PERMIT AMENDMENT NO. 4911-015-0011-V-03-C
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name:	**Bowen Steam-Electric Generating Plant**
Facility Address:	**317 Covered Bridge Road**
	Cartersville, Georgia (Bartow County)
Mailing Address:	**241 Ralph McGill Blvd. N.E., Bin 10221**
	Atlanta, Georgia 30308
Parent/Holding Company:	**Southern Company/Georgia Power**
Facility AIRS Number:	**04-13-015-00011**

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 an amendment to the Part 70 Operating Permit for:

> **The addition of the requirements of 40 CFR 63 Subpart UUUUU-National Emission Standards for Hazardous Air Pollutants: Coal and Oil Fired Electric Utility Steam Generating Units [Mercury and Air Toxics Standards (MATS)].**

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. **4911-015-0011-V-03-0**. Unless modified or revoked, this Amendment expires simultaneously with Permit No**. 4911-015-0011-V-03-0**. 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. **43951** dated **December 2, 2016**; any other applications upon which this Amendment or Permit No. **4911-015-0011-V-03-0** 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 **10** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
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Richard E. Dunn, Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Georgia Power requests the addition and modification of the following permit conditions for the steam generating units (Emission Unit IDs SG01, SG02, SG03, and SG04) at Plant Bowen, in order to specify the compliance requirements of 40 CFR 63 Subpart UUUUU, National Emissions Standards for Hazardous Air Pollutants (NESHAP): Coal- and Oil-Fired Electric Utility Steam Generating Units, otherwise known as the Mercury and Air Toxics Standards (MATS).

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

3.3 Equipment Federal Rule Standards

NEW CONDITIONS

3.3.8 The Permittee shall not discharge or cause the discharge into the atmosphere from any steam generating unit (Emission IDs SG01, SG02, SG03, and SG04), any gases which contain mercury, particulate matter or hydrogen chloride above the following limits specified by 40 CFR 63 Subpart UUUUU. The emission limits apply at all times except during periods of startup and shutdown as defined in 40 CFR 63.10042 when work practice standards are applicable as required by Permit Condition 6.2.25.
[40 CFR 63.9991(a)(1)]

a. Mercury in excess of 1.2 lb/TBtu heat input or 0.013 lb/GWh gross output based on a 30-operating day rolling average for each steam generating unit.

b. Particulate matter in excess of 0.030 lb/MMBtu heat input or 0.30 lb/MWh gross output.

c. Hydrogen chloride in excess of 0.0020 lb/MMBtu heat input or 0.020 lb/MWh gross output.

d. As an alternative to the hydrogen chloride emission limit in Condition 3.3.8(c), sulfur dioxide in excess of 0.20 lb/MMBtu heat input or 1.5 lb/MWh gross output based on a 30-operating day rolling average for each steam generating unit.

3.3.9 The Permittee may comply with MATS using emissions averaging according to the requirements of 40 CFR 63.10009 in lieu of the requirements in Permit Condition 3.3.8.
[40 CFR 63.10009]

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 which pertain to the emission units listed in Section 3.1 are as follows:
[40 CFR 63.10007]

a. [unchanged]

b. [unchanged]

c. [unchanged]

d. [unchanged]

e. [unchanged]

f. Method 5 for the determination of Particulate Matter concentration. The probe and filter holder front half heating systems in the sampling train shall maintain a gas temperature of 160 ± 14ºC (320 ± 25ºF) for verifying compliance with Georgia Rule 391-3-1-.02(2)(d) and 40 CFR 63 Subpart UUUUU.

g. [unchanged]

h. [unchanged]

i. [unchanged]

j. Method 19 when applicable, to convert mercury, hydrogen chloride, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen oxides concentrations (i.e. grains/dscf for PM, ppm for gaseous pollutants), as determined using other methods specified in this section, to emission rates (i.e. lb/MMBtu),

k. Method 26 or 26A, where applicable, for the determination of hydrogen chloride concentration.

l. Method 30B for the determination of mercury concentration.

m. [unchanged]

n. [unchanged]

o. The procedures contained in 40 CFR 63.10007(e)(3) and 40 CFR 63 Subpart UUUUU, Appendix A, when applicable, shall be used to convert mercury, hydrogen chloride, particulate matter, and sulfur dioxide concentrations, as determined using other methods specified in this section to a gross output-based emission rate (i.e. lb/MWh)

