STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Mississippi Power Company, David M Ratcliffe
5835 Highway 493
DeKalb, Mississippi
Kemper County

ULN/F6 HGP Conversion Project

has been granted permission to construct air emissions equipment to comply with the 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.

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD

_____

AUTHORIZED SIGNATURE
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued:_____ **Permit No.: 1380-00017**

Draft/Proposed

SECTION 1

A. GENERAL CONDITIONS

1. This permit is for air pollution control purposes only.

   (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.1.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.1.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(15)(b).)

8. The permit does not convey any property rights of any sort, or any exclusive privilege.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.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 11 Miss. Admin. Code Pt. 2, R. 1.10., "Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants."

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 1.10.)

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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.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.: 11 Miss. Admin. Code Pt. 2, R. 2.2.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.: 11 Miss. Admin. Code Pt. 2, R. 2.16.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.: 11 Miss. Admin. Code Pt. 2, R. 2.1.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(3).)

21. Beginning Operation: Except as prohibited in Section 1, 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 11 Miss. Admin. Code Pt. 2, R. 2.13.G.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(4).)

22. Application for a Permit to Operate: Except as otherwise specified in Section 1, 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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(5).)

23. Operating Under a Permit to Construct: Except as otherwise specified in Section 1, 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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(7).)

25. General Duty: All air emission equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

26. Deviation Reporting: Except as otherwise specified herein, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) working days of the time the deviation began.

    (Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

27. 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.: 11 Miss. Admin. Code Pt. 2, R. 2.6.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.C(3).)

3. Upon the completion of construction or installation of an approved stationary source or modification, and prior to commencing operation, 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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(1) and (3).)

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.: 11 Miss. Admin. Code Pt. 2, R. 2.5.D(2).)

SECTION 2
EMISSION POINT DESCRIPTION

The permittee is authorized to construct and operate, upon certification of construction, air emissions equipment, as described in the following table.

Emission Point	Description
AB-001	2270 MMBTU/hr Natural Gas Fired Combustion Turbine with Ultra Low NOx Burners and Heat Recovery Steam Generator with a 737 MMBTU/hr Natural Gas Fired Duct Burner. Emissions are controlled by a Selective Catalytic Reduction (SCR) unit.
AB-002	2270 MMBTU/hr Natural Gas Fired Combustion Turbine with Ultra Low NOx Burners and Heat Recovery Steam Generator with a 737 MMBTU/hr Natural Gas Fired Duct Burner. Emissions are controlled by a Selective Catalytic Reduction (SCR) unit.

SECTION 3
EMISSION LIMITATIONS AND STANDARDS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limitation/Standard
AB-001 and AB-002	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012	3.1	NOx	0.015 lb/MMBTU not to exceed 39 lbs/hr and 920 tpy, limits are based on a 24-hour operating rolling average
		3.2	CO	0.063 lb/MMBTU not to exceed 127 lbs/hr, limits are based on a 24-hour operating rolling average
		3.3	PM/PM_{10} (filterable)	0.01 lb/MMBTU not to exceed 24 lbs/hr and 228 tpy, limits are based on a 3-hour block average
		3.4	VOC	0.008 lb/MMBTU not to exceed 21 lbs/hr and 91 tpy, limits are based on a 3-hour block average
		3.5	SO_2	1.9 lbs/hr and 58 tpy based on a 3-hour block average
		3.6	Sulfuric Acid Mist	0.3 lbs/hr and 8 tpy based on a 3-hour block average
		3.7	Reduced Sulfur Compounds (RSC) including H_2S, COS, and C_2S	9.9 tpy
		3.8	Opacity	20% (six-minute average), except for one six-minute period per hour of not more than 27%
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.9	Fuel Restriction	Natural Gas Only
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012	3.10	Startup and Shutdown Provisions	Shall not use emission rates during periods of startup or shutdown for determining compliance with the short-term emission limits.
		3.11		Turbine Startup and Turbine Shutdown
	40 CFR 72 – 78	3.12	NOx and SO_2	Acid Rain
	40 CFR 96	3.13		Clean Air Interstate Rule (CAIR)

