

STATEMENT OF LEGAL AND FACTUAL BASIS

General Shale Brick, Inc.
Blue Ridge, Virginia
Permit No. VA-20447

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, General Shale Brick has applied for a renewal of the Title V Operating Permit for its Blue Ridge, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: Gary R. Bradley, P.E.

Date: June 29, 2007

FACILITY INFORMATION

Permittee

General Shale Brick, Inc.
P. O. Box 3547
Johnson City, TN 37602

Facility

General Shale Brick, Inc. - Plants 35 & 36
770 Webster Road
Blue Ridge, Virginia 24064

AIRS ID No. 51-023-0006

SOURCE DESCRIPTION

SIC Code: 3251- Face Brick / Structural Manufacture of brick from shale

NAICS Code:

General Shale Plants 35 and 36 manufacture face brick and structural brick from processed shale. The manufacturing process involves shale mining, grinding, screening, and blending of the shale and other raw materials followed by forming, cutting or shaping, drying, firing (or curing), cooling, storage, and shipping of the final product. General Shale Brick, Inc. is the current owner of what was previously known as Webster Brick. The plant was registered and permitted in 1973 for the addition of Plant 36, an Interkiln natural gas-fired Dryer/Kiln - 18 "brick" x 389' long - rated at approximately 14.8 tons per hour input. Plant 35 was the existing "grandfathered" portion of the facility, which consisted of shale mining, crushing & screening, handling, and two kilns. Records show the Plant 35 kilns "A" and "B" as being installed in 1954. Webster Brick had been in existence at this site since 1928. In 2005 the source received permits to modify and operate Plant 35 and Plant 36 by installing a coal handling system and to fire the kilns with a coal / natural gas blend.

The brick-making process is as follows: the raw shale is generally loaded by truck or front-end loader into an existing primary crusher for initial size reduction. The inherent moisture content of the raw shale ranges from 3 - 15%. The material is then conveyed to an enclosed grinding room, which houses several grinding mills and banks of screens that produce a fine material that is suitable for forming brick or other products. The shale is conveyed to an enclosed storage area, where it is then used to form bricks in the forming area. The Steele Primary Crushers referenced in the NSR permit were replaced in 2006 by the Stedman Grandslam Impactor referenced below. The cage mill was also removed. A pending application will revise the underlying permits.

The bricks are formed using a stiff mud extrusion process. The ground raw material is mixed with water and possibly other additives in a pug mill, and the raw material is then discharged into

a vacuum chamber. The moisture content of the material entering the vacuum chamber at General Shale is typically between 15% and 20%. The vacuum chamber removes air from the material, which is then augered or extruded into continuous columns of soft, formed mud. The columns are then treated with various friction or setting materials, and wire-cut into soft bricks. Various sands, slurries and engobes used as coloring and texturing agents are also prepared and applied to the surface of the brick. The green bricks at both plants are mechanically set onto kiln cars.

The kiln cars are sent to a pre-dryer which utilizes waste heat from the kilns, then to one of three kilns at General Shale. Kilns "A" & "B" at Plant 35 are tunnel-type kilns that measure 8 "brick" wide by 417 feet long, and have been modified to fire coal and natural gas with a vaporized propane backup fuel capacity. These two kilns are identical, parallel units. Plant #36 tunnel kiln measures 18 "brick" wide by 389 feet long, also permitted to be fueled by a coal / natural gas blend with a vaporized propane backup. Each kiln includes a preheat zone, a firing zone, and a cooling zone. Firing of the green bricks involves six steps: the evaporation of free water, dehydration, oxidation, vitrification, flashing, and cooling.

Stoker-sized coal is charged into the coal processing system at Plant 35 by a wheel loader. The continuous, enclosed system dries and pulverizes the coal to the proper size graduation and distributes it to kilns at Plant 35 and Plant 36.

Uncontrolled PM and PM₁₀ emissions occur from the raw material grinding, screening, handling & storage, as well as fugitive emissions from paved/unpaved roads, or storage piles. Emissions from the brick texturing equipment are controlled by pulse-jet baghouses. Particulate emissions from the coal processing system are controlled by a fabric filter baghouse. Products of combustion at the facility are managed by proper operation and combustion practices, use of low sulfur and low ash coal, and are exhausted through dry limestone adsorption systems (DLA) in each plant. Emissions that occur during kiln firing and cooling are PM, PM₁₀, SO₂, SO₃, CO & CO₂, NO_x, TOC, VOC, and various HAPs, including HCl and HF. Emissions of hydrogen fluoride and hydrogen chloride are limited to less than ten tons each by a state operating permit. The adsorbers control HF, HCl, and SO₂ to specified levels. Some PM control occurs in the adsorbers but it is not uniform over time and therefore difficult to quantify. Emission estimates were developed using AP-42 emission factors and test results from similar plants. Testing for empirical data at this location is under way. Reissuance of this permit was delayed when test schedules anticipated a revision in the underlying NSR and SOP permits by early spring of 2007. Unforeseen testing problems have delayed the revision of emission factors. Therefore the federal operating permit will be renewed based on the modification from June 2006. A revision of the permits is now anticipated in late summer. This federal operating permit will be reopened when that occurs.

