

# **STATE OF MISSISSIPPI AIR POLLUTION CONTROL PERMIT**

**TO CONSTRUCT AIR EMISSIONS EQUIPMENT**

## **THIS CERTIFIES THAT**

Calgon Carbon Corporation  
13121 Webre Road  
Bay St. Louis, Mississippi  
Hancock County

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**

  
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**AUTHORIZED SIGNATURE**

**MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY**

Issued: MAR 07 2012

Permit No.: 1000-00015

**Part I.**

**A. GENERAL CONDITIONS**

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

The permittee may furnish such records directly to the Administrator along with a claim of confidentiality. (Ref.: APC-S-2, Section II.B.15(d))

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

- b) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c) A change in federal, state, or local laws or regulations that require either a temporary or permanent reduction or elimination of previously authorized air emission.

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

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

certification of construction, unless the permittee specifies differently in writing. (Ref.: APC-S-2, Section V.D.5)

23. Operating Under a Permit to Construct: Except as otherwise specified in Part I, Condition 24 of this permit, upon submittal of a timely and complete application for issuance or modification of a State Permit to Operate or a Title V Permit, whichever is applicable, the applicant may continue to operate under the terms and conditions of the Permit to Construct and in compliance with the submitted application until the Permit Board issues, modifies, or denies the Permit to Operate. (Ref.: APC-S-2, Section V.D.6)
24. Application Requirements for a Permit to Operate for Moderate Modifications: For moderate modifications that require contemporaneous enforceable emissions reductions from more than one emission point in order to “net” out of PSD/NSR, the applicable Title V Permit to Operate or State Permit to Operate must be modified prior to beginning operation of the modified facilities. (Ref.: APC-S-2, Section V.D.7)
25. Compliance Testing: Regarding compliance testing:
- a) The results of any emissions sampling and analysis shall be expressed both in units consistent with the standards set forth in any Applicable Rules and Regulations or this permit and in units of mass per time.
  - b) Compliance testing will be performed at the expense of the permittee.
  - c) Each emission sampling and analysis report shall include but not be limited to the following:
    - (1) detailed description of testing procedures;
    - (2) sample calculation(s);
    - (3) results; and
    - (4) comparison of results to all Applicable Rules and Regulations and to emission limitations in the permit.

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

## **B. GENERAL NOTIFICATION REQUIREMENTS**

1. Within fifteen (15) days of beginning actual construction, the permittee must notify DEQ in writing that construction has begun. (Ref.: APC-S-2, Section V.C.2)

2. The permittee must notify DEQ in writing when construction does not begin within eighteen (18) months of issuance or if construction is suspended for eighteen (18) months or more. (Ref.: APC-S-2, Section V.C.3)
3. Upon the completion of construction or installation of an approved stationary source or modification, the applicant shall notify the Permit Board that construction or installation was performed in accordance with the approved plans and specifications on file with the Permit Board. (Ref.: APC-S-2, Section V.D.1)
4. The Permit Board shall be promptly notified in writing of any change in construction from the previously approved plans and specifications or permit. If the Permit Board determines the changes are substantial, it may require the submission of a new application to construct with “as built” plans and specifications. Notwithstanding any provision herein to the contrary, the acceptance of an “as built” application shall not constitute a waiver of the right to seek compliance penalties pursuant to State Law. (Ref.: APC-S-2, Section V.D.2)

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

Beginning upon permit issuance, the permittee is authorized to construct and/or modify air emissions equipment for the emission of air contaminants from Emission Point AA-005, the Grinding Mill equipped with a baghouse for product recovery and particulate matter (PM) emissions control. Coal leaving the Grinding Mill is pneumatically conveyed to the baghouse.

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

EMISSION LIMITATIONS

PM/PM<sub>10</sub>/PM<sub>2.5</sub> (filterable only)    1.18 lbs/hour (3-hr average)

Opacity    40% (6-minute average)

OTHER REQUIREMENTS

The baghouse shall be operated at all times when the Grinding Mill is producing product.

TESTING REQUIREMENTS

The permittee shall demonstrate compliance with the PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and opacity limitations by performing an initial stack test in accordance with the specified test methods and the procedures outlined below:

- a. The initial performance test shall be performed within 180 days after initial start-up of the permitted equipment.
- b. The permittee shall operate the emission source as close to the maximum capacity as operating conditions allow.
- c. The permittee shall conduct the performance test using EPA Test Method 5, 201, 201A, or other EPA-approved alternative. The test method used to determine filterable PM emissions shall measure total PM mass, the mass of PM with a diameter of 10 microns and less, and the mass of PM with a diameter of 2.5 microns and less, unless the permittee chooses to assume all the total filterable PM to be 2.5 microns or less. Should the permittee use this assumption and the stack test results show total PM emissions greater than the permit limits established herein, MDEQ shall assume the emission point is out of compliance with all fractions of PM, including PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.
- d. The permittee shall conduct an opacity evaluation in accordance with EPA Test Method 9, 40 CFR Part 60, Appendix A. This evaluation shall be conducted concurrently with the particulate matter stack testing required for this emission point(s). However, if visibility or other conditions prevent the opacity