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Limitation/Standard
AB-001 and AB-002	New Source Performance Standards (NSPS) for Stationary Combustion Turbines (40 CFR 60, Subpart KKKK) 40 CFR 60.4300 and 60.4305(a)	3.14	NOx and SO_2	Applicability
	40 CFR 60.4320(a) and Table 1, Subpart KKKK	3.15	NOx	15 ppm at 15% O_2
	40 CFR 60.4330(a)(2), Subpart KKKK	3.16	SO_2	0.060 lb SO_2/MMBTU

3.1 For each Emission Point AB-001 and AB-002, the Nitrogen Oxides (NOx) emissions shall not exceed 0.015 lb/MMBTU, 39 lbs/hr, and 920 tpy. The limits are based on a 24-hour operating rolling average, as determined by EPA Test Method 7, 40 CFR 60, Appendix A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.2 For each Emission Point AB-001 and AB-002, the Carbon Monoxide (CO) emissions shall not exceed 0.063 lb/MMBTU and 127 lbs/hr. The limits are based on a 24-hour operating rolling average, as determined by EPA Test Method 10, 40 CFR 60, Appendix A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.3 For each Emission Point AB-001 and AB-002, the Particulate Matter (PM/PM_{10} (filterable)) emissions shall not exceed 0.01 lb/MMBTU, 24 lbs/hr, and 228 tpy. The limits are based on a 3-hour block average, as determined by EPA Test Methods 1-5, 40 CFR 60, Appendix A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.4 For each Emission Point AB-001 and AB-002, the Volatile Organic Compound (VOC) emissions shall not exceed 0.008 lb/MMBTU, 21 lbs/hr, and 91 tpy. The limits are based on a 3-hour block average, as determined by EPA Test Method 25A/18, 40 CFR 60, Appendix A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.5 For each Emission Point AB-001 and AB-002, the Sulfur Dioxide (SO_2) emissions shall not exceed 1.9 lbs/hr and 58 tpy. The limits are based on a 3-hour block average, as determined by fuel monitoring.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.6 For each Emission Point AB-001 and AB-002, the Sulfuric Acid Mist emissions shall not exceed 0.3 lb/MMBTU and 8 tpy. The limits are based on a 3-hour block average, as determined by fuel monitoring.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.7 For Emission Points AB-001 and AB-002, the Reduced Sulfur Compounds (RSC) including H_2S. COS, and C_2S shall not exceed 9.9 tpy. The limit is based on 3-hour block average determined by EPA Test Method 15, 40 CFR 60, Subpart A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.8 For each Emission Point AB-001 and AB-002, the opacity shall not exceed 20% (six-minute average), except for one six-minute period per hour of not more than 27%, as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.9 For Emission Points AB-001 and AB-002, the permittee shall only burn pipeline quality natural gas.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).)

3.10 For Emission Points AB-001 and AB-002, the permittee shall not use emission rates during periods of startup and shutdown for determining compliance with the short-term emission rates. However, the permittee shall use emission rates during periods of startup and shutdown for determining compliance with the long-term annual emission rates.

(Ref.: PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.11 For Emission Points AB-001 and AB-002, turbine startup is defined as the period of time when the unit initiates firing until the unit reaches 60% load. Turbine shutdown is defined as the period of time from 60% load to the cessation of turbine firing.

(Ref.: PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

3.12 For Emission Points AB-001 and AB-002, the permittee is subject to the Acid Rain Program Regulations as specified in 40 CFR 72 – 78, and the permittee shall comply with all applicable requirements of said standards.

(Ref.: 40 CFR 72 – 78)

3.13 For Emission Points AB-001 and AB-002, the permittee is subject to the Clean Air Interstate Rule (CAIR) regulations as specified in 40 CFR 96, and the permittee shall comply with all applicable requirements of said standards.

(Ref.: 40 CFR 96)

3.14 For Emission Points AB-001 and AB-002, the permittee is subject to and shall comply with all applicable requirements of New Source Performance Standards (NSPS) for Stationary Combustion Turbines (40 CFR 60, Subpart KKKK) and the General Provisions (40 CFR 60, Subpart A).

(Ref.: 40 CFR 60.4300 and 60.4305(a), Subpart KKKK)

3.15 For Emission Points AB-001 and AB-002, the permittee shall meet the applicable NOx emission limits specified in Table 1 to NSPS Subpart KKKK.

