schedule/Progress Reports

- None Applicable

G. Emissions Trading

- None Applicable

H. Acid Rain Requirements

- The 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 MPC Generating, LLC'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 met.

I. Stratospheric Ozone Protection Requirements

Note: Be sure to discuss any new stratospheric ozone protection requirements (see subsection J.) that may apply to the source. State if the facility has indicated that they are subject to Title VI

J. Pollution Prevention

- describe new pollution prevention requirements in Title V permit
- NOTE: requirements to comply with any applicable standards are not considered to be pollution prevention

K. Specific Conditions

- None Applicable

L. Cross State Air Pollution Rule (CSAPR) Allowance trading Program Requirements

The Clean Air Interstate Rule (CAIR) has been replaced by the Cross State Air Pollution Rule (CSAPR) [40 CFR Part 97] per the Federal Implementation Plan (FIP) and no longer in effect. Please find additional details about the promulgation of CSAPR at the following EPA website.

<https://www3.epa.gov/crossstaterule/faqs.html>

CSAPR replaces a 2005 rule known as the Clean Air Interstate Rule (CAIR). A December 2008 court decision kept the requirements of CAIR in place temporarily, but directed EPA to issue a new rule to implement the Clean Air Act requirements concerning the transport of air pollution across state boundaries. This Cross-State Air Pollution Rule is designed to implement these Clean Air Act requirements and respond to the court's concerns. The CSAPR took effect January 1, 2015; CAIR was implemented through the 2014 compliance periods, and then replaced by the CSAPR.

Permit Condition 7.15.1 identifies the units subject to CSAPR and the applicable CSAPR Programs.

Permit Condition 7.15.2 outlines the Annual NO_x, SO₂ and Ozone Season NO_x Emissions Requirements

Permit Condition 7.15.3 outlines the monitoring, reporting and recordkeeping requirements associated with CSAPR.

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.//