- observations from being performed concurrently with the stack testing, the permittee shall reschedule the opacity observations as soon after the stack testing as possible, but no later than thirty (30) days after.
- e. A written test protocol must be submitted at least thirty (30) days prior to the intended test date(s) to ensure that all test methods and procedures are acceptable to the MDEQ.
  - f. A notification of the scheduled test date(s) shall be submitted ten (10) days prior to the scheduled date(s) so that an observer may be afforded the opportunity to witness the test(s).
  - g. The performance test results must be submitted to MDEQ within sixty (60) days following the completion of the test.
  - h. Subsequent compliance testing shall be conducted in accordance with the testing frequency described in the Title V Permit to Operate, upon modification of the Title V to include this project.



**Part II. (continued)**  
**EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

Beginning upon permit issuance, the permittee is authorized to construct and/or modify air emissions equipment for the emission of air contaminants from Emission Point AA-006, the existing Coal Press Room and Grinding Mill Operations, with emissions venting to the existing baghouse for control of PM in this process area.

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

EMISSION LIMITATIONS<sup>1</sup>

PM/PM<sub>10</sub>/PM<sub>2.5</sub> (filterable only) 0.73 lbs/hour (3-hr average)

Opacity 40% (6-minute average)

<sup>1</sup> These emission limitations shall become effective upon certification of construction for Emission Point AA-005.

OTHER REQUIREMENTS

The baghouse shall be operated at all times when emissions may be vented to it.

TESTING REQUIREMENTS

The permittee shall demonstrate compliance with the PM limitations by performing an initial stack test in accordance with the specified test methods and the procedures outlined below:

- a. The initial performance test shall be performed within 180 days after initial start-up of the permitted equipment.
- b. The permittee shall operate the emission source as close to the maximum capacity as operating conditions allow.
- c. The permittee shall conduct the performance test using EPA Test Method 5, 201, 201A, or other EPA-approved alternative. The test method used to determine filterable PM emissions shall measure total PM mass, the mass of PM with a diameter of 10 microns and less, and the mass of PM with a diameter of 2.5 microns and less, unless the permittee chooses to assume all the total filterable PM to be 2.5 microns or less. Should the permittee use this assumption and the stack test results show total PM emissions greater than the permit limits established herein, MDEQ shall assume the emission point is out of compliance with all fractions of PM, including PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.

- d. The permittee shall conduct an opacity evaluation in accordance with EPA Test Method 9, 40 CFR Part 60, Appendix A. This evaluation shall be conducted concurrently with the particulate matter stack testing required for this emission point(s). However, if visibility or other conditions prevent the opacity observations from being performed concurrently with the stack testing, the permittee shall reschedule the opacity observations as soon after the stack testing as possible, but no later than thirty (30) days after.
- e. A written test protocol must be submitted at least thirty (30) days prior to the intended test date(s) to ensure that all test methods and procedures are acceptable to the MDEQ.
- f. A notification of the scheduled test date(s) shall be submitted ten (10) days prior to the scheduled date(s) so that an observer may be afforded the opportunity to witness the test(s).
- g. The performance test results must be submitted to MDEQ within sixty (60) days following the completion of the test.
- h. Subsequent compliance testing shall be conducted in accordance with the testing frequency described in the Title V Permit to Operate, upon modification of the Title V to include this project.

**Part II. (continued)**  
**EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

Beginning upon permit issuance, the permittee is authorized to construct and/or modify air emissions equipment for the emission of air contaminants from Emission Points AA-010 and AA-012, Carbon Activator Furnaces No. 1 and 2, respectively. Each is a multiple hearth furnace with an 18.00 MMBTU/hr low-NO<sub>x</sub>, natural gas-fired burner. This permit allows for modification of each furnace to include a new centrifugal separator to reduce and recover particulate matter, followed by a new thermal oxidizer equipped with a 10 MMBTU/hr natural gas burner for startups. Emissions from the thermal oxidizer will be vented to the existing Venturi scrubber with mist eliminators for control of PM and SO<sub>2</sub>.

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

EMISSION LIMITATIONS

PM/PM <sub>10</sub> /PM <sub>2.5</sub> (filterable + condensable)	4.0 lb/hr (3-hour average) <sup>2</sup> , not to exceed 16.63 tons/year combined limit <sup>1</sup> (12-month rolling total)
Nitrogen Oxides	10.0 lb/hr (3-hour average) <sup>2</sup> , not to exceed 70.0 tons/year combined limit <sup>1</sup> (12-month rolling total)
Sulfur Dioxide	7.0 lb/hr (3-hour average) <sup>2</sup> , not to exceed 40.0 tons/year combined limit <sup>1</sup> (12-month rolling total)
Opacity	40% (6-minute average)

<sup>1</sup> The tons/year limit is a limit on the total emissions from both AA-010 and AA-012, calculated monthly beginning upon certification of construction for the modifications to both AA-010 and AA-012.