For new, modified, or reconstructed turbine firing natural gas > 850 MMBTU/hr, the NOx emissions shall not exceed 15 ppm at 15% O_2.

(Ref.: 40 CFR 60.4320 and Table 1, Subpart KKKK)

3.16 For Emission Points AB-001 and AB-002, the permittee shall not burn any fuel which contains potential sulfur emissions in excess of 0.060 lb SO_2/MMBTU heat input.

(Ref.: 40 CFR 60.4330(a)(2), Subpart KKKK)

SECTION 4
WORK PRACTICES

"THIS SECTION WAS INTENTIONALLY LEFT BLANK SINCE NO WORK PRACTICE STANDARDS APPLY TO THIS PERMIT ACTION."

SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/ Parameter	Monitoring/Recordkeeping Requirement
AB-001 and AB-002	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012	5.1		Operate in manner consistent with good air pollution control practices to minimize emissions
		5.2	Fuel Combusted	Pipeline Quality Natural Gas
		5.3	CO	Performance Testing
		5.4	VOC	
	40 CFR 60.4333(a), Subpart KKKK	5.5	NOx and SO_2	Good Air Pollution Control Practices
	40 CFR 60.4340(b)(1) and 60.4335(b), Subpart KKKK	5.6	NOx	Demonstrate compliance if not using water or steam injection
	40 CFR 60.4345, Subpart KKKK	5.7		CEMS Requirements
	40 CFR 60.4350, Subpart KKKK	5.8		Identifying Excess Emissions using CEMS data
	40 CFR 60.4355(b), Subpart KKKK	5.9		Parameter Monitoring Plan
	40 CFR 60.4365, Subpart KKKK	5.10	SO_2	Monitoring for Sulfur Content of the Fuel
	40 CFR 60.4380(b), Subpart KKKK	5.11	NOx	Excess Emissions and Monitor Downtime
	40 CFR 60.4405, Subpart KKKK	5.12		Performance Test Requirements
	40 CFR 52.21(r)(6)(iii)	5.13	NOx PM_{10} $PM_{2.5}$	Project Actual Emission Recordkeeping
	40 CFR 52.21(r)(7)	5.14		

5.1 For Emission Points AB-001 and AB-002, 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 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. The SCR system shall be operated as soon as and as long as the unit operating conditions are amenable to its effective use. The SCR system shall be maintained in accordance with written procedures developed and maintained by the permittee, and the procedures shall be reviewed at least biennially by December 31st of the respective year (e.g. December 31, 2019 and December 31, 2021).

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

5.2 For Emission Points AB-001 and AB-002, the permittee shall demonstrate compliance with the sulfur dioxide and sulfuric acid mist limitations by maintaining the following records to demonstrate the fuel is pipeline quality natural gas:

(a) The gas 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 4 ppmv (or 1 grain/100 scf equivalent) or less, or

(b) Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 4 ppmv (or 1 grain/100 scf equivalent). At a minimum, the amount of fuel sampling data specified in Section 2.3.1.4 or 2.3.2.4 of Appendix D to 40 CFR 75 is required.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

5.3 For each of the turbines (Emission Points AB-001 and AB-002), the permittee shall demonstrate compliance with CO emission limits by testing in accordance with the EPA Method 10 or an approved equivalent and submittal of a test report within 60 days after achieving the maximum power production rate and biennially thereafter by December 31st of the respective year (e.g. December 31, 2019 and December 31, 2021).

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

5.4 For each of the turbines (Emission Points AB-001 and AB-002), the permittee shall demonstrate compliance with VOC emission limits by stack testing in accordance with the EPA Method 25A/18 or an approved equivalent, and submittal of a test report within 60 days after achieving the maximum power production rate and biennially thereafter by December 31st of the respective year (e.g. December 31, 2019 and December 31, 2021).

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

5.5 For Emission Points AB-001 and AB-002, the permittee shall operate and maintain the stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(Ref.: 40 CFR 60.4333(a), Subpart KKKK)

5.6 For Emission Points AB-001 and AB-002, the permittee shall install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NO_x monitor and a diluent gas (oxygen (O_2) or carbon dioxide (CO_2)) monitor, to determine the hourly NO_x emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu).

