

Facility Name: **General Shale Brick, Inc. – Plant 40**
 City: Coosa
 County: Floyd
 AIRS #: 04-13-115 00105

Application #: TV-16305
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 Date Application Deemed
 Administratively Complete: July 21, 2005
 Date of Draft Permit:
 Permit No: 3251-115-0105-V-02-0

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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 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 Amendments of 1990. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Chapter I 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 **General Shale Brick, Inc. – Plant 40** 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: **General Shale Brick, Inc. – Plant 40**

2. Parent/Holding Company Name: Wienerberger Group

3. Previous and/or Other Name(s)

None.

4. Facility Location

121 Turners Bend Road
Coosa, Georgia (Floyd County)

5. Attainment or Non-attainment Area Location

The facility is not located in a non-attainment area.

6. Class I Area Impacts

The facility is located within 100 km of Class I areas; Sipsey Wilderness Area, and Cohutta Wilderness Area. The facility is located within 200 km of the Great Smoky National Park.

B. Site Determination

There are no site determination issues associated with this facility.

C. Existing Permits**Table 1: List of Current Permits as Amended**

Permit Number and/or Purpose of Issuance	Date of Issuance and Date of Amendments (if any)	Comments	
		Yes	No
3251-115-0105-S-01-0	July 31,2003	X	

Table 2: Comments on Specific Permits

Permit Number	Comments
3251-115-0105-S-01-0	Synthetic Minor Permit

D. Process Description

1. SIC Codes(s): 3251

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility manufactures and processes clay bricks.

3. Overall Facility Process Description

Kiln K1

"Green" brick from the Millroom are stacked on kiln cars and placed in the Predryer section of the kiln where the moisture content of the green brick is lowered slightly. From the Predryer, the kiln cars are moved to the Dryer section of the kiln for further moisture removal. The Predryer is heated with hot air from the cooling section of the kiln. Dried brick are moved from the Dryer to the Tunnel Kiln (K1). Airflow in this portion of the kiln (preheat) is in the opposite direction of the kiln car movement until the end of the firing zone. The kiln exhaust, which is eventually fed into a scrubber, is in the preheat area of the kiln. Kiln temperatures slowly rise as the kiln cars approach the firing zone and transfer pulverized coal into the kiln where the coal ignites nearly instantaneously. Temperatures can rise as high as 2,000 degrees Fahrenheit. Following the combustion zone, running clean ambient air over the brick slowly cools the brick. As mentioned earlier, this air is eventually recycled into the predryer and dryer sections of the kiln. In addition, airflow in the cooling zone is now in the direction of the kiln car movement. After the finished product is allowed to cool, it is stored for resale.

Kiln K2

"Green" brick from the Millroom are stacked on kiln cars and placed in the Predryer section of the kiln where the moisture content of the green brick is lowered slightly. From the Predryer, the kiln cars are moved to the Dryer section of the kiln for further moisture removal. The Predryer is heated with hot air from the cooling section of the kiln. Dried brick are moved from the Dryer to the Tunnel Kiln (K2). Airflow in this portion of the kiln (preheat) is in the opposite direction of the kiln car movement until the end of the firing zone. The kiln exhaust, which is eventually fed into a scrubber, is in the preheat area of the kiln. Kiln temperatures slowly rise as the kiln cars approach the firing zone and transfer pulverized coal into the kiln where the coal ignites nearly instantaneously. Temperatures can rise as high as 2,000 degrees Fahrenheit. Following the combustion zone, running clean ambient air over the brick slowly cools the brick. As mentioned earlier, this air is eventually recycled into the predryer and dryer sections of the kiln. In

addition, airflow in the cooling zone is now in the direction of the kiln car movement. After the finished product is allowed to cool, it is stored for resale.

