

# **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, Moselle Plant  
308 Moselle Seminary Road  
Moselle, Jones, Mississippi

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**

**Permit Issued:** December 10, 2004

**Permit No.:** 1360-00035

**Permit Modified:** DEC 17 2009

**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 [Permit Modification Date], the permittee is authorized to construct air emissions equipment and emit air contaminants from Emission Point AA-006, the 1143.3 MMBTU/hr (HHV) natural gas-fired simple cycle combustion turbine generator (CTG) equipped with dry low NO<sub>x</sub> burners and inlet combustion air evaporative cooling.

The emission point is subject to the Acid Rain Program Regulations as specified in 40 CFR 72-78, and the permittee must comply with all applicable requirements of said standards.

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

#### EMISSIONS LIMITATIONS

Carbon Monoxide	20 PPMV at 15% oxygen on a dry basis, not to exceed 54.0 lbs/hr, both limits are based on a 3-hour block average, and 148.1 tons/year, as determined by EPA Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	9 PPMV at 15% oxygen on a dry basis, not to exceed 36.0 lbs/hr, both limits are based on a 3-hour operating rolling average, and 99.0 tons/year, as determined by the Continuous Emission Monitoring System.
Particulate Matter	10.0 lbs/hr and 27.5 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM <sub>10</sub>	10.0 lbs/hr and 27.5 tons/year as determined by EPA Test Method 201 or 201A in conjunction with Test Method 202, 40 CFR 51, Appendix M.
Opacity	10% as determined by EPA Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect [Permit Modification Date]. Unless otherwise specified above, the averaging time for the short-term limits for all pollutants will default to the averaging period that is specified in the applicable EPA Reference Methods. The short-term ppm and lb/hr limits specified above shall exclude periods during startup or shutdown. The tons/yr limits specified above shall include startup and shutdown emissions.

**Part II**  
**EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

Beginning [Permit Modification Date], the permittee is authorized to construct air emissions equipment and emit air contaminants from Emission Point AA-007, the 3.6 MMBTU/hr fuel gas heater

Such emissions shall be limited by the permittee as specified below:

EMISSIONS LIMITATIONS

Opacity	40% as determined by EPA Test Method 9, 40 CFR 60, Appendix A.
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All test methods specified above shall be those versions, or their approved equivalents, which are in effect [Permit Modification Date].



**Part III**  
**OTHER REQUIREMENTS**

1. The combustion turbine, associated with Emission Point AA-006 is subject to and shall comply with all applicable requirements of the New Source Performance Standards, as described in 40 CFR 60, Subpart A - General Provisions, and the specific requirements outlined in 60.330, Subpart GG - Standards of Performance for Stationary Gas Turbines.

Standards

- (a) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart GG, Section 60.332 and 60.333.

Monitoring Requirements

- (b) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart GG, Section 60.334 or alternative monitoring requirements subject to Mississippi DEQ and EPA approval.

Test Methods and Procedures

- (c) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart GG, Section 60.335 or alternative methods subject to Mississippi DEQ and EPA approval.
2. For Emission Point AA-006, the permittee shall demonstrate compliance with nitrogen oxides and carbon monoxide emission limitations by stack testing in accordance with EPA Reference Methods 20 and 10 respectively, and the test methods and procedures as listed in 40 CFR 60.335 or their approved equivalents. The stack test report must be submitted within 180 days of startup, but no later than 60 days of attaining maximum production rate. After the initial stack test, the permittee shall demonstrate compliance with nitrogen oxides limitations using 40 CFR Part 75 requirements for NO<sub>x</sub> monitoring and the permittee shall demonstrate compliance with CO limitations by performing biennial stack test thereafter.
3. A pretest conference at least thirty (30) days prior to the scheduled stack test date is needed to ensure that all test methods and procedures are acceptable to the Office of Pollution Control. Also, the Office of Pollution Control must be notified prior to the scheduled test date. At least TEN (10) DAYS notice should be given so that an observer may be scheduled to witness the test(s).
4. For Emission Point AA-006, the permittee shall be limited to 5,500 hours/year per turbine on a 365 day rolling total. The hours of operation include startups and

shutdowns. The permittee shall monitor and record the hours of operation on a daily basis. The permittee shall also record the number and the duration of startups and shutdowns based on a 365 day rolling total.

The permittee shall submit semi-annual reports summarizing the hours of operation for each consecutive 365-day period.

5. For Emission Point AA-006, the permittee shall demonstrate compliance with the tons/yr emission limitation for CO by using the following formula:

$$\frac{[135.3 \times \text{hours of operation in startup mode (in a 365 day rolling total)}] + [156.3 \times \text{hours of operation in shutdown mode (in a 365 day rolling total)}] + [54.0 \times \text{hours in normal operation (in a 365 day rolling total)}]}{2000}$$

The permittee shall submit semi-annual reports summarizing the tons/year of CO emitted for each consecutive 365-day period.

6. For Emission Point AA-006, The permittee shall not use any fuel other than natural gas. The permittee shall not burn any fuel which contains sulfur in excess of 2 grains per 100 dry standard cubic feet. The permittee shall demonstrate compliance with the sulfur fuel limitation by using the EPA approved custom fuel monitoring plan.
7. For Emission Point AA-007, the permittee shall not use any fuel other than natural gas.
8. For Emission Point AA-006, the permittee shall install, calibrate, maintain and operate continuous monitoring systems for NO<sub>x</sub> (as specified in 40 CFR 60.334, Appendix B of 40 CFR 60 and 40 CFR 75), and O<sub>2</sub> (as specified in 40 CFR 60, Appendix B, and 40 CFR 75). These monitoring systems must comply with all applicable requirements specified in §60.334, §60.13, and Appendix B of 40 CFR 60 and 40 CFR 75. In addition, the permittee must comply with the reporting and recordkeeping requirements specified in 40 CFR 60, §60.7 and 40 CFR 75. In accordance with 40 CFR 75.62, the permittee shall submit the monitoring plan no later than 45 days prior to the initial certification test date.
9. For Emission Point AA-006, the permittee shall operate the combustion turbines in a manner consistent with good air pollution control practices to minimize emissions during startup and shutdowns. This operation shall occur in accordance with the manufacturer's written instructions or other written instructions developed and maintained by the permittee onsite which shall include review of the operating parameters of the unit during startup or shutdowns as necessary to make adjustments to reduce or eliminate excess emissions.

10. For Emission Points AA-006, a record of all startups or shutdowns of the associated combustion turbines 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, date and duration of such startups and shutdowns and confirmation that good air pollution control practices, as provided in paragraph (9) above, were followed.
11. For Emission Point AA-006, the permittee shall submit semiannual reports providing the summary of emissions in tons/year of NO<sub>x</sub> based on CEM data for each consecutive 365-day rolling total. This report is due by January 31 and July 31 of each calendar year. All records required by this permit shall be maintained for review for at least five years from the date the report was generated.
12. Turbine Startup is defined as that period of time from initiation of combustion firing until the unit reaches 75% load.  
Turbine Shutdown is defined as the period of time from 75% load to flame-out.
13. For periods of startup, the permittee shall limit the total startup time to sixty minutes or less per occurrence.
14. For periods of shutdown, the permittee shall limit the total shutdown time to sixty minutes or less per occurrence.
15. The permittee shall submit the startup and shutdown duration information as specified in 40 CFR 60, 60.7 and 40 CFR 75.