STATE OF MISSISSIPPI
AIR POLLUTION CONTROL PERMIT

AND PREVENTION OF SIGNIFICANT DETERIORATION AUTHORITY TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Quantum Choctaw Power, LLC
740 MW Combined Cycle Power Plant
2510 Pensacola Road
Ackerman, Choctaw County, 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

Issued: **December 13, 2001** **Permit No.: 0400-00019**

Modified: **May 16, 2003 and September 4, 2009**

Transferred: FEB 1 5 2012

15884 PER20020001

Part I
GENERAL CONDITIONS

1. **Any activities not identified in the application are not authorized by this permit.**

2. **All air pollution control facilities shall be designed and constructed such as to allow proper operation and maintenance of the facilities.**

3. **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.**

4. **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.**

5. **The construction of facilities shall be performed in such a manner as to reduce both point source and fugitive dust emissions to a minimum.**

6. **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.**

7. **After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:**

   a. **Violation of any 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 any condition that required either a temporary or permanent reduction or elimination of authorized air emission.

8. 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.

9. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.

11. This permit may only be transferred upon approval of the Mississippi Environmental Quality Permit Board.

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

13. Approval to construct will expire should construction not begin within eighteen (18) months of the issuance of this permit, or should construction be suspended for eighteen (18) months.

14. Prior to startup of air emissions equipment at this source, the permittee must obtain a Permit to Operate and submit certification that construction was completed in accordance with the approved plans and specifications.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning [permit modification date], the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Emission Point AA-001, the 2737 MMBTU/hr (HHV) natural gas-fired combined cycle combustion turbine generator (CTG) equipped with dry low NOx burners. This unit will exhaust through a heat recovery steam generator (HRSG) with a supplemental heat input of 207 MMBTU/hr and equipped with a selective catalytic reduction (SCR) unit.

These emission points are 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, except during periods of startups and shutdowns. However, the permittee shall meet the tons/year emission limits to include emissions during periods of startup and shutdown.

EMISSIONS LIMITATIONS

Particulate Matter	31.1 lbs/hr and 136.2 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	31.1 lbs/hr and 136.2 tons/year, as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	4.1 lbs/hr and 18.1 tons/year, as determined by EPA Reference Method 6C, 40 CFR 60, Appendix A or an EPA approved fuel sampling and analysis program.
Nitrogen Oxides	3.5 PPMV at 15% oxygen on a dry basis, not to exceed 37.8 lbs/hr, both limits are based on a 24-hour operating rolling average, and 148.1 tons/year, as determined by EPA Reference Method 20, 40 CFR 60, Appendix A.
Carbon Monoxide	22.3 PPMV at 15% oxygen on a dry basis, not to exceed 142.6 lbs/hr, both limits are based on a 24-hour operating rolling average, and 564.2 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.

EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

(Continued)

Volatile Organic Compounds	4.0 PPMV at 15% oxygen on a dry basis, not to exceed 13.5 lbs/hr, both limits are based on a 3-hour block average, and 59.1 tons/year as determined by EPA Reference Method 25A/18, 40 CFR 60, Appendix A.
Opacity	10% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect December 13, 2001. Emission limits specified above which are based upon a rolling average shall exclude periods during startup or shutdown.

Startup and/or Shutdown Provisions

(1) Turbine Startup is defined as that period of time from initiation of firing until the unit reaches ≥ 75% normalized load for 15 minutes. Turbine Shutdown is defined as that period of time when "Normal Stop" is initiated or the load is <60% until cessation of combustion turbine firing.

(2) For periods of startup, the permittee shall limit the total startup time to eight (8) hours or less per occurrence.

(3) For periods of shutdown, the permittee shall limit the total shutdown time to three (3) hours or less per occurrence.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning [permit modification date], the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Emission Point AA-002, the 2737 MMBTU/hr (HHV) natural gas-fired combined cycle combustion turbine generator (CTG) equipped with dry low NOx burners. This unit will exhaust through a heat recovery steam generator (HRSG) with a supplemental heat input of 207 MMBTU/hr and equipped with a selective catalytic reduction (SCR) unit.

These emission points are 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, except during periods of startups and shutdowns. However, the permittee shall meet the tons/year emission limits to include emissions during periods of startup and shutdown.

