# 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 Generating Station 308 Moselle Seminary Road Moselle, Mississippi

Jones 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

| [ssued: |    | AUG | 1 | 7 | 2010 | _ |
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Permit No.: 1360-00035

5099 PER20090003

### 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 – Simple Cycle Operation

### 1. Emission Point Description

Beginning <u>August 17, 2010</u>, the Permittee is authorized to construct air emissions equipment and emit air contaminants from the following emission points:

Emission Point AA-008, the 1260 MMBtu/hr (HHV<sup>1</sup>) natural gas fired combustion turbine equipped with dry low NOx burners with a power output of 103 MW when operating in simple cycle mode (Facility Ref.: Unit 6).

Emission Point AA-009, the 1260 MMBtu/hr heat input (HHV) natural gas fired combustion turbine equipped with dry low NOx burners with a power output of 103 MW when operated in simple cycle mode (Facility Ref.: Unit 7).

The air emission equipment shall be constructed to comply with the short term emission limitations and monitoring requirements specified below, except during periods of startups and shutdowns. However, the tons/year emission limits shall include emissions during periods of startup and shutdown.

### 2. Emission Limitation for Emission Points AA-008 and AA-009 when operated in Simple Cycle Mode

For Emission Points, AA-008 and AA-009 operating in simple cycle mode low NOx burners shall be installed and operate as BACT for NOx

Each combustion turbine, Emissions Points AA-008 and AA-009 operated in simple cycle mode shall be limited to the following:

| Fuel Restriction | Each combustion turbine shall be limited to<br>pipeline natural gas in accordance with<br>applicable requirements of the Acid Rain<br>Program  |
|------------------|--|
| Operating Hours  | Each combustion turbine shall be limited to 2000 hours of operation per year on a twelve month rolling total.  |
| Nitrogen (NOx)   | 9 ppmvd corrected to 15% oxygen on a dry basis at 60% and greater load not to exceed 36 lb/hr, based on a 1 hour average and 41.3 tpy based on a 12 month rolling total including startup and shutdown. <sup>2</sup> |

<sup>&</sup>lt;sup>1</sup> HHV means higher heating value of fuel

<sup>&</sup>lt;sup>2</sup> ppmvd means parts per million volumetric dry basis

| Carbon Monoxide  | 20.0 ppmvd corrected to 15% oxygen on a dry basis at 80-100% load not to exceed 49 lbs/hr and  |
|--|--|
|  | 85 ppmvd corrected to 15% oxygen on a dry basis at 60-79% load not to exceed 117 lb/hr   |
|  | Total annual emissions shall not exceed 136.5 tons/year based on a 12 month rolling total and shall include operation at all loads including startup and shutdown. |
|  | All short term emission rates shall be based on a 3 hour average.  |
| Particulate Matter/PM <sub>10</sub> /PM <sub>2.5</sub> | 10 lbs/hr based on a 3 hour average and 10.9 tons/ year based on a 12 month rolling total including startup and shutdown.  |
| Opacity  | 10% as determined by EPA Test Method 9, 40<br>CFR 60, Appendix A.  |

### Part II Emission Limitations – Combined Cycle Operation

### 1. Emission Point Description

Beginning <u>August 17, 2010</u>, the Permittee is authorized to construct air emissions equipment and emit air contaminants from the following emission points:

Emission Point AA-010, the 1,260 MMBtu/hr (HHV) natural gas fired combustion turbines operated in combined cycle mode equipped with a heat recovery steam generator (HRSG), dry low NOx burner and a selective catalytic reduction (SCR) unit for control of NOx. The HRSG will also be equipped with a 267 MMBtu/hr duct burner for power augmentation.

Emission Point AA-011, the 1,260 MMBtu/hr (HHV) natural gas fired combustion turbine operated in combined cycle mode equipped with a heat recovery steam generator (HRSG), dry low NOx burner and a selective catalytic reduction (SCR) unit for control of NOx. The HRSG will also be equipped with a 267 MMBtu/hr duct burner for power augmentation.

The air emission equipment shall be constructed to comply with the short term emission limitations and monitoring requirements specified below, except during periods of startups and shutdowns. However, the tons/year emission limits shall include emissions during periods of startup and shutdown.

