

STATE OF MISSISSIPPI AIR POLLUTION CONTROL PERMIT

AND PREVENTION OF SIGNIFICANT DETERIORATION AUTHORITY TO CONSTRUCT AIR EMISSIONS EQUIPMENT THIS CERTIFIES THAT

South Mississippi Electric Power Association, Batesville Generating Station
200 Industrial Drive
Batesville, Mississippi
Panola County

has been granted permission to construct air emissions equipment to comply with emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder and under authority granted by the Environmental Protection Agency under 40 CFR 52.01 and 52.21.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD



AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: November 25, 1997

Permit No.: 2100-00054

Modified: July 14, 1998, June 25, 2012, DEC 10 2012

Part I

A. GENERAL CONDITIONS

1. This permit is for air pollution control purposes only. (Ref.: APC-S-2, Section I.D)
2. Any activities not identified in the application are not authorized by this permit. (Ref.: Miss. Code Ann. 49-17-29 1.b)
3. The knowing submittal of a permit application with false information may serve as the basis for the Permit Board to void the permit issued pursuant thereto or subject the applicant to penalties for operating without a valid permit pursuant to State Law. (Ref.: APC-S-2, Section II.B.5)
4. It is the responsibility of the applicant/permittee to obtain all other approvals, permits, clearances, easements, agreements, etc., which may be required including, but not limited to, all required local government zoning approvals or permits. (Ref.: APC-S-2, Section I.D.6)
5. The issuance of a permit does not release the permittee from liability for constructing or operating air emissions equipment in violation of any applicable statute, rule, or regulation of state or federal environmental authorities. (Ref.: APC-S-2, Section II.B.7)
6. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit, unless halting or reducing activity would create an imminent and substantial endangerment threatening the public health and safety of the lives and property of the people of this state. (Ref.: APC-S-2, Section II.B.15(a))
7. The permit and/or any part thereof may be modified, revoked, reopened, and reissued, or terminated for cause. Sufficient cause for a permit to be reopened shall exist when an air emissions stationary source becomes subject to Title V. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. (Ref.: APC-S-2, Section II.B.15(b))
8. The permit does not convey any property rights of any sort, or any exclusive privilege. (Ref.: APC-S-2, Section II.B.15(c))
9. The permittee shall furnish to the DEQ within a reasonable time any information the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality. The permittee may furnish such records directly to the Administrator along with a claim of confidentiality. (Ref.: APC-S-2, Section II.B.15(d))

10. Design and Construction Requirements: The stationary source shall be designed and constructed so as to operate without causing a violation of an Applicable Rules and Regulations, without interfering with the attainment and maintenance of State and National Ambient Air Quality Standards, and such that the emission of air toxics does not result in an ambient concentration sufficient to adversely affect human health and well-being or unreasonably and adversely affect plant or animal life beyond the stationary source boundaries. (Ref.: APC-S-2, Section V.A)
11. Solids Removal: The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters without the proper environmental permits. (Ref.: Miss. Code Ann. 49-17-29)
12. Diversion and Bypass of Air Pollution Controls: The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed except as provided for in Regulation APC-S-1, "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants", Section 10. (Ref.: APC-S-1, Section 10)
13. Fugitive Dust Emissions from Construction Activities: The construction of the stationary source shall be performed in such a manner so as to reduce fugitive dust emissions from construction activities to a minimum. (Ref.: APC-S-2, Section V.A.4)
14. Right of Entry: The permittee shall allow the Mississippi Department of Environmental Quality Office of Pollution Control and the Mississippi Environmental Quality Permit Board and/or their representatives upon presentation of credentials:
 - a) To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and
 - b) At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emissions. (Ref.: Miss. Code Ann. 49-17-21)
15. Permit Modification or Revocation: After notice and opportunity for a hearing, the Permit Board may modify the permit or revoke it in whole or in part for good cause shown including, but not limited to:
 - a) Persistent violation of any of the terms or conditions of this permit;
 - b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

- c) A change in federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

(Ref.: APC-S-2, Section II.C)