Millroom (MR)

Raw material that has been ground and screened is transferred into the Millroom (MR), where additives are introduced into the material along with water. This material is then extruded through a brick machine into a column of brick. Sand is applied if needed, to the outside of the column of brick and conveyed to a wire cutter (please note that the sand is stored in a silo (SD)). The column is then cut into individual "green" brick. Robots stack the individual "green" brick onto kiln cars for drying. The millroom is totally enclosed within a building, and the baghouse exhausts to the outside atmosphere. This baghouse exists primarily for health and safety purposes, and the material captured by the baghouse is recycled back into the raw material and is made into brick.

Sand Application (SD)

Sand is stored in the silo (SD). The only air emissions that occur from this silo are during filling operations.

Coal System (CS)

Our primary fuel is coal, which is supplemented by natural gas. Gas is needed to maintain temperatures in the Kilns high enough to ensure complete coal combustion. The bulk of our coal is stored on a concrete pad. When needed, coal is transferred via a front-end loader to a covered storage area and fed into a hopper. Coal is then conveyed into the Coal System (CS) where it is ground into a fine material. A baghouse controls air emissions from this system with any captured coal dust being fed back into the Kilns. This baghouse exhausts to the outside atmosphere. Please note that plant drawings will show multiple stacks. These other stacks do not exhaust any pollutants.

Grinding Room (GR)

Raw material (clay/shale) is trucked to the site and stockpiled near the Grinding Room (GR). When needed, a front-end loader transfers raw material from the stockpile into a hopper at the front of the Grinding Room. Material is ground and screened by the Grinder, Hammermill and screens. Dust is controlled by the inherent moisture content of the raw material and the total enclosure of the grinding room equipment within a four-sided building.

4. Overall Process Flow Diagram (optional)

See application.

E. Regulatory Status

1. PSD/NSR

PSD/NSR - Floyd County is nonattainment for particulate matter less than 2.5 microns (PM_{2.5}). The facility is not subject to PSD/NSR review. The permit has limits to ensure the facility is not a major source as defined in the 40 CFR Part 52.21 *Prevention of Significant Deterioration*

(PSD). General Shale Brick, Inc. – Plant 40 is in attainment for all National Ambient Air Quality Standards (NAAQS). Therefore, non-attainment portion of New Source Review (NSR) contained in the 40 CFR Part 52 does not apply. The potential emissions have been calculated based on physical, operational, and permit limitations at this facility, and determined to be as follows:

Pollutant Potential Emissions (ton/yr)

Particulate Matter (PM)	<100
Sulfur Dioxide (SO ₂)	<250
Nitrogen Oxide (NO _x)	<250
Ozone – Volatile Organic Compounds (VOC)	<10
Carbon Monoxide (CO)	< 250

TRS and H₂S emissions are reported to be less than 100 tons per year. Single HAPs are shown to be less than 10 tons per year and combination of HAPs is shown to be less than 25 tons per year.

2. Title V Major Source Status by Pollutant

Table 3: 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 ₁₀	✓			✓
SO ₂	✓	✓		
VOC	✓			✓
NO _x	✓	✓		
CO	✓	✓		
TRS	✓			✓
H ₂ S	✓			✓
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

The source is not a major for HAPs due to the addition of control devices KS1 and KS2 and thus is not subject to the Brick and Structural Clay Products MACT (40 CFR 63 Subpart JJJJ).

4. Program Applicability

Program Code	Applicable (y/n)
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
The facility manufactures and processes clay bricks.