EMISSIONS LIMITATIONS

Particulate Matter	31.1 lbs/hr and 136.2 tons/year, as determined by EPA Reference Methods 1-5, 40 CFR 60, Appendix A.
PM_{10}	31.1 lbs/hr and 136.2 tons/year, as determined by EPA Reference Method 201 or 201A in conjunction with Reference Method 202, 40 CFR 51, Appendix M.
Sulfur Dioxide	4.1 lbs/hr and 18.1 tons/year, as determined by EPA Reference Method 6C, 40 CFR 60, Appendix A or an EPA approved fuel sampling and analysis program.
Nitrogen Oxides	3.5 PPMV at 15% oxygen on a dry basis, not to exceed 37.8 lbs/hr, both limits are based on a 24-hour operating rolling average, and 148.1 tons/year, as determined by EPA Reference Method 20, 40 CFR 60, Appendix A.
Carbon Monoxide	22.3 PPMV at 15% oxygen on a dry basis, not to exceed 142.6 lbs/hr, both limits are based on a 24-hour operating rolling average, and 564.2 tons/year, as determined by EPA Reference Method 10, 40 CFR 60, Appendix A.

EMISSION LIMITATIONS AND MONITORING REQUIREMENTS
Continued

Volatile Organic Compounds	4.0 PPMV at 15% oxygen on a dry basis, not to exceed 13.5 lbs/hr, both limits are based on a 3-hour block average, and 59.1 tons/year as determined by EPA Reference Method 25A/18, 40 CFR 60, Appendix A.
Opacity	10% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect December 13, 2001. Emission limits specified above which are based upon a rolling average shall exclude periods during startup or shutdown.

Startup and/or Shutdown Provisions

(1) Turbine Startup is defined as that period of time from initiation of firing until the unit reaches ≥ 75% normalized load for 15 minutes. Turbine Shutdown is defined as that period of time when "Normal Stop" is initiated or the load is <60% until cessation of combustion turbine firing.

(2) For periods of startup, the permittee shall limit the total startup time to eight (8) hours or less per occurrence.

(3) For periods of shutdown, the permittee shall limit the total shutdown time to three (3) hours or less per occurrence.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning December 13, 2001, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Emission Point AA-003, the 1.3 MMBTU/hr diesel fuel-fired emergency fire pump.

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

EMISSIONS LIMITATIONS

Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect December 13, 2001.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning December 13, 2001, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Emission Point AA-004, the 12 cell mechanical draft cooling tower.

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

EMISSIONS LIMITATIONS

Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect December 13, 2001.

Part II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning May 16, 2003, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Emission Point AA-005, the 5.6 MMBTU/hr fuel gas heater.

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

EMISSIONS LIMITATIONS

Opacity	40% as determined by EPA Reference Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect May 16, 2003.

Part III
OTHER REQUIREMENTS

(1) This permit is being issued to Choctaw Gas Generation LLC located at 2510 Pensacola Road in Ackerman, MS for a contiguous and adjacent operation under common control and ownership and considered one source with Choctaw Generation Limited Partnership (CGLP), Red Hills Generation Facility located on Pensacola Road in Ackerman, MS, Air Permit Ref. 0400-00011.

(2) The combustion turbines, associated with Emission Points AA-001 and AA-002, are 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.

Monitoring Requirements

(b) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart GG, Section 60.334.

Test Methods and Procedures

(c) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart GG, Section 60.335.

(3) The duct burners, associated with Emission Points AA-001 and AA-002, are 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 Subpart Db - Standards of Performance for Electric Utility Steam Generating Units.

Standards

(a) The permittee shall comply with the standards for nitrogen oxides listed in 40 CFR 60, Subpart Db, Section 60.44b.

Monitoring Requirements

(b) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart Db, Section 60.48b.

Reporting Requirements

(c) The permittee shall comply with the requirements listed in 40 CFR 60, Subpart A, Section 60.7 and 40 CFR 60, Subpart Db, Section 60.49b.

(4) For Emission Points AA-001 and AA-002 the permittee shall not burn any fuel which contains sulfur in excess of 0.5 grains per 100 dry standard cubic foot.

(5) For Emission Points AA-001 and AA-002, the permittee shall not use any fuel other than natural gas.

(6) For Emission Points AA-001 and AA-002 the permittee shall demonstrate compliance with nitrogen oxides, volatile organic compounds, carbon monoxide, and particulate matter emission limitations by stack testing in accordance with EPA Reference Methods 20, 25A/18, 10, and 1-5 respectively, and the test methods and procedures as listed in 40 CFR 60.335 or their approved equivalents and submittal of a stack test report within 180 days of startup, but no later than 60 days of attaining maximum production rate.

(7) The permittee shall install, calibrate, maintain and operate continuous monitoring systems for NO_X (as specified in 40 CFR 60.334, Appendix B and 40 CFR 75), The 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 60.7 and 40 CFR 75.