<sup>2</sup>The lb/hr limits are individual limits for each emission point and are based on the PSD Construction Permit issued November 27, 1990.

All test methods specified above shall be those versions, or their approved equivalents, which are in effect upon permit issuance.

OTHER REQUIREMENTS

The permittee shall combust only natural gas or propane.

### TESTING REQUIREMENTS

Stack testing, as required by the Title V Operating Permit issued September 4, 2008, is waived until the initial performance test described below is performed.

The permittee shall demonstrate compliance with the PM, NO<sub>x</sub>, and SO<sub>2</sub> limitations by performing an initial stack test on both AA-010 and AA-012 in accordance with the specified test methods and the procedures outlined below:

- a. The initial performance test shall be performed within 180 days after initial start-up of the permitted equipment.
- b. The permittee shall operate the emission source as close to the maximum capacity as operating conditions allow.
- c. To determine the filterable PM emissions, the permittee shall conduct the performance test using EPA Test Method 5, 201, 201A, or other EPA-approved alternative. The test method used to determine filterable PM emissions shall measure total PM mass, the mass of PM with a diameter of 10 microns and less, and the mass of PM with a diameter of 2.5 microns and less, unless the permittee chooses to assume all the total filterable PM to be 2.5 microns or less. Should the permittee use this assumption and the stack test results show total PM emissions greater than the permit limits established herein, MDEQ shall assume the emission point is out of compliance with all fractions of PM, including PM, PM<sub>10</sub>, and PM<sub>2.5</sub>.
- d. To determine the condensable PM emissions, the permittee shall conduct the performance test using EPA Test Method 202, or other EPA-approved alternative.
- e. A written test protocol must be submitted at least thirty (30) days prior to the intended test date(s) to ensure that all test methods and procedures are acceptable to the MDEQ.
- f. A notification of the scheduled test date(s) shall be submitted ten (10) days prior to the scheduled date(s) so that an observer may be afforded the opportunity to witness the test(s).
- g. The performance test results must be submitted to MDEQ within sixty (60) days following the completion of the test.
- h. Subsequent compliance testing shall be conducted in accordance with the testing frequency described in the Title V Permit to Operate, upon issuance.

### MONITORING REQUIREMENTS

For AA-010 and AA-012, the permittee shall develop emission factors for PM, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> for each furnace. The emission factors shall be based upon the initial stack test and any other relevant operating factors and shall be expressed in mass of pollutant emitted per mass of throughput in the furnace (e.g., lb SO<sub>2</sub> per ton of coal fed to furnace). These emissions factors and the throughput of coal shall be used to determine the total monthly emissions of each pollutant limited above. The emission

factors shall be adjusted based upon additional stack testing and as needed to account for any changes to the operating conditions.

#### RECORDKEEPING REQUIREMENTS

The permittee shall maintain records of the emission factors established for each pollutant and for each furnace and the method by which they were developed. The permittee shall also maintain records of the throughput as related to the emission factors. The permittee shall calculate and record the total monthly emissions from each furnace for PM, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> and shall record the total monthly emissions from both furnaces and the 12-month rolling total, calculated monthly.

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

**Projected Actual Emissions Recordkeeping:**

- (1) For the project modified and affected emission units, the permittee shall calculate and maintain a record of the annual PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, CO<sub>2e</sub>, NO<sub>x</sub>, and CO emissions, in tons per year on a calendar year basis, for a period of ten (10) years following resumption of regular operations after startup of the change. (Ref.: 40 CFR 52.21(r)(6)(iii))
- (2) The permittee shall submit a report to the DEQ if the annual emissions, in tons per year, from the modifications allowed by this permit, exceed the baseline actual emissions (as documented in the project application), by a significant amount for any regulated NSR pollutant, and if such emissions differ from the preconstruction projection as documented and maintained in the permit application. Such report shall be submitted to the DEQ within 60 days after the end of such year. The report shall contain the following:
  - (a) The name, address, and telephone number of the major stationary source;
  - (b) The annual emissions as calculated pursuant to §52.21(r)(6)(iii); and
  - (c) Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).(Ref.: 40 CFR 52.21(r)(6)(v))
- (3) The permittee shall make the information required to be documented and maintained pursuant to §52.21(r)(6) available for review upon a request for inspection by DEQ or the general public pursuant to the requirements contained in §70.4(b)(3)(viii) of this chapter. (Ref.: 40 CFR 52.21(r)(7))

**Emission Point AA-004**

- (4) Upon certification of construction for Emission Point AA-005, Emission Point AA-004 shall no longer be a permitted emission point.