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
K1	Kiln 1	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.5, 6.1.7, 6.2.3	KS1	Procedair All-Dry Scrubbing System and Baghouse
K2	Kiln 2	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.2, 4.2.3, 5.2.1, 5.2.2, 5.2.3, 5.2.5, 6.1.7, 6.2.3	KS2	Dustex Dry Lime Scrubber and Baghouse
CS	Coal System	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(n)	3.4.1, 3.4.2, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 5.2.4, 6.1.7, 6.2.2	CB1	Coal Handling Baghouse
SD	Sand Silo	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.4.1, 3.4.2, 3.5.1, 3.5.2, 5.2.2, 5.2.3, 6.1.7	SB1	Silo Bin Vent
MR	Millroom	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.2, 5.2.3, 6.1.7	MB1	Millroom Baghouse
Grinding Room (GR)					
	Stedman Grand Slam, Hammermill	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	(2) Scalping Screens 5x10 Triple Deck Midwestern	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	Finish Screens 5x10 Double Deck Midwestern,	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	Conveyor from hopper to Stedman	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	30" Screen Feed Conveyor	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	24" Tailings Conveyor	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	24" Hammermill Feed Conveyor	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	24" Product Conveyor	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None
	Trampoline Conveyor	NSPS OOO 40 CFR 60 Subpart A 391-3-1-.02(2)(e)	3.3.1, 3.3.2, 3.4.1, 3.4.2, 3.5.1, 3.5.2, 4.2.1, 5.2.4, 6.1.7	N/a	None

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

C. Equipment & Rule Applicability

Since Kiln K1 and Kiln K2 are subject to Georgia Rule (e), they are also subject to Georgia Rule (b) for opacity. Kiln K1 and Kiln K2 burn coal and therefore are subject to Georgia Rule (g) for sulfur dioxide. General Shale has requested a more stringent sulfur limit (1.0 percent sulfur by weight) to stay below the PSD 250 ton threshold. Hence, Georgia Rule (g) (2.5 percent sulfur by

weight) is subsumed into this lower limit. Emissions of sulfur dioxide (SO₂) were calculated by making the assumption that all of the sulfur in the coal is converted into SO₂. This is a reasonable assumption, but does not take into account sulfur that may occur in the raw materials. Variations of sulfur in the clay can make a calculation of uncontrolled SO₂ emissions difficult. However, emissions from Kiln K1 and Kiln K2 will be controlled by the **Procedair All-Dry Scrubbing System (KS1) and Dustex Dry Lime Scrubber (KS2)**. With 60 percent control, which the scrubber manufacturer has guaranteed based on prior permitting activities; emissions of SO₂ for the entire facility should be **130.6 tons per year**. General Shale expects actual removal to be from 65 up to 70 percent. Condition 4.2.3 requires an initial test for SO₂ on each kiln. Potential SO₂ emissions from each kiln should be well below 100 tons under any circumstances.

Kiln 1 (K1)

Maximum Coal Usage per Year: 8,160 tons/yr

Sulfur Content: 1% sulfur

Assume 100% of sulfur content becomes SO₂

Note: (1 tons of sulfur becomes 2 tons of SO₂)

Assume 60% control efficiency

K1 Sulfur Emissions:

$$(8,160 \text{ tons/yr}) * (.01) * (2 \text{ lb SO}_2 / \text{lb S}) = 163.2 \text{ tons/yr}$$

$$\text{With Controls } 163.2 \text{ tons/yr} * (1 - .60) = \underline{65.3 \text{ tons/yr}}$$

Kiln 2 (K2)

Maximum Coal Usage per Year: 8,160 tons/yr

Sulfur Content: 1% sulfur

Assume 100% of sulfur content becomes SO₂

Note: (1 tons of sulfur becomes 2 tons of SO₂)

Assume 60% control efficiency

K2 Sulfur Emissions:

$$(8,160 \text{ tons/yr}) * (.01) * (2 \text{ lb SO}_2 / \text{lb S}) = 163.2 \text{ tons/yr}$$

$$\text{With Controls } 163.2 \text{ tons/yr} * (1 - .60) = \underline{65.3 \text{ tons/yr}}$$

Total Facility Uncontrolled Sulfur Emissions: K1 + K2 = 326.4 tons/yr

Total Facility Controlled Sulfur Emissions: 326.4 tons/yr* (1 - .60) = 130.6 tons/yr