16. Public Record and Confidential Information: Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Environmental Quality, Office of Pollution Control. (Ref.: Miss. Code Ann. 49-17-39)
17. Permit Transfer: This permit shall not be transferred except upon approval of the Permit Board. (Ref.: APC-S-2, Section XVI.B)
18. Severability: The provisions of this permit are severable. If any provision of the permit, or the application of any provision of the permit to any circumstances, is challenged or held invalid, the validity of the remaining permit provisions and/or portions thereof or their application to other persons or sets of circumstances, shall not be affected thereby. (Ref. APC-S-2, Section I.D.7)
19. Permit Expiration: The permit to construct will expire if construction does not begin within eighteen (18) months from the date of issuance or if construction is suspended for eighteen (18) months or more. (Ref.: APC-S-2, Section V.C.1)
20. Certification of Construction: A new stationary source issued a Permit to Construct cannot begin operation until certification of construction by the permittee. (Ref.: APC-S-2, Section V.D.3)
21. Beginning Operation: Except as prohibited in Part I, Condition 24 of this permit, after certification of construction by the permittee, the Permit to Construct shall be deemed to satisfy the requirement for a permit to operate until the date the application for issuance or modification of the Title V Permit or the application for issuance or modification of the State Permit to Operate, whichever is applicable, is due. This provision is not applicable to a source excluded from the requirement for a permit to operate as provided by APC-S-2, Section XIII.G. (Ref.: APC-S-2, Section V.D.4)
22. Application for a Permit to Operate: Except as otherwise specified in Part I, Condition 24 of this permit, the application for issuance or modification of the State Permit to Operate or the Title V Permit, whichever is applicable, is due twelve (12) months after beginning operation or such earlier date or time as specified in the Permit to Construct. The Permit Board may specify an earlier date or time for submittal of the application. Beginning operation will be assumed to occur upon certification of construction, unless the permittee specifies differently in writing. (Ref.: APC-S-2, Section V.D.5)
23. Operating Under a Permit to Construct: Except as otherwise specified in Part I, Condition 24 of this permit, upon submittal of a timely and complete application for issuance or

modification of a State Permit to Operate or a Title V Permit, whichever is applicable, the applicant may continue to operate under the terms and conditions of the Permit to Construct and in compliance with the submitted application until the Permit Board issues, modifies, or denies the Permit to Operate. (Ref.: APC-S-2, Section V.D.6)

24. Application Requirements for a Permit to Operate for Moderate Modifications: For moderate modifications that require contemporaneous enforceable emissions reductions from more than one emission point in order to “net” out of PSD/NSR, the applicable Title V Permit to Operate or State Permit to Operate must be modified prior to beginning operation of the modified facilities. (Ref.: APC-S-2, Section V.D.7)

25. Compliance Testing: Regarding compliance testing:

- a) The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.
- b) Compliance testing will be performed at the expense of the permittee.
- c) Each emission sampling and analysis report shall include but not be limited to the following:
 - (1) detailed description of testing procedures;
 - (2) sample calculation(s);
 - (3) results; and
 - (4) comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

(Ref.: APC-S-2, Section VI.B.3, 4, and 6)

B. GENERAL NOTIFICATION REQUIREMENTS

- 1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun. (Ref.: APC-S-2, Section V.C.2)
- 2. The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more. (Ref.: APC-S-2, Section V.C.3)
- 3. Upon the completion of construction or installation of an approved stationary source or modification, the applicant shall notify the Permit Board that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board. (Ref.: APC-S-2, Section V.D.1)

4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it may require the submission of a new application to construct with “as built” plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an “as built” application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law. (Ref.: APC-S-2, Section V.D.2)

Part II.
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning June 25, 2012, the permittee is authorized to construct air emissions equipment and emit air contaminants from Emission Point AA-001, the 185,000 KW combustion turbine (CTG) set fueled by natural gas and equipped with a heat recovery steam generator with supplemental heat input (duct burner) of up to 268.0 MMBTU/hr and equipped with a Selective Catalytic Reduction (SCR) unit.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