The permittee shall install, calibrate, maintain and operate continuous monitoring systems for CO (as specified in 40 CFR 60, Appendix B and Appendix F). The CGA, RA Audits shall be conducted according to 40 CFR 60, Appendix B and F. However, the frequency of the audit shall be as specified in 40 CFR 75, Appendix B, Section 2.2. The RATA required under 40 CFR 60, Appendix F, shall be at the frequency specified in 40 CFR 75, Appendix B, Section 2.3.1 and is as follows:

A calendar quarter that does not qualify as QA operating quarter shall be excluded in determining the deadline for the next RATA. No more that eight successive calendar quarters shall elapse after the quarter in which a RATA was last performed without a subsequent RATA having been conducted. If the RATA has not been completed by the end of the eight calendar quarter since the quarter of the last RATA, then the RATA must be completed within a 720 unit (or stack) operating hour grace period following the end of the eighth successive elapsed calendar quarter. For the diluent monitors RATA may be performed annually (i.e., once every four successive QA operating quarters, rather than once every two successive QA operating quarters.

(8) The permittee shall demonstrate compliance with nitrogen oxides, and carbon monoxide emission limitations using CEMs. Demonstrating compliance with NO_X and CO limits using CEMs data in lieu of EPA Reference Methods is an acceptable practice provided that the permittee meets the guidelines established in EPA's general guidance on "Alternative Testing and Monitoring Procedures for Combustion Turbines Regulated under New Source Performance Standards". This includes use of reference method test data collected during the Relative Accuracy Test Audits (RATA) required under 40 CFR 75.

(9) These NO_X, CO, and O_2 CEM systems shall also be capable of and certified to accurately read/measure NO_X and CO concentrations to comply with the tons/year limit. Within 60 days of the date of the [**permit modification date]** modification of this permit, the permittee shall submit a data substitution protocol for the CEMs in case of malfunction to calculate the tons/year emissions for NOx and CO as specified. Within 90 days of approval of the protocol, the permittee will commence configuring the Data Acquisition Handling System (DAHS) in accordance with the approved protocol. The permittee will use this data to calculate the tons/year for NOx and CO.

(10) The permittee shall submit semiannual reports providing the summary of emissions in tons/year of NOx and CO based on CEMs 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.

(11) The permittee shall perform a one-time initial stack test for VOCs during a period of startup and a period of shutdown per EPA Reference Method 25A/18, 40 CFR 60, Appendix A.

(12) For Emission Points AA-001 and AA-002, the permittee shall monitor formaldehyde emissions by performing a one time stack test in accordance with an EPA Reference Method or any other EPA approved method within 180 days of startup. The test shall be performed while each turbine is operating at peak load conditions and without duct burning. The permittee shall submit a written test protocol at least thirty (30) days prior to the intended test date(s) to ensure that all test methods and procedures are acceptable to the DEQ. Also, the permittee shall notify the DEQ in writing at least ten (10) days prior to the intended test date(s) so that an observer may be afforded the opportunity to witness the test. The permittee shall submit a test report of the results of the stack test within forty-five (45) days of the test date.

(13) 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.

(14) The combustion turbines and duct burners associated with Emission Points AA-001 and AA-002 shall be operated in a manner consistent with good air pollution control practices to minimize emissions during startups, and shutdowns including:

(a) Operation in accordance with the manufacturer's written instructions or other written instructions developed and maintained by the permittee, which shall include at a minimum the following measures:

(i) Review of operating parameters of the unit during startups or shutdowns as necessary to make adjustments to reduce or eliminate excess emissions;

(ii) Operation of the SCR system as soon as and as long as the unit operating conditions are amenable to its effective use.

(b) Maintenance of the SCR systems in accordance with written procedures developed and maintained by the permittee, which procedures shall be reviewed at least annually.

(15) For Emission Points AA-001 and AA-002, 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 three (3) 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 were followed (i.e., manufacturer's instructions).

(16) For Emission Points AA-001 and AA-002, the permittee shall submit semi-annual reports with the startup and shutdown duration information as specified in 40 CFR 60, 60.7 and 40 CFR 75.

(17) For Emission Points AA-001 and AA-002, the permittee shall use the heat input from duct burners only during periods of the maximum capable combustion turbine output.

(18) For Emission Point AA-003, the permittee is limited to 60 hours per year routine operation on a 12 month rolling total.

(19) For Emission Points AA-003, the permittee shall submit semi-annual reports showing the hours of operation on a monthly basis and on a 12 month rolling total. Each 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 of the sampling, measurement, or report.