**PTE based on Condition 3.2.4: 2 kilns (22.7 lb/hr) = 199 tons/yr*

Millroom (MR), Coal System (CS), and Sand Silo (SD) are all subject to Georgia Rule (e). The Millroom (MR) equipment consists of the following: Stedman Grand Slam, Hammermill, (2) Scalping Screens 5x10 Triple Deck Midwestern, Finish Screens 5x10 Double Deck Midwestern, Conveyor from hopper to Stedman, 30" Screen Feed Conveyor, 24" Tailings Conveyor, 24" Hammermill Feed Conveyor, 24" Product Conveyor, Trampolin Conveyor. All of the Millroom equipment is enclosed within a building. Hammermill, (2) Scalping Screens 5x10 Triple Deck Midwestern, Finish Screens 5x10 Double Deck Midwestern, Conveyor from hopper to Stedman, 30" Screen Feed Conveyor, 24" Tailings Conveyor, 24" Hammermill Feed Conveyor, 24" Product Conveyor, Trampolin Conveyor are subject to the NSPS for Non-Metallic Mineral

Processing Plants (40 CFR 60 Subpart OOO. However, the particulate matter emissions standard of Subpart OOO does not apply to any of the aforementioned equipment because the emissions are not vented from a stack. However, these units with Subpart OOO PM limits are part of the process that includes other emission units subject to Rule (e) and would therefore need to be included with any Rule (e) compliance determination.

Condition 3.2.2 requires General Shale not discharge or cause the discharge into the atmosphere from the entire facility any single hazardous air pollutants that equal to or exceeding 0.060 pounds of Hydrogen Fluoride (HF) per ton of brick processed, or 0.060 pounds of Hydrogen Chloride (HCl) per ton of brick processed, and 0.150 pounds of total combination of HAPs per ton of brick processed. This is to avoid 40 CFR 63 Subpart JJJJ. The calculation limits are as follows:

Single hazardous air pollutants

Limit not to equal or exceed: 0.060 pounds of Hydrogen Fluoride (HF) per ton of brick

Limit not to equal or exceed: 0.060 pounds of Hydrogen Chloride (HCl) per ton of brick

Total HAP combination

Limit not to equal or exceed: 0.150 pounds HAPs per ton of brick

$(0.060 \text{ lbs HF/ton Brick}) * (328,500 \text{ ton Brick/yr}) * (1 \text{ ton/ } 2,000 \text{ lbs.}) = 10 \text{ tons/yr}$

$(0.060 \text{ lbs HCl/ton Brick}) * (328,500 \text{ ton Brick/yr}) * (1 \text{ ton/ } 2,000 \text{ lbs.}) = 10 \text{ tons/yr}$

$(0.150 \text{ lbs HAPs/ton Brick}) * (328,500 \text{ ton Brick/yr}) * (1 \text{ ton/ } 2,000 \text{ lbs.}) = 25 \text{ tons/yr}$

D. Compliance Status

General Shale Brick did not report any non-compliance in their Title V application. This has been confirmed with SSCP.

E. Operational Flexibility

None applicable.

F. Permit Conditions

In Condition 3.2.1, General Shale Brick has requested for a brick production limit for the entire facility at 328,500 tons per twelve consecutive months. The production limit is requested in order to avoid PSD and MACT. Sulfur dioxide emissions will be limited to less than 250 tons per year. Single and combinations of HAPs will be limited to less than 10 and 25 tons per year respectfully. General Shale Brick must keep monthly brick production records for each kiln, and use these records to calculate the monthly production for the facility and a rolling twelve-month total.

Since, General Shale Brick has installed a control device to limit their hydrogen fluoride (HF) and hydrogen chloride (HCl) emissions below the major source threshold for HAPs, Condition 3.2.2 limits the discharge or cause of discharge into the atmosphere from the entire facility any single hazardous air pollutant which is listed in Section 112 of the Clean Air Act, specifically an amount equal to or exceeding 0.060 pounds of Hydrogen Fluoride (HF) per ton of brick

processed or 0.060 pounds of Hydrogen Chloride (HCl) per ton of brick processed, or any combination of such listed pollutants in amount equal to or exceeding 0.150 lbs/hr per ton of brick processed. This condition in conjunction with 3.2.1 will assure avoidance of the Brick and Structural Clay Products MACT (40 CFR 63 Subpart JJJJ).