Nitrogen Oxides	9.0 ppmvd at 15% O₂, not to exceed 77 lbs/hr based on a 3 –hour rolling average, and 337.3 tons/year based on 12 month rolling average, as determined by EPA Test Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	30.3 ppmvd at 75% load or greater, 200 ppmvd at less than 75% load, not to exceed 108 lbs/hr based on a 3-hour rolling average, and 3264 tons/year based on 12 month rolling average, as determined by EPA Test Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	9.3 ppmvd at 75% load or greater, 20 ppmvd at less than 75% load, not to exceed 18.3 lbs/hr based on a 3-hour rolling average, and 80 tons/year based on 12 month rolling average, as determined by EPA Test Method 25, 40 CFR 60, Appendix A.
Opacity	20% (6-minute average) except for one 6-minute period per hour of not more than 27%, as determined by EPA Test Method 9, 40 CFR 60, Appendix A.

OPERATIONAL RESTRICTIONS

The permittee shall comply with the limitations and monitoring requirements specified in this permit, except during periods of startups and shutdowns. However, the permittee shall meet the tons/year limitations to include emissions during periods of startup and shutdown.

Except for upsets, startups, and shutdowns, the permittee shall not operate the CTG at less than 50% load, as defined by the manufacturer.

Startup is defined as the period of time when the combustion unit initiates firing until the unit reaches 60% load, as defined by the manufacturer, not to exceed 210 minutes in duration.

Shutdown is defined as the period of operation from 50% load, as defined by the manufacturer, to the cessation of the combustion turbine firing, not to exceed 70 minutes in duration per event.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect June 25, 2012.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning June 25, 2012, the permittee is authorized to construct air emissions equipment and emit air contaminants from Emission Point AA-002, the 185,000 KW combustion turbine (CTG) set fueled by natural gas and equipped with a heat recovery steam generator with supplemental heat input (duct burner) of up to 268.0 MMBTU/hr and equipped with a Selective Catalytic Reduction (SCR) unit.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

Nitrogen Oxides	9.0 ppmvd at 15% O₂, not to exceed 77 lbs/hr based on a 3 –hour rolling average, and 337.3 tons/year based on 12 month rolling average, as determined by EPA Test Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	30.3 ppmvd at 75% or greater load, 200 ppmvd at less than 75% load, not to exceed 108 lbs/hr based on a 3-hour rolling average, and 3264 tons/year based on 12 month rolling average, as determined by EPA Test Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	9.3 ppmvd at 75% load or greater, 20 ppmvd at less than 75% load, not to exceed 18.3 lbs/hr based on a 3-hour rolling average, and 80 tons/year based on 12 month rolling average, as determined by EPA Test Method 25, 40 CFR 60, Appendix A.
Opacity	20% (6-minute average) except for one 6-minute period per hour of not more than 27%, as determined by EPA Test Method 9, 40 CFR 60, Appendix A.

OPERATIONAL RESTRICTIONS

The permittee shall comply with the limitations and monitoring requirements specified in this permit, except during periods of startups and shutdowns. However, the permittee shall meet the tons/year limitations to include emissions during periods of startup and shutdown.

Except for upsets, startups, and shutdowns, the permittee shall not operate the CTG at less than 50% load, as defined by the manufacturer.

Startup is defined as the period of time when the combustion unit initiates firing until the unit reaches 60% load, as defined by the manufacturer, not to exceed 210 minutes in duration.