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

MODIFIED CONDITIONS

4.2.1 The Permittee shall conduct the following performance tests on the following emissions units at the frequency specified:
[40 CFR 63.10006]

a. For particulate matter on each steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04). The test shall be conducted on a quarterly basis as specified in 40 CFR 63.10006, as applicable. This test is not required if a PM CEMS is used to demonstrate compliance with the limit in Permit Condition 3.3.8(b).

i. A quarterly stack test is required if the steam generating unit operates for 168 boiler operating hours or more during a quarter, and the test must be separated by at least 45 calendar days, measured from the test's end date, from the performance test conducted in the previous quarter.

ii. A performance test shall be conducted in the 4^{th} quarter of the calendar year if the Permittee has not conducted a performance test on that steam generating unit in the first 3 quarters of the calendar year.

iii. If the steam generating unit qualifies as a LEE as defined in 40 CFR 63.10005(h), an alternative testing schedule of once every 3 years will replace the above testing schedule. The test must be separated by at least 1,050 calendar days, measured from the test's end date, from the performance test conducted in the previous 3-year period.

b. For hydrogen chloride on each steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04). The test shall be conducted on a quarterly basis as specified in 40 CFR 63.10006, as applicable. This test is not required if the alternative SO_2 limit is used for hydrogen chloride compliance under 40 CFR 63 Subpart UUUUU.

i. A quarterly stack test is required if the steam generating unit operates for 168 boiler operating hours or more during a quarter, and the test must be separated by at least 45 calendar days, measured from the test's end date, from the performance test conducted in the previous quarter.

ii. A performance test must be conducted in the 4th quarter of the calendar year if the Permittee has not conducted a performance test on that steam generating unit in the first 3 quarters of the calendar year.

iii. If the steam generating unit qualifies as a LEE as defined in 40 CFR 63.10005(h), an alternative testing schedule of once every 3 years will replace the above testing schedule. The test must be separated by at least 1,050 calendar days, measured from the test's end date, from the performance test conducted in the previous 3-year period.

4.2.4 For the performance tests in Condition 4.2.1(a) and (b), if a steam generating unit misses a performance test deadline that would otherwise be required by these conditions due to being inoperative, and if 168 or more boiler operating hours occur in the next test period, the Permittee must complete an additional performance test with at least 15 calendar days separating two performance tests conducted in the same quarter and at least 350 calendar days separating two performance tests conducted in the same 3 year period.
[40 CFR 63.10006(f)(3)]

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. [unchanged]

b. [unchanged]

c. [unchanged]

d. A continuous emissions monitoring system (CEMS), for the measurement of sulfur dioxide concentration (ppm) and diluent concentrations (either Oxygen or Carbon Dioxide, percent), is required to be installed on each steam generating unit (Emission Unit ID SG02, SG03, and SG04). Sulfur dioxide emissions are monitored at both the inlet and outlet of the SO_2 control device. The output of the CEMS shall be expressed in terms of pounds per million British thermal units (lb/MMBtu) or pounds per megawatt hour (lb/MWh).

e. A continuous emissions monitoring system (CEMS) for the measurement of sulfur dioxide concentration (ppm) and diluent concentrations (either Oxygen or Carbon Dioxide, percent), is required to be installed on Steam Generating Unit 1 (Emission Unit ID SG01). Sulfur dioxide emissions are monitored at both the inlet and outlet of the SO_2 control device. The output of the CEMS shall be expressed in terms of pounds per million British thermal units (lb/MMBtu) or pounds per megawatt hour (lb/MWh).

f. A continuous monitoring system (CEMS) for the measurement of mercury concentrations ($\mu g/m^3$) on Steam Generating Units 1, 2, 3, and 4 (Emissions Unit IDs: SG01, SG02, SG03 and SG04) scrubber stacks (ST05, ST06, ST07, and ST08). The output of the CEMS shall be expressed in terms of pounds per trillion British thermal units (lb/TBtu) or pounds per gigawatt hour (lb/GWh).

