

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT**

TO CONSTRUCT AIR EMISSIONS EQUIPMENT

THIS CERTIFIES THAT

Columbus Brick Company
114 Brickyard Road
Columbus, Mississippi
Lowndes 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



AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: DEC 26 2019

Permit No.: 1680-00008

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
AA-001	11.25 MMBTU/hr natural gas-fired Tunnel Kiln No. 1 equipped with a dry limestone adsorber (DLA) (controls emissions from Kilns 1 and 2)
AA-002	11.25 MMBTU/hr natural gas-fired Tunnel Kiln No. 2 equipped with a dry limestone adsorber (DLA) (controls emissions from Kilns 1 and 2)
AA-003	54 MMBTU/hr natural gas-fired Tunnel Kiln No. 3 equipped with a dry limestone adsorber (DLA)

**SECTION 3
EMISSION LIMITATIONS AND STANDARDS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Limitation/Standard
AA-001 AA-002 AA-003	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10). (MACT-Avoidance Limits)	3.1	HCl	9.9 tons per year (12-month rolling total)
			HF	9.9 tons per year (12-month rolling total)
		3.2	HAP	Install, operate, and maintain dry limestone adsorbers by December 26, 2019

3.1 For Emission Points AA-001, AA-002, and AA-003, upon permit issuance, the permittee shall limit the total emissions of hydrochloric acid (HCl) and hydrogen fluoride (HF) to no more than 9.9 tons per year each, as determined on a monthly basis for each consecutive 12-month period. These limits include emissions during periods of startup, shutdown, and malfunction. For purposes of demonstrating compliance with these limits, the first month of the 12-month period shall be January 2020.

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

3.2 No later than December 26, 2019, the permittee shall install, maintain, and operate a dry limestone adsorber (DLA) for control of Hydrogen Fluoride (HF) and Hydrochloric Acid (HCl) from Emission Points AA-001 and AA-002. For Emission Points AA-001, AA-002, and AA-003, the permittee shall operate the dry limestone adsorbers at all times the kilns are in operation, except during startups, shutdowns, and malfunctions.

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

SECTION 4 WORK PRACTICES

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Work Practice
AA-001 AA-002 AA-003	11 Miss. Admin. Code Pt. 2, R. 2.2.B(10).	3.D.1	Push rate and DLA Inlet Temperature	Operating conditions during startups
			DLA Inlet Temperature	Operating conditions during shutdowns

4.1 For Emission Points AA-001, AA-002, and AA-003, the permittee shall establish the minimum inlet temperature for each DLA and a maximum startup push rate for each kiln that shall not be exceeded until the minimum inlet temperature is reached. During a startup, the permittee may bypass the DLA until the minimum inlet temperature is reached; however, the permittee may not exceed the maximum startup push rate during this time.

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

4.2 For Emission Points AA-001, AA-002, and AA-003, during shutdowns, kiln exhaust shall continue to be vented to the DLA until the kiln exhaust temperature falls below the minimum DLA inlet temperature. The permittee shall cease pushing loaded kiln cars in to the kiln once the kiln exhaust temperature falls below the minimum DLA inlet temperature.

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

**SECTION 5
MONITORING AND RECORDKEEPING REQUIREMENTS**

Emission Point	Applicable Requirement	Condition Number(s)	Pollutant/Parameter	Monitoring/Recordkeeping Requirement
AA-001 AA-002 AA-003	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	5.1	Fuel & Fired Brick Throughput	Recordkeeping
		5.2	HAP	Control device inspection and maintenance requirements
		5.3	HCl & HF	Performance test
		5.4	DLA Pressure Drop	Install pressure monitors for measuring pressure drop across each DLA
		5.5	DLA Pressure Drop, Limestone Feed Rate	Daily recordkeeping requirements
		5.6	Startup/Shutdown	Recordkeeping
		5.7	HCl & HF	Monthly and 12-month rolling total emissions

5.1 For Emission Points AA-001, AA-002, and AA-003, the permittee shall keep records on a monthly basis which consist of the quantity of natural gas used and tons of fired bricks manufactured.

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

5.2 For Emission Points AA-001, AA-002, and AA-003, the permittee shall perform inspections and maintenance, as needed, on each DLA in accordance with the manufacturer's recommendations. The permittee shall keep readily accessible records of the inspections and all maintenance activities completed on each DLA, as well as a copy of the manufacturer's maintenance recommendations.

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

5.3 For Emission Points AA-001, AA-002, and AA-003, the permittee shall conduct a performance test for Hydrogen Fluoride (HF) and Hydrochloric Acid (HCl) in accordance with the test methods required in Table 4 of 40 CFR 63, Subpart JJJJJ, within 180 days of issuance of this permit. During the performance test, the kilns shall be operated as close to maximum capacity as operating conditions allow. Emission Points

AA-001 and AA-002 must be operated concurrently during the testing since they vent through a common control device. The tests results shall be used to develop controlled emission factors for HF and HCl in terms of pounds of pollutant per ton of fired brick.

During the performance tests, the permittee shall monitor and record the pressure drop across the DLA, the limestone feed rate to the DLA, and fired brick throughput (in tons per hour) for each test run. The permittee shall use this data to establish a minimum pressure drop across the DLA and minimum limestone feed rate per ton of fired product to ensure proper operation of the DLA.

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

- 5.4 For Emission Points AA-001, AA-002, and AA-003, the permittee shall install, operate, and maintain pressure monitors for continuously measuring the pressure drop across each DLA. The pressure monitors shall consist of gauges with a minimum measurement sensitivity of 0.5 inch of water or transducers with a minimum measurement sensitivity of 1 percent of the pressure range. The pressure monitors and all components shall be inspected at least monthly and calibrated in accordance with the manufacturer's written instructions. Sufficient parts shall be maintained on site for routine repairs of the monitoring equipment.