## 2. Emission Limitation for Emission Points AA-010 and AA-011 when operated in combined cycle mode with duct burners firing (Case 1)

Each combustion turbine operated in combined cycle mode shall be limited to the following:

| Control Equipment     | For Emission Points AA-010 and AA-011, low<br>NOx burners and Selective Catalytic Reduction<br>(SCR) shall be installed and operated at all times<br>during 60% load and above. |
|-----------------------|---|
| Fuel Restriction      | Each combustion turbine shall be restricted to pipeline natural gas in accordance with applicable requirements of the Acid Rain Program   |
| Operating Restriction | Each combustion turbine/heat recovery steam<br>generator shall fire the duct burners during periods<br>of the maximum capable combustion turbine output<br>only.                |

### A) Emissions Limitation with Duct Firing (Per Unit) – Case 1

| Operating Hours  | Each combustion turbine shall be limited to 8,760 hours of operation with duct firing  |  |  |
|--|--|--|--|
| Heat Input Restriction   | Each combustion turbine/HRSG with duct firing shall be limited to 1,538.8 MMBtu/hr heat input (HHV)  |  |  |
| Nitrogen Oxide   | 2 ppmvd at 15% oxygen on a dry basis, not to exceed 11.4 lbs/hr based on a 1 hour average  |  |  |
| Carbon Monoxide  | 28.2 ppmvd at 15% oxygen on a dry basis, not to exceed 67 lb/hr based on a 3 hour average  |  |  |
| Particulate Matter/ PM 10/PM 2.5                                 | 16.8 lbs/hr based on a 3 hour average  |  |  |
| Opacity  | 10% as determined by EPA Test Method 9, 40 CFR 60, Appendix A  |  |  |
| B) Emissions Limitations without Duct Firing (Per Unit) - Case 2 |  |  |  |
| Heat Input Restriction   | Each combustion turbine shall be limited to 1,260 MMBtu/hr (HHV)   |  |  |
| Nitrogen Oxide   | 2 ppmvd at 15% Oxygen on a dry basis at 60% and greater load, not to exceed 11.4 lbs/hr based on a 1 hour average  |  |  |
| Nitrogen Oxide   | Total annual emissions shall not exceed 75.7 tons/year including operation at all loads including duct firing and startup/shutdown events                  |  |  |
| Carbon Monoxide  | 17.5 ppmvd at 15% oxygen on a dry basis, not to exceed 48 lb/hr when operating at 100 % load   |  |  |
|  | 44 ppmvd, not to exceed 88 lb/hr when operating at 80 to 99 % load   |  |  |
|  | 106 ppmvd, not to exceed 180 lb/hr when operating at 60 to 79% load  |  |  |
| Carbon Monoxide  | Total annual emissions shall not exceed 831.5<br>tons/year including operation at all loads including<br>duct firing and startup/shutdown event. All short |  |  |

|  | term emission limitations shall be based on a 3 hour average   |
|--|--|
| Particulate Matter/PM 10/PM2.5                         | 16.8 lbs/hr based on a 3 hour average  |
| Particulate Matter/PM <sub>10</sub> /PM <sub>2.5</sub> | Total annual emissions shall not exceed 74.4 tons/year including operation at all loads, including duct firing and startup/shutdown events |
| Opacity  | 10% as determined by EPA Test Method 9, 40 CFR 60, Appendix A.   |

### 3. Combustion Turbine Startup/Shutdown Provisions for Simple Cycle and Combined Cycle Operation

The combustion turbines shall not be operate in simple cycle or combined cycle mode below 60% load, except during periods of start up and shutdown. For simple cycle and combined cycle mode, start up and shutdown shall be defined as follows:

- Each combustion turbine shall be limited to 365 startups and 365 shutdowns in one year.
- Start up is that period of time from initiation of firing (0 % load) until the unit reaches 60% load and shall end when 60% load is achieved. Turbine shutdown shall be defined as that period of time from 60% until cessation of combustion turbine firing (0% load).
- The total startup time shall be limited to 60 minutes per startup for simple cycle operation and 240 minutes per startup for combined cycle operation.
- The total shutdown time for either simple or combined cycle operation shall be limited to 60 minutes per shutdown.

### 4. Regulatory Requirements

A. The combustion turbines, associated with Emission Points AA-008, AA-009, AA 010 and AA-011 are subject to and shall comply with the New Source Performance Standards (NSPS), as described in 40 CFR Part 60, Subpart A-General Provisions, including Notification and Recordkeeping as provided in 40 CFR Section 60.7, the Performance Test Requirements as provided in 40 CFR Section 60.8, and the specific requirements outlined in 40 CFR Part 60 Subpart KKKK – Standards of Performance for Stationary Gas Turbines. The permittee shall comply with the standards, monitoring requirements, test methods, procedures and reporting requirements listed in 40 CFR 60, Subpart KKKK.

