

Facility Name: **Boral Bricks, Augusta Plant 6**  
 City: Augusta  
 County: Richmond  
 AIRS #: 04-13-24500024

Application #: TV-19384  
 Date Application Received: December 17, 2009  
 Permit No: 3251-245-0024-V-04-0

<b>Program</b>	<b>Review Engineers</b>	<b>Review Managers</b>
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## Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Boral Bricks, Augusta Plant 6** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

## I. Facility Description

### A. Facility Identification

1. Facility Name: Boral Bricks, Augusta Plant 6
2. Parent/Holding Company Name  
Boral Bricks, Inc.
3. Previous and/or Other Name(s)

The facility was originally designated as Georgia Carolina Brick & Tile Company having been permitted on November 15, 1973 (No. 3251-121-664-C). On August 5, 1974, a construction and operation permit (No. 3251-121-1854-0) was issued for the entire facility. On February 27, 1978, an Air Quality Permit (No. 3251-121-6035-0) was issued for the facility under the name Merry Companies, Incorporated with no mention of any name change or permit revocation. Permit No. 3251-121-12010 dated July 11, 1996 was issued changing the name to Boral Bricks, Augusta Plant 6 and revoking permit No. 3251-121-6035-0.

4. Facility Location

1449 Doug Barnard Parkway  
Augusta, Georgia 31902

5. Attainment, Non-attainment Area Location, or Contributing Area

The facility is located in an attainment area.

### B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

### C. Existing Permits

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/Effectiveness	Purpose of Issuance
3251-245-0024-V-03-0	June 14, 2005	Renewal

#### D. Process Description

1. SIC Codes(s): 3251

2. Description of Product(s)

The operation of clay brick manufacturing facility.

3. Overall Facility Process Description

Boral Bricks, Augusta Plant 6, manufactures facing brick using clay, sawdust, and other body additives. Clay is mined from a nearby mining site and is delivered to the plant by truck. Green sawdust is also delivered to the plant by trucks. The sawdust is unloaded into a covered Clay Preparation/Raw Material Storage Building. The clay is unloaded into a clay receiving hopper/feeder which is located in the covered Clay Receiving Building. From the receiving feeder, the clay is carried by conveyor to a disintegrator in the same building. A belt conveyor and shuttle conveyor transport the clay to the covered stockpile area in the Clay Prep/Raw Material Storage Building, where it is stockpiled along with the green sawdust. As needed, the clay and sawdust are loaded into one of two feeders. The clay feeder, along with a manganese additive feeder, deposits raw material on one common belt conveyor. The blend is then conveyed through two roll crushers (specifically a disintegrator and smooth roll crusher). After being processed, the material enters a surge hopper to provide a buffer for manufacturing. The green sawdust is deposited on the belt exiting the surge bin. The clay receiving and clay preparation equipment are contained in two separate and covered buildings.

Clay used for surface coating is received in a separate covered building via a dump truck into a feeder for a hammermill. The finely ground material is deposited from the hammermill into pans which are then transported by forklift to be mixed with water and/or other additives for use as a surface coating on the brick. The hammermill in this building is maintained under vacuum and vented to a dust collector.

Upon demand from the manufacturing building, the clay preparation equipment starts up and processed raw materials are fed by conveyor to the manufacturing building. In the manufacturing building, clay enters a pug mill where water may be added depending on the moisture content of the clay. "Pugged" clay is then extruded in a column. Facial colorants are added to some products. These colorants typically consist of sand coatings mixed with other additives. The sand coatings are prepared off site. Emissions from the sand coating operation on the manufacturing line are controlled by a dust collector. This collector exhausts indoors.

After being sand coated and textured, the extruded column is subsequently cut into green brick. Green brick is stacked on kiln cars and placed in a holding room where the moisture content is typically lowered slightly. There is one stack where the air is vented into the atmosphere. From the holding room, kiln cars are moved to one of six dryers. The purpose of the dryer is to further reduce the moisture content of the bricks. The holding room and dryers are heated with waste heat from the cooling section of the kiln.

Finally, dried brick are moved from each set of three dryers to one of two identical tunnel kilns. Final evaporation of free water, dehydration, oxidation, vitrification, flashing, and cooling of bricks occurs in the kiln. The primary fuel of the kiln is natural gas while propane is used as a secondary fuel. Exhaust from the kilns exit respective stacks. Brick exiting the kiln are packaged and moved to outside storage prior to distribution.

#### 4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

### E. Regulatory Status

#### 1. PSD/NSR

The facility is not subject to PSD.

#### 2. Title V Major Source Status by Pollutant

**Table 2: Title V Major Source Status**

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓	✓		
PM <sub>10</sub>	✓	✓		
SO <sub>2</sub>	✓	✓		
VOC	✓			✓
NO <sub>x</sub>	✓			✓
CO	✓	✓		
TRS				
H <sub>2</sub> S				
Individual HAP	✓	✓		
Total HAPs	✓	✓		

#### 3. MACT Standards

The source is major for HAPs but was never subject to the Brick and Structural Clay Products MACT (40 CFR 63 Subpart JJJJ). Tunnel Kiln C (EU02) and Tunnel Kiln D (EU03) have a production rate below the 10 ton/hr 40 CFR 63, Subpart JJJJ MACT requirement. Tunnel Kiln C (EU02) and Tunnel Kiln D (EU03) have production rates of 9.4 tons/hr and 9.2 tons/hr, respectfully.