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

- 5.5 For Emission Points AA-001, AA-002, and AA-003, the permittee shall record the following information on at least a daily basis:

- (a) The pressure drop across the DLA;
- (b) Whether the limestone hopper and storage bin contain adequate limestone; and
- (c) The limestone feeder setting.

In the event the pressure drop or limestone feeder setting is below the established operating value, the permittee shall determine why the parameter is below the established value and take any necessary corrective actions to return it to the acceptable value established during the performance test(s). The permittee shall keep records of all conducted monitoring and any associated corrective actions taken. These records shall include, at a minimum, the date, time, and inspector's name, as well as the date and time any corrective action is completed.

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

- 5.6 For Emission Points AA-001, AA-002, and AA-003, to comply with Conditions 4.1 and 4.2, the permittee shall develop written procedures for kiln startups and shutdowns within 60 days of permit issuance. These procedures shall specify the maximum startup push rate required to bring the kiln to proper operating temperature and the minimum DLA

inlet temperature required for proper operation and control. During startups and shutdowns, the permittee shall record the following information:

- (a) The date, time, and duration of each startup and shutdown period;
- (b) For periods of startup, the kiln push rate and kiln exhaust temperature prior to the time the kiln exhaust reaches the minimum DLA inlet temperature;
- (c) For periods of shutdown, the kiln push rate and kiln exhaust temperature after the time the kiln exhaust falls below the minimum DLA inlet temperature.

The permittee shall also develop emission factors for periods of startup, shutdown, and malfunction, when emissions are not controlled by the respective DLA. The startup, shutdown, and malfunction procedures and related records shall be maintained on site and made readily available for review upon request by DEQ personnel.

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

- 5.7 For Emission Points AA-001, AA-002, and AA-003, the permittee shall use the monthly tons of fired brick recorded in accordance with Condition 5.1 and the emission factors developed in accordance with Conditions 5.3 and 5.6 to determine the monthly emissions of HF and HCl. To demonstrate compliance with the permit limits in Condition 3.1, the permittee shall calculate the 12-month rolling total emissions on a monthly basis for each consecutive 12-month period.

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

SECTION 6 REPORTING REQUIREMENTS

Emission Point	Applicable Requirement	Condition Number(s)	Reporting Requirement
AA-001 AA-002 AA-003	11 Miss. Admin. Code Pt. 2, R. 2.9.	6.1	Semiannual reports
	11 Miss. Admin. Code Pt. 2, R. 2.2.B(11).	6.2	Reports of deviations within 5 working days
		6.3	Report results of daily monitoring, including any deviations and subsequent corrective action
		6.4	Submit test protocol 30 days prior and notify DEQ of test 10 days prior to conducting a performance test
		6.5	Reporting DLA shutdowns and time kiln(s) operated while DLA is offline
		6.6	Submit test report within 60 days of completing test
		6.7	Summarize deviations from startup / shutdown requirements
		6.8	Submit monthly and 12-month rolling total HF and HCl emissions

6.1 Beginning upon issuance of this permit and lasting until renewal of the Title V operating permit, the permittee shall submit reports of any required monitoring by July 31 and January 31 for the preceding six-month period. All instances of deviations from permit requirements must be clearly identified in such reports and all required reports must be certified by a responsible official consistent with 11 Miss. Admin. Code Pt. 2, R. 2.1.C. Where no monitoring data is required to be reported and/or there are no deviations to report, the report shall contain the appropriate negative declaration. These reports shall be submitted in conjunction with the routine reports required by the Operating Permit.

(Ref.: 11 Miss. Admin. Code Pt. 2, R. 2.9.)

6.2 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(11).)

6.3 For Emission Points AA-001, AA-002, and AA-003, in accordance with Condition 6.2, the permittee shall submit a report of the daily monitoring conducted in accordance with Condition 5.5. The report shall clearly identify any deviations from the minimum pressure drop and limestone feed rates established in accordance with Condition 5.3, the

corrective action taken, and the date and time the pressure drop and/or feed rate returned at or above the acceptable value(s).

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

- 6.4 For Emission Points AA-001, AA-002, and AA-003, with regards to performance testing required by Condition 5.3, 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 DEQ. The protocol shall also address monitoring of the control device and production data as required to establish the minimum pressure drop and limestone feed rate for determining adequate control of emissions. 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.

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

- 6.5 In accordance with Condition 6.2, for Emission Points AA-001, AA-002, and AA-003, the permittee shall submit a report of the date, time, and reason the DLA was shut down and restarted and shall identify the kiln that was operating and number of hours the kiln operated while the DLA was offline.

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

- 6.6 For Emission Points AA-001, AA-002, and AA-003, the permittee shall report the results of the performance test(s) required by Condition 5.3 to DEQ within 60 days following the completion of the performance test(s). This report shall also contain the minimum pressure drop and limestone feed rate established for each DLA.

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

- 6.7 For Emission Points AA-001, AA-002, and AA-003, the permittee shall summarize any time a kiln startup or shutdown does not comply with the requirements of Conditions 4.1 and 4.2.

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

- 6.8 For Emission Points AA-001, AA-002, and AA-003, the permittee shall submit in accordance with Condition 6.1 the monthly emissions, in tons, of HF and HCl, including the emission factors used, monthly tons of brick fired, and hours any kiln operated without the respective DLA in operation. The permittee shall also submit the 12-month rolling total emissions for each month, as determined in accordance with Condition 5.7.

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