Condition 3.2.3 limits General Shale Brick from not firing any coal containing more than 1.0 percent sulfur, by weight. This condition in conjunction with 3.2.1 will assure avoidance of PSD.

Condition 3.2.4 limits SO₂ emissions from either Kiln K1 or Kiln K2 to less than 22.7 pounds per hour. This condition is to avoid the PSD provisions and the provisions of CAM.

Conditions 3.3.1 and 3.3.2 contain NSPS provisions. The NSPS Subpart OOO condition has been modified to include the alternative limitation of 40 CFR 60.672(e)(1) for equipment enclosed in buildings.

Conditions 3.4.1 and 3.4.2 are conditions covering Georgia Rules (e) and (b) for emissions units specifically identified in Part 3.0 of the permit. The kilns are subject to Rule (g) since they burn coal. General Shale has requested a more stringent sulfur limit (1.0 percent sulfur by weight) than Georgia Rule (g) (2.5 percent sulfur by weight) therefore, it is not necessary to list the rule in the permit.

Condition 3.5.1 requires that all baghouses need to be operated to control particulate matter emissions from the facility and Condition 3.5.2 requires General Shale maintain an adequate inventory of replacement filter bags for all other baghouses.

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 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

General Shale must conduct performance tests on the Proceadair All-Dry Scrubbing System (KS1) and Dustex Dry Lime Scrubber (KS2), to demonstrate compliance with the HF and HCl emissions limitations contained in Condition 3.2.2 no later than 180 days after issuance of this permit. General Shale originally tested for HF and HCl on June 23, 2004. These tests were completed at a production rate limit of 249,000 tons per year. Further testing is required with the production rate limit increasing to 328,500 tons per year.

General Shale must conduct a performance test on the Proceadair All-Dry Scrubbing System (KS1) and Dustex Dry Lime Scrubber (KS2), to demonstrate compliance with the emissions limitations contained in Condition 3.2.4 no later than 180 days after issuance of this permit. The test is necessary required to avoid the provisions PSD and the provisions of CAM.

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

Initial and subsequent performance testing for demonstrating compliance with NSPS equipment is included in Condition 4.2.1.

V. Monitoring Requirements (with Associated Record Keeping and Reporting)

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

Kiln K1 is controlled by Proceadair All-Dry Scrubbing System w/Baghouse (KS1) and Kiln K2 is controlled by Dustex Dry Lime Scrubber w/Baghouse (KS2). Both control device systems KS1 and KS2 are subject to Georgia Rules (b) and (e) for PM and Visible emissions. The controls reduce hydrogen fluoride (HF) emissions, hydrogen chloride (HCl) emissions, PM emissions and VE emissions. General Shale Bricks has installed, calibrated, maintained, and operated monitoring devices that continuously measure and record the pressure loss of the gas stream across KS1 and KS2, the fresh limestone feed rate to Scrubber, and total limestone feed rate (fresh plus recycled) to KS1 and KS2. Excursions for the scrubber systems parameters have been defined based on testing.

For Proceadair All-Dry Scrubbing System Baghouse (KS1), Dustex Dry Lime Scrubber Baghouse (KS2), and Millroom Baghouse (MB1), daily VE checks are required and standard weekly Preventive Maintenance Program is required. This monitoring approach assures that the baghouses are properly operated and maintained. The primary reporting feature for the baghouse monitoring is based on the daily VE check. The company needs to take immediate action any time a VE check shows visible emissions equal to or greater than the opacity action level. An excursion is any two consecutive required daily determinations of visible emissions for which visible emissions are equal to or greater than the opacity action level. For the weekly maintenance checks, the previous permit had required a report anytime corrective action was not taken within 12 hours. This reporting element has been replaced with an updated requirement to report if the Preventative Maintenance Program is not followed to resolve a problem identified by the preventive maintenance checks. This broad reporting feature encompasses all elements of the Preventive Maintenance Program. A good Preventative Maintenance program must include elements such as the proper pressure drop ranges for each baghouse, the appropriate course of action to address identified maintenance needs, and time tables for implementing the maintenance. The weekly Preventive Maintenance Program and respective reporting will be

subject to review, and modification by the Division if necessary, to assure the baghouses are properly operated and maintained.