(Ref.: 40 CFR 60.4335(b) and 40 CFR 60.4340(b)(1), Subpart KKKK)

5.7 For Emission Points AB-001 and AB-002, each NO_x diluent CEMS must be installed and certified according to Performance Specification 2 (PS 2) in appendix B to this part, except the 7-day calibration drift is based on unit operating days, not calendar days. With state approval, Procedure 1 in appendix F to this part is not required. Alternatively, a NO_x diluent CEMS that is installed and certified according to appendix A of part 75 of this chapter is acceptable for use under this subpart. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis.

(Ref.: 40 CFR 60.4345, Subpart KKKK)

5.8 For Emission Points AB-001 and AB-002, the following shall be used to identify excess emissions from the CEMs equipment data:

(a) All CEMS data must be reduced to hourly averages as specified in 40 CFR 60.13(h).

(b) For each unit operating hour in which a valid hourly average, as described in 40 CFR 60.4345(b), is obtained for both NO_x and diluent monitors, the data acquisition and handling system must calculate and record the hourly NO_x emission rate in units of ppm or lb/MMBtu, using the appropriate equation from method 19 in appendix A of this part. For any hour in which the hourly average O_2 concentration exceeds 19.0 percent O_2 (or the hourly average CO_2 concentration is less than 1.0 percent CO_2), a diluent cap value of 19.0 percent O_2 or 1.0 percent CO_2 (as applicable) may be used in the emission calculations.

(c) Correction of measured NO_x concentrations to 15 percent O_2 is not allowed.

(d) If you have installed and certified a NO_x diluent CEMS to meet the requirements of part 75 of this chapter, states can approve that only quality assured data from the CEMS shall be used to identify excess emissions under this subpart. Periods where the missing data substitution procedures in subpart D of part 75 are applied are to be reported as monitor downtime in the excess emissions and monitoring performance report required under 40 CFR 60.7(c).

(e) All required fuel flow rate, steam flow rate, temperature, pressure, and megawatt data must be reduced to hourly averages.

(f) Calculate the hourly average NO_x emission rates, in units of the emission standards under 40 CFR 60.4320, using either ppm for units complying with the

concentration limit or the equations in 40 CFR 60.4350(f) for units complying with the output based standard.

(g) For simple cycle units without heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 4-hour rolling average basis, as described in 40 CFR 60.4380(b)(1).

(h) For combined cycle and combined heat and power units with heat recovery, use the calculated hourly average emission rates from paragraph (f) of this section to assess excess emissions on a 30 unit operating day rolling average basis, as described in 40 CFR 60.4380(b)(1).

(Ref.: 40 CFR 60.4350, Subpart KKKK)

5.9 For Emission Point AB-001 and AB-002, for affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in 40 CFR 75.19 or the NO_x emission measurement methodology in appendix E to part 75, the permittee shall meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in 40 CFR 75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

(Ref.: 40 CFR 60.4355(b), Subpart KKKK)

5.10 For Emission Points AB-001 and AB-002, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. The permittee shall use one of the following sources of information to make the required demonstration:

(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet, and has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input; or

(b) Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter is required.

(Ref.: 40 CFR 60.4365, Subpart KKKK)

5.11 For Emission Points AB-001 and AB-002, the periods of excess emissions and monitoring downtime for NOx that are required to be reported in Condition 6.4 are defined below.

(a) An excess emissions is any unit operating period in which the 4-hour or 30-day rolling average NO_x emission rate exceeds the applicable emission limit in

Condition 3.15 (40 CFR 60.4320). For the purposes of this subpart, a "4-hour rolling average NO_x emission rate" is the arithmetic average of the average NO_x emission rate in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given hour and the three unit operating hour average NO_x emission rates immediately preceding that unit operating hour. Calculate the rolling average if a valid NO_x emission rate is obtained for at least 3 of the 4 hours. For the purposes of this subpart, a "30-day rolling average NO_x emission rate" is the arithmetic average of all hourly NO_x emission data in ppm or ng/J (lb/MWh) measured by the continuous emission monitoring equipment for a given day and the twenty-nine unit operating days immediately preceding that unit operating day. A new 30-day average is calculated each unit operating day as the average of all hourly NO_x emissions rates for the preceding 30 unit operating days if a valid NO_x emission rate is obtained for at least 75 percent of all operating hours.