State-Only Enforceable Condition

5.2.21 As an alternative to the monitoring devices required in Permit Condition 5.2.17 the Permittee may comply through the mercury monitors required by Permit Condition 5.2.1(f).
[391-3-1-.02(6)(b)1]

NEW CONDITIONS

5.2.23 The CEMS required by Conditions 5.2.1.f. shall be operated and data recorded during all periods of operation of the affected Steam Generating Units (Emission Unit IDs SG01, SG02, SG03, and SG04) including periods of startup, shutdown, malfunction or emergency conditions, except for periods of monitoring system malfunctions or out-of-control periods and associated repairs and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments.
[40 CFR 63.10020(b)]

5.2.24 The Permittee must conduct a tune-up on each steam generating unit (Emission IDs SG01, SG02, SG03, and SG04) every 36 months from the completion of the previous tune-up according to 40 CFR 63.10021(e). If a neural network is employed, a tune-up must be completed every 48 months. If the steam generating unit is offline when a deadline to perform the tune-up passes, the Permittee shall perform the tune-up work practice requirements within 30 days after the re-start of the unit.
[40 CFR 63.10021(e)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

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)

ii. Any 30 operating day period in which the mercury emissions rate from a steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04) exceeds the applicable emissions limit in Condition 3.3.8(a).

iii. If the alternative SO_2 limit is used for hydrogen chloride compliance under 40 CFR 63 Subpart UUUUU, any 30 operating day period in which the SO_2 emissions rate from a steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04) exceeds the applicable emissions limit in Condition 3.3.8(d).

b. [unchanged]

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)

State-Only Enforceable Condition

xi. Except from May 1 through September 30, any 30 consecutive operating day period in which the flue gas did not go through the SCR (Emission Unit IDs SCR1, SCR2, SCR3 and SCR4) for at least 90% of the operating hours during that period, excluding periods described in Georgia Rules for Air Quality Control 391-3-1-.02(2)(sss)20. This condition shall not apply for each 30 consecutive operating day period for which reports are submitted in accordance with Permit Condition 6.1.7a.ii.

xii. [deleted]

6.2 Specific Record Keeping and Reporting Requirements

6.2.24 The Permittee must maintain the records required in Conditions 6.2.23 and 6.2.26 in a form suitable and readily available for expeditious review. The facility must keep each record for 5 years following the date of each recorded action. The facility must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The facility may keep the record off site for the remaining 3 years.
[40 CFR 63.7560 and 63.10033]

NEW CONDITIONS

6.2.25 The Permittee must comply with applicable work practice standards required by 40 CFR 63.10021 and Table 3 to 40 CFR 63 Subpart UUUUU for the steam generating units (Emission Unit IDs SG01, SG02, SG03, and SG04) during periods of startup and shutdown as defined in 40 CFR 63.10042.
[40 CFR 63.10021 and Table 3 to 40 CFR 63 Subpart UUUUU]

6.2.26 The Permittee must maintain the following records for any steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04):
[40 CFR 63.10032]

a. A copy of each notification and report that the Permittee submitted to comply with 40 CFR 63 Subpart UUUUU, including all documentation supporting any Initial Notification, Notification of Compliance Status, or semiannual compliance report.

b. Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations.

c. For each CEMS, the Permittee must keep the following records:

i. Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods).

ii. All required measurements needed to demonstrate compliance with the relevant standard

iii. Previous versions of the performance evaluation plan.

iv. Any requests for alternatives to relative accuracy test for CEMS as required in 63.8(f)(6)(i).

v. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

d. Monthly records of fuel use by each steam generating unit, including the types of fuel and amount(s) used.

e. The occurrence and duration of each malfunction of an operation (i.e. process equipment) or the air pollution control and monitoring equipment and the actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

f. The occurrence and duration of each startup and/or shutdown and the type(s) and amount(s) of fuel used during each startup or shutdown.

6.2.27 The Permittee shall prepare and submit MATS compliance reports on the schedule specified by and containing the applicable information required by 40 CFR 63.10031 for each steam generating unit (Emission Unit IDs SG01, SG02, SG03, and SG04). The MATS compliance reports shall include any failed stack test required by Conditions 4.2.1 (a) and (b) per the applicable methods in Condition 4.1.3. All reports shall be submitted electronically no later than 60 days following the end of the reporting period.
[40 CFR 63.10031]