- **B.** Emission Points AA-008, AA-009, AA-010 and AA-011 are subject to and shall comply with the Acid Rain Program Regulations as specified in 40 CFR Part 72-78.
- C. Emission Points AA-008, AA-009, AA-010 and AA-011, are subject to the requirements of APC-S-1, Section 14.1 and the Clean Air Interstate Rule (CAIR) as set forth in 40 CFR 51.123, 40 CFR 51.124, 40 CFR 96.102 through 96.388. The combustion turbines shall be in compliance with all applicable requirements of the CAIR NOx Annual Trading Program, all applicable requirements of the CAIR SO2 Annual Trading Program and the NOx Ozone Season Trading Program.
- D. The duct burners associated with Emission Points AA-010 and AA-011 are subject to and shall comply with all applicable requirements of the New Source Performance Standards, as described in 40 CFR Part 60, Subpart A General Provisions and Subpart Da Standards of Performance for Electric Utility Steam Generating Units. For the duct burners, the permittee shall comply with the standards, monitoring requirements, test methods, procedures and reporting requirements of 40 CFR Part 60 Subpart Da .

## 5. Monitoring Requirements for Combustion Turbines during simple cycle, combined cycle and startup/shutdown operation

- **A.** For Emission Points AA-008, AA-009, AA-010 and AA-011, a CO Monitoring Plan shall be submitted to the MDEQ for review and approval prior to operation of the combustion turbines. This CO Monitoring Plan shall describe the work practices, parameters monitored and compliance techniques that will be employed to ensure that good combustion practices (BACT) are maintained.
- B. For Emissions Points AA-010 and AA-011 during combined cycle operation, performance testing shall be used to demonstrate compliance with the Carbon Monoxide (CO) BACT emission limitations, using EPA Reference Method 10, 40 CFR 60, Appendix A, at the following operating scenarios
  - a) combined cycle mode at 100 % load with duct firing
  - b) combined cycle mode operating at 100% load without duct firing
  - c) combined cycle mode operating at 60-79 % load without duct firing
  - d) combined cycle mode operating at 80-99% load without duct firing
  - e) combined cycle mode startup and shutdown emissions (verifying lb/startup and lb/shutdown emissions)

The performance test shall be conducted within 60 days of achieving the maximum production rate for combined cycle operation at which the combustion turbines will be operated, but not later than 180 days after initial startup of combustion turbines in combined cycle and biennially thereafter.

- C. For Emission Point AA-008 and AA-009 during simple cycle operation, performance testing shall be used to demonstrate compliance with Carbon Monoxide (CO) BACT emission limitations at 60% load, 80% load, 100% load and during startup/shutdown using EPA Reference Method 10, 40 CFR 60, Appendix A. The performance test shall be conducted within 60 days of achieving the maximum production rate for simple cycle operation at which the combustion turbines will be operated, but no later than 180 days after initial startup of combustion turbines and biennially thereafter.
- **D.** For Emissions Point AA-008, AA-009, AA-010 and AA-011, performance testing, using EPA Reference Method 20, 40 CFR 60, Appendix A, shall be used to demonstrate compliance with nitrogen oxide (NOx) limitation at 60 % and 100% load.
- E. For Emissions Point AA-008, AA-009, AA-010 and AA-011, a continuous emission monitoring system shall be used in accordance with 40 CFR Section 60.4345 and 40 CFR Part 75, to demonstrate compliance with nitrogen oxide emissions limitations. Demonstrating compliance with NO<sub>x</sub> 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 Part 75.
- **F.** For Emission Point AA-008, AA-009, AA-010 and AA-011, performance testing shall be conducted within 180 days of commencing operation to demonstrate compliance with the BACT PM/PM<sub>10</sub>/PM <sub>2.5</sub> emission limitations using method 5T, or Method 17 as applicable. The test shall be conducted during simple cycle and combined cycle mode to show compliance with each BACT limitation. EPA method 5, 40 CFR 60 Appendix A shall be used for the performance test.
- **G.** For Emission Points AA-008, AA-009, AA-010 and AA-011, duration time that the combustion units, duct burners and SCR systems engage in periods of both startups and shutdowns and confirmation that good air pollution practices were followed shall be recorded.
- H. For Emission Point AA-008, AA-009, AA-010 and AA-011, the total sulfur content in the combustion fuel shall be determined in accordance with 40 CFR 60 Subpart KKKK, Section 60.4360 or 60.4365. 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.