(b) A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NO_x concentration, CO2 or O_2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if you will use this information for compliance purposes.

(c) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.

(Ref.: 40 CFR 60.4380(b), Subpart KKKK)

5.12 For Emission Points AB-001 and AB-002, if elected to install and certify a NO_x-diluent CEMS under 40 CFR 60.4345, then the initial performance test required under 40 CFR 60.8 may be performed in the following alternative manner:

(a) Perform a minimum of nine RATA reference method runs, with a minimum time per run of 21 minutes, at a single load level, within plus or minus 25 percent of 100 percent of peak load. The ambient temperature must be greater than 0 °F during the RATA runs.

(b) For each RATA run, concurrently measure the heat input to the unit using a fuel flow meter (or flow meters) and measure the electrical and thermal output from the unit.

(c) Use the test data both to demonstrate compliance with the applicable NO_x emission limit under 40 CFR 60.4320 and to provide the required reference method data for the RATA of the CEMS described under 40 CFR 60.4335.

(d) Compliance with the applicable emission limit in 40 CFR 60.4320 is achieved if the arithmetic average of all of the NO_x emission rates for the RATA runs, expressed in units of ppm or lb/MWh, does not exceed the emission limit.

(Ref.: 40 CFR 60.4405, Subpart KKKK)

5.13 For the project modified and affected emission units, the permittee shall calculate and maintain a record of the annual NOx, PM_{10}, and $PM_{2.5}$ emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after startup of the change.

(Ref.: 40 CFR 52.21(r)(6)(iii))

5.14 For Emission Points AB-001 and AB-002, the permittee shall make the information required to be documented and maintained pursuant to 40 CFR 52.21(r)(6) available for review upon a request for inspection by DEQ or the general public through DEQ pursuant to the requirements contained in 40 CFR 70.4(b)(3)(viii) of this chapter.

(Ref.: 40 CFR 52.21(r)(7))

SECTION 6
REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
AB-001 and AB-002	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012	6.1	Semi-annual Reporting
		6.2	Stack Test Protocol
		6.3	Deviation Reports
	40 CFR 60.4375(a), Subpart KKKK	6.4	Excess Emissions and Downtime Reports
	40 CFR 60.4375(b), Subpart KKKK	6.5	Performance Test Results
	40 CFR 52.21(r)(6)(v)	6.6	Project Actual Emissions Reporting

6.1 For Emission Points AB-001 and AB-002, the permittee shall submit semiannual reports providing the summary of emissions in tons/year of NOx and SO_2 based on CEMS data for each consecutive 12-month period. This report is due by January 31st and July 31st of each calendar year.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

6.2 For Emission Points AB-001 and AB-002, the permittee shall submit a written stack test protocol at least thirty (30) days prior to the scheduled test date to ensure that all test methods and procedures are acceptable to the Office of Pollution Control. The protocol shall address the conditions under which the plant will be operated during testing, and how and which operating parameters will be monitored during testing. 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).

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

6.3 For Emission Points AB-001 and AB-002, the permittee shall report all deviations from permit requirements, including those attributable to upsets, the probable cause of such deviations, and any corrective actions or preventive measures taken. Said report shall be made within five (5) days of the time the deviation began.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). and PSD Construction Permit issued October 22, 2008, modified March 9, 2010, and modified October 24, 2012)

6.4 For Emission Points AB-001 and AB-002, the permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown, and malfunction.

(Ref.: 40 CFR 60.4375(a), Subpart KKKK)

6.5 For Emission Points AB-001 and AB-002, the permittee shall submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

(Ref.: 40 CFR 60.4375(b), Subpart KKKK)

6.6 For Emission Points AB-001 and AB-002, the permittee shall submit a report to the DEQ after the end of each year during which records must be generated under 40 CFR 52.21(r)(6)(iii) setting out the unit's annual emissions during the calendar year that preceded submission of the report. This report is required for a period of five (5) years following resumption of regular operations after startup of the change and is due 60 days after each calendar year (e.g. March 1, 2019; March 1, 2020, etc.).

(Ref.: 40 CFR 52.21(r)(6)(iv))