The Grinding Room (GR) equipment consisting of the Stedman Grand Slam, Hammermill, (2) Scalping Screens 5x10 Triple Deck Midwestern, Finish Screens 5x10 Double Deck Midwestern, Conveyor from hopper to Stedman, 30" Screen Feed Conveyor, 24" Tailings Conveyor, 24" Hammermill Feed Conveyor, 24" Product Conveyor, Trampolin Conveyor are uncontrolled emission units subject to 40 CFR, Part 60, Subpart OOO and Georgia Rules 391-3-1-.02(2)(e) & (n) for PM and Visible emissions. Condition 5.2.4 specifies a monitoring strategy to assure the uncontrolled emission units are checked for proper operations and maintenance each day. An excursion would be reported if the opacity persisted above the reporting threshold for two consecutive days from the same emission unit. The reporting threshold is half the opacity standard. This opacity reporting threshold level is expected to be readily achieved by emission units that are properly operated and maintained. Assuring the emission units are properly operated and maintained provides a reasonable assure of compliance with the applicable standards including Rule 391-3-1-.02(2)e for particular matter emissions.

The Sand Silo (SD) and Coal Handling System (CS) are subject to Georgia Rules 391-3-1-.02(2)(e) & (n) for PM and Visible emissions. To provide a reasonable assurance of compliance, daily VE checks are required. A 10% opacity action level has been established to identify normal vs. abnormal operations of the Coal Handling Baghouse (CB1) and Sand Silo Bin Vent (SB1). The Coal Handling Baghouse (CB1) and Sand Silo Bin Vent (SB1) have a normal operational mode that complies with the applicable emission standards. The company needs to take immediate action any time a VE check shows visible emissions equal to or greater than the opacity action level. An excursion is any two consecutive required daily determinations of visible emissions for which visible emissions are equal to or greater than the opacity action level.

All monitoring requirements have been updated to closely match the monitoring requirements in the current permit while assuring conformance to 40 CFR 70 and 40 CFR 64.

CAM is applicable criteria:

- Unit is located at a major source that is required to obtain a Title V permit.
- Unit uses a control device to achieve compliance.
- Unit is subject to emission limitation or standard for the applicable pollutant.
- For small PCU pre-controlled emissions of applicable pollutant from unit are at least 100% of the major source threshold.
- For large PCU post-controlled emissions above major source threshold
- Small PCU becomes subject to CAM only as part of a Title V permit renewal.
- Unit is not otherwise exempt.

This source is now a major Title V source. The following are emission units that use control devices to achieve compliance: Kiln 1 (K1), Kiln 2 (K2), Coal System (CS), Sand Silo (SD), and Millroom (MR). All emission units are subject to a PM limit based on Rule (e). The Kiln 1 (K1) and Kiln 2 (K2) are subject to MACT avoidance limits for HF and HCL. A 22.7 pound per hour PSD limit has been set for each Kiln. This limits SO₂ emissions below 100 tons per year per kiln, so CAM is not applicable. The following is an applicability table that considers emission levels:

Emission Unit	Control Device ID No.	Pollutant	Subject to CAM	Actual Emissions (lb/hr)	Post Controlled (ton/yr)	% Control Efficiency	Pre Controlled (ton/yr)	Bases for Limit	Limit (ton/yr)	Maximum Production Rate (ton/hr)
Kiln 1 (K1)	KS1	PM	No	0.066	0.288	99%	288.0	Rule (e)	100	18.3
		HF	No	0.31	1.36	95%	27.2	Avoid MACT	10.00	
		HCL	No	0.62	2.72	90%	27.2	Avoid MACT	10.00	
		SO ₂	No	14.9	65.3	60%	163.2	Avoid PSD Avoid CAM	250	
Kiln 2 (K2)	KS2	PM	No	0.066	0.288	99%	288.0	Rule (e)	100	18.3
		HF	No	0.31	1.36	95%	27.2	Avoid MACT	10.00	
		HCL	No	0.62	2.72	90%	27.2	Avoid MACT	10.00	
		SO ₂	No	14.9	65.3	60%	163.2	Avoid PSD Avoid CAM	250	
Coal System (CS)	CB1	PM	No	0.37	1.64	99%	163.5	Rule (e)	100	122.1
Sand Silo (SD)	SB1	PM	No	0.05	0.23	99%	23.4	Rule (e)	100	1.9
Millroom (MR)	MB1	PM	No	0.16	0.75	99%	75.3	Rule (e)	100	12.5

Control devices have been determined necessary to achieve compliance for the Kiln 1 (K1), Kiln 2 (K2), and Coal System (CS). The post-controlled emissions are all below the major source levels. Since this is an initial Title V permit and all of these sources have post-controlled emissions below the major source levels, **CAM does not apply.**

VI. Other 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

Excess emissions would include any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement). None required for this permit.

Any exceedances that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring) For this permit, an exceedance is any month where brick production for the entire facility exceeds 328,500 tons during any 12-month rolling period.

Any excursion will include any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring). For this permit, the following excursions are specified:

- i. Any two consecutive required daily determinations of visible emissions requiring action by Condition 5.2.2 a. or b. from the same source;
- ii. Any three-hour period in which the recycled reagent feed rate or total reagent feed rate (fresh reagent plus recycled reagent) of the Proceadair All-Dry Scrubbing System (KS1) and Dustex Dry Lime Scrubber (KS2), is less than the effective level established during the performance testing.
- iii. Any three hour period in which the fresh reagent feed rate (powdered hydrated lime) of the Proceadair All-Dry Scrubbing System (KS1) and Dustex Dry Lime Scrubber (KS2), is less than the effective level established during the performance testing
- iv. Any three hour period in which the gas phase pressure loss across Baghouse (KS1) or (KS2) is less than the effective level established during the performance testing;
- v. Any instance an operational or maintenance check required by Condition 5.2.3 reveals that a maintenance action level was triggered and the maintenance was not performed according to the Preventative Maintenance Program.
- vi. Any two consecutive required daily determinations of visible emissions for an emission unit that exceed the opacity reporting threshold as specified by Condition 5.2.4.
- vii. Any shipment of coal with a sulfur content greater than 1%, by weight.

Condition 6.2.2 requires General Shale Brick keep the records for each shipment of coal received at the facility including, the name of the coal supplier, the location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. Moreover, General Shale is required to keep the coal certification including the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected). All results of the analysis of the coal from which the shipment came (or of the shipment itself) shall include the sulfur content; and the methods used to determine the properties of the coal.

VII. Specific Requirements

Note: Be sure to discuss any stratospheric ozone protection requirements (see subsection J.) that may apply to the source.

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

General Shale Brick has not made a request to operate any temporary sources.

E. Short-Term Activities

General Shale Brick did not report any short-term activities.

F. Compliance Schedule/Progress Reports

General Shale Brick, Plant 40 is **not** subject to the MACT Standard for Brick and Structural Clay Products Manufacturing (40 CFR 63 Subpart JJJJ).

G. Emissions Trading

The facility is not involved in any emission trading program.

H. Acid Rain Requirements

The facility is not subject to any Acid Rain requirements.

I. Stratospheric Ozone Protection Requirements

The facility indicated that they are subject to Title VI requirements.

J. Pollution Prevention

There are no specific pollution prevention provisions in the Title V permit.

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.

Addendum to Narrative

The 30-day public review started on July 10, 2006 and ended on August 8, 2006. No comments were received by the Division.