#### 4. Program Applicability (AIRS Program Codes)

<b>Program Code</b>	<b>Applicable (y/n)</b>
Program Code 6 - PSD	no
Program Code 8 – Part 61 NESHAP	no
Program Code 9 - NSPS	yes
Program Code M – Part 63 NESHAP	no
Program Code V – Title V	yes

## Regulatory Analysis

### II. Facility Wide Requirements

- A. Emission and Operating Caps:  
None applicable.
- B. Applicable Rules and Regulations  
None applicable.
- C. Compliance Status  
Not applicable..
- D. Operational Flexibility  
None applicable.
- E. Permit Conditions  
None applicable.

### III. Regulated Equipment Requirements

#### A. Brief Process Description

A brief process description is specified in the narrative for Title V Permit No. 3251-245-0024-V-03-0. Minor changes have been made to clarify the process, please refer to this narrative for Title V Permit No. 3251-245-0024-V-03-0

#### B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
EU02	Tunnel Kiln C	3.2.1, 3.4.1, 3.4.2, 3.4.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	None	None
EU03	Tunnel Kiln D	3.2.1, 3.4.1, 3.4.2, 3.4.3, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	None	None
SH	Surge Hopper	3.3.1, 3.3.2, 3.4.1, 5.2.1, 6.1.7	391-3-1-.02(2)(e) 40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	None	None
C7	Belt Conveyor	3.3.1, 3.3.2, 3.4.1, 5.2.1, 6.1.7	391-3-1-.02(2)(e) 40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	None	None
C8	Belt Conveyor	3.3.1, 3.3.2, 3.4.1, 5.2.1, 6.1.7	391-3-1-.02(2)(e) 40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	None	None
C9	Belt Conveyor	3.3.1, 3.3.2, 3.4.1, 5.2.1, 6.1.7	391-3-1-.02(2)(e) 40 CFR 60 Subpart A 40 CFR 60 Subpart OOO	None	None

\* Generally applicable requirements contained in this permit may also apply to emission units listed above.

#### C. Equipment & Rule Applicability

Equipment and Rule Applicability specified in Permit No. 3251-245-0024-V-02-0 is discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

##### Emission and Operating Caps:

Emission and Operating Caps specified in Permit No. 3251-245-0024-V-03-0 are discussed in the Title V permit narrative for this permit. Please refer to this narrative. Only the reference to avoidance of the MACT has been changed to a state rule reference in Condition 3.2.1.

##### Rules and Regulations Assessment:

Rules and Regulations Assessment specified in Permit No. 3251-245-0024-V-03-0 is discussed in the Title V permit narrative for this permit. Please refer to this narrative.

D. Compliance Status

Boral did not report any non-compliance in their Title V application.

E. Operational Flexibility

None applicable.

F. Permit Conditions

Permit Conditions specified in Permit No. 3251-245-0024-V-03-0 are discussed in the Title V permit narrative for this permit. Please refer to this narrative. Condition 3.2.1 had a compliance action date of May 16, 2006. The date has been removed but the company must still comply with the condition. The new NSPS OOO that was amended on April 28, 2009 has been inserted to Condition 3.3.2.

**IV. Testing Requirements (with Associated Record Keeping and Reporting)****A. General Testing Requirements**

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

**B. Specific Testing Requirements****1. Individual Equipment**

The general NSPS OOO reporting requirement (40 CFR 60.8) for new and modified equipment has been added to Condition 4.2.1.

**2. Equipment Groups (all subject to the same test requirements):**

None applicable.

**V. Monitoring Requirements****A. General Monitoring Requirements**

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

**B. Specific Monitoring Requirements**

Specific Monitoring Requirements specified in Permit No. 3251-245-0024-V-03-0 are discussed in the Title V permit narrative for this permit. Please refer to this narrative.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

**VI. Record Keeping and Reporting Requirements****A. General Record Keeping and Reporting Requirements**

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

**B. Specific Record Keeping and Reporting Requirements**

Record keeping and reporting requirements specified in Permit No. 3251-245-0024-V-03-0 are discussed in the Title V permit narrative for this permit. Please refer to this narrative. Conditions 6.1.7iii and 6.2.1-6.2.3 had a compliance action date of May 16, 2006. The date has been removed but the company must still comply with these conditions.

**VII. Specific Requirements**

## A. Operational Flexibility

- No specific operational flexibility provisions are included in the Title V permit. The applicant did not include any alternative operating scenarios in their Title V application.

## B. Alternative Requirements

- There are no alternative requirements that need to be incorporated into the Title V permit.

## C. Insignificant Activities

Refer to <http://airpermit.dnr.state.ga.us/GATV/default.asp> for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

## D. Temporary Sources

Boral Bricks has not made a request to operate any temporary sources.

## E. Short-Term Activities

Boral Bricks did not report any short-term activities.

## F. Compliance Schedule/Progress Reports

None applicable.

## G. Emissions Trading

None applicable.

## H. Acid Rain Requirements

None applicable.

## I. Stratospheric Ozone Protection Requirements

None applicable.

J. Pollution Prevention

Not applicable.

K. Specific Conditions

None.

**VIII. General Provisions**

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.