Shutdown is defined as the period of operation from 50% load, as defined by the manufacturer, to the cessation of the combustion turbine firing, not to exceed 70 minutes in duration per event.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect June 25, 2012.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning June 25, 2012, the permittee is authorized to construct air emissions equipment and emit air contaminants from Emission Point AA-003, the 185,000 KW combustion turbine (CTG) set fueled by natural gas and equipped with a heat recovery steam generator with supplemental heat input (duct burner) of up to 268.0 MMBTU/hr and equipped with a Selective Catalytic Reduction (SCR) unit.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

Nitrogen Oxides	9.0 ppmvd at 15% O₂, not to exceed 77 lbs/hr based on a 3 –hour rolling average, and 337.3 tons/year based on 12 month rolling average, as determined by EPA Test Method 7, 40 CFR 60, Appendix A.
Carbon Monoxide	30.3 ppmvd at 75% or greater load, 200 ppmvd at less than 75% load, not to exceed 108 lbs/hr based on a 3-hour rolling average, and 3264 tons/year based on 12 month rolling average, as determined by EPA Test Method 10, 40 CFR 60, Appendix A.
Volatile Organic Compounds	9.3 ppmvd at 75% load or greater, 20 ppmvd at less than 75% load, not to exceed 18.3 lbs/hr based on a 3-hour rolling average, and 80 tons/year based on 12 month rolling average, as determined by EPA Test Method 25, 40 CFR 60, Appendix A.
Opacity	20% (6-minute average) except for one 6-minute period per hour of not more than 27%, as determined by EPA Test Method 9, 40 CFR 60, Appendix A.

OPERATIONAL RESTRICTIONS

The permittee shall comply with the limitations and monitoring requirements specified in this permit, except during periods of startups and shutdowns. However, the permittee shall meet the tons/year limitations to include emissions during periods of startup and shutdown.

Except for upsets, startups, and shutdowns, the permittee shall not operate the CTG at less than 50% load, as defined by the manufacturer.

Startup is defined as the period of time when the combustion unit initiates firing until the unit reaches 60% load, as defined by the manufacturer, not to exceed 210 minutes in duration.

Shutdown is defined as the period of operation from 50% load, as defined by the manufacturer, to the cessation of the combustion turbine firing, not to exceed 70 minutes in duration per event.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect June 25, 2012.

Part III.
OTHER REQUIREMENTS

- 1. The selective catalytic reduction shall be used at all times for control of NOx emissions.**
- 2. The permittee shall only burn natural gas for Emission Points AA-001, AA-002, and AA-003.**
- 3. The combustion turbines (CTG), a part of Emissions Points AA-001, AA-002, and AA-003, are subject and shall comply with all applicable requirements of the New Source Performance Standards, as described in 40 CFR 60, Subpart A-General Provisions, including Notifications and Recordkeeping as provided in 60.7, the Performance Test requirements as provided in 60.8, and the specific requirements outlined in 60.330, 40 CFR 60, Subpart GG-Standards of Performance for Stationary Gas Turbines.**
- 4. The heat recovery steam generators (HGSG), a part of Emission Points AA-001, AA-002, and AA-003, are subject to and shall comply with all applicable requirements of the New Source Performance Standards, as described in 40 CFR 60, Subpart Da-Standards of Performance for Electric Utility Steam Generating Units.**
- 5. Emission Points AA-001, AA-002, and AA-003 are subject to and shall comply with all applicable requirements of the Acid Rain Program Regulations as specified in 40 CFR 72-78.**
- 6. For Emission Points AA-001 through AA-003, the permittee shall record the hours of operation on a daily basis. For Emission Points AA-001 through AA-003, a record of all startups or shutdowns of the associated combustion turbines, duct burners, and SCR systems shall be kept and retained for a period of five (5) years and shall be made available to the Mississippi Department of Environmental Quality Office of Pollution Control, the Mississippi Environmental Quality Permit Board and/or their authorized representatives upon request. Such records shall include the time and date of such startups and shutdowns and confirmation that good air pollution control practices, as provided in this permit, were followed.**
- 7. For Emission Points AA-001, AA-002 and AA-003, permittee shall monitor quantity of fuel burned. For the firing of natural gas, as allowed by 40 CFR 60.334(h)(3), the permittee shall not be required to monitor the total sulfur content of the gaseous fuel combusted in the turbines if the gaseous fuel is demonstrated to meet the definition of natural gas in Sec. 60.331(u). The permittee shall use one of the following sources of information to make the required demonstration:**
 - a) The quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less.**