- **I.** For Emissions Point AA-008, AA-009, AA-010 and AA-011, the hours of operation during simple cycle mode, combined cycle mode with duct firing and combined cycle mode without duct firing shall be recorded.
- **J.** For Emission Points AA-008, AA-009, AA-010 and AA-011, the amount of time the combustion turbines operate in various operation loads shall be recorded.

### 5. Recordkeeping and Reporting Requirements for Combustion Turbines during simple cycle, combined cycle and startup/shutdown operation

- **A.** Semiannual reports providing a summary of emissions in tons/year of NOx based on CEMs data for each consecutive 365-day rolling total shall be submitted to MDEQ. This report is due by January 31 and July 31 of each calendar year.
- **B.** All records required by this permit shall be maintained for review for at least five years from the date the report was generated.
- **C.** Startup and shutdown duration information included in the reports required for 40 CFR Section 60.4340 and Section 60.4345 and 40 CFR Part 75 shall be submitted to MDEQ semi-annually.
- **D.** The data gathering from CEMS for NOx for six (6) months of normal operation shall be used to confirm the BACT limitations during startup and shutdown. The permittee shall submit this information to the agency within 90 days following this period. The CO startup/shut down emissions will be verified by a performance stack test. Stack testing for CO and CEMS data for NOx start up/shutdown shall be done for simple cycle startup/shutdown and combined cycle startup/shutdown emissions. The PSD Permit then may be revised to include any required revisions in start up/shut down provisions.
- **E.** For Emission Points AA-008, AA-009, AA-010 and AA-011 records certifying that each combustion turbine and duct burner combust only pipeline natural gas shall be kept on-site. The record shall include the heat input of the fuel combusted, the heating value and the quantity of natural gas in cubic feet burned on a monthly basis.
- **F.** The initial performance test results for NOx, CO,  $PM/PM_{10}/PM_{2.5}$  shall be submitted to MDEQ within 180 days of startup, but no later than 60 days of attaining maximum production rate.
- **G.** The semi-annual reports summarizing the hours of operation in simple cycle and combined cycle mode for each consecutive 365-day period shall be submitted to the MDEQ. During combined cycle operation, the report shall include the hours of operation with duct burners firing on a monthly basis and on a 12 month rolling total. This report shall include the maximum heat input of the combustion turbines

during this 12 month period. Each report is due by January 31 and July 31 of each calendar year.

- **H.** For the combustion turbines required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content in compliance with 40 CFR Part 60 Subpart KKKK, the permittee must submit reports of excess emissions and monitor downtime, in accordance with 40 CFR Section 60.7 (c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.
- I. A written test protocol for all stack testing shall be submitted to the MDEQ at least thirty days prior to the intended test dates to ensure that all test methods and procedures are approved. Notification in writing shall be submitted to MDEQ at least ten days prior to the intended test dates so that an observer may be afforded the opportunity to witness the test. A test report shall be submitted within sixty days of the test date. A pretest conference at least thirty (30) days prior to the scheduled 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). All test methods specified above shall be those versions, or their approved equivalents, which are in effect August 17, 2010.
- **J.** The combustion turbines and duct burners associated with Emission Points AA-010 and AA-011 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 while operating in combined cycle mode as soon as and as long as the unit operating conditions are amenable to its effective use.
  - (b) Maintenance of the SCR systems while operating in combined cycle mode shall be conducted in accordance with written procedures developed and maintained by the Permittee. These procedures shall be reviewed at least annually.

### Part II Emission Limitations

#### 1) Emission Point Description

Beginning <u>August 17, 2010</u>, the permittee is authorized to construct air emissions equipment for the emissions of air contaminants from the following emission points:

Emission Point AA-012, the 9.8 MMBtu/hr natural gas pre-heater.

Emission Point AA-013, the 9.8 MMBtu/hr natural gas pre-heater.

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

#### 2) Emission Limitation

Each pre-heater shall be limited to 9.8 MM Btu/hr heat input

Each pre-heater shall be operated with dry low-NOx burners and good combustion practices as BACT.

Each pre-heater shall fire pipeline natural gas only

Each pre-heater shall have opacity of 10% or less as determined by EPA Test Method 9, 40 CFR 60, Appendix A.

#### 3) Monitoring, Recordkeeping and Reporting for Pre-heater engines

The quantity of natural gas, in cubic feet burned in the natural gas fired pre-heater shall be recorded monthly.