General Shale Brick, Inc. is subject to Title V permitting requirements due to its potential to emit more than 100 tons per year of particulate (PM₁₀), sulfur dioxide (SO₂), and carbon monoxide (CO). The facility has a state operating permit which restricts HAP emissions to less than twenty-five tons combined and less than ten tons of a single HAP. Underlying minor NSR permits pursuant to 9 VAC 5 Chapter 80, Article 6 that are in effect for the facility include a

permit to modify and operate dated Dec. 30, 2003 as amended July 5, 2005; a permit to modify and operate dated February 15, 2006; and a permit to modify and operate dated March 6, 2006. A state operating permit pursuant to 9 VAC 5 Chapter 80, Article 5 dated March 16, 2006 is also in effect for the facility. The source is presently PSD major for sulfur dioxide. It is anticipated that control of the hydrogen chloride emissions to less than ten tons per year will create a corresponding reduction in sulfur dioxide emissions to less than 250 tons per year. If that prediction proves accurate during the ongoing testing, the pending NSR/SOP revisions will set lower limits for sulfur dioxide.

The facility is subject to NSPS OOO for the Steele Hammermill. By extension, the building enclosing the mill is subject to the NSPS visible emission limit. As this facility is a synthetic minor source for HAP emissions, no MACT requirements presently apply.

COMPLIANCE STATUS

The facility is inspected at least once per year. The facility is presently in compliance with the State Air Pollution Control Board regulations. (The limit for emissions of oxides of nitrogen was not properly modified for the conversion to coal. That correction is part of the SOP action pending at the time of this permit renewal. No violation was charged as action to revise limits in order to correct this exceedance was in process prior to the latest inspection.)

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emission units are grouped as follows:

Fuel Burning Equipment	As the main process entails direct contact of the brick product with hot combustion gasses, no distinction is made between fuel burning and manufacturing.
Manufacturing Equipment	A brief description of each operational unit follows. The emission and control details appear in the table.
	Shale Preparation: mining, crushing, screening and storage of the raw material.
	Plant 35 Brick Making: final blending, extrusion, cutting and loading of raw brick.
	Plant 36 Brick Making: final blending, extrusion, cutting and loading of raw brick
	Plant 35 Kiln Operation: dehydration, baking, firing, and curing of the final product
	Plant 36 Kiln Operation: dehydration, baking, firing, and curing of the final product

Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Shale Preparation (01)							
01-01	01	Stedman Grandslam Impactor	150 tons/hr	moisture & enclosure	-	PM/PM ₁₀	3/6/06
01-02	01	Steele Hammermill Model 36-24	100 tons/hr	moisture & enclosure	-	PM/PM ₁₀	3/6/06
01-04	01	(8) 4'x10' Screens (Leahy & Deister)	75 tons/hr	moisture & enclosure	-	PM/PM ₁₀	-
01-05	01	Belt conveyors (11) custom made	75 tons/hr	moisture & enclosure	-	PM/PM ₁₀	-
01-06	01A	Bulk Material Storage Silo	60 cu yards	vent filter	01A	PM/PM ₁₀	3/6/06
01-07	01B	C.E.Raymond Coal Processing System	2.6 tons/hr	Pulse-jet baghouse	07	PM/PM ₁₀	12/30/03
Plant 35 Brick Making & Texturing (02)							
02-01	-	Steele Brick Machine	70 tons/hr	Building enclosure	-	PM/PM ₁₀	-
02-02	02	Custom Brick Texturing Equipment	2 tons/hr	Pulse-jet baghouse	02	PM/PM ₁₀	-
Plant 36 Brick Making & Texturing (03)							
03-01	-	Steele Brick Machine	65 tons/hr	Baghouse, Gold Series GS-12	03	PM/PM ₁₀	3/6/06
03-02	02	Custom Brick Texturing Equipment	2 tons/hr	Pulse-jet baghouse	03A	PM/PM ₁₀	3/6/06
Plant 35 Dryer/Kilns (04 & 05)							
04	04	35A Dryer/Kiln – Harrop 1954	10.1 tons/hr in 8.2 tons/hr out	Dry Limestone Adsorber	DLA-1	HF, HCl, SO ₂ , (PM)	12/30/03 & 3/16/06
05	04	35B Dryer/Kiln – Harrop 1955	10.1 tons/hr in 8.2 tons/hr out	Dry Limestone Adsorber	DLA-1	HF, HCl, SO ₂ , (PM)	12/30/03 & 3/16/06
Plant 36 Dryer/Kiln (06)							
06	06	36 Dryer/Kiln – Interkiln 1973	22.0 tons/hr in 17.5 tons/hr out	Dry Limestone Adsorber	DLA-2	HF, HCl, SO ₂ , (PM)	2/15/06 & 3/16/06

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

The 2005 emission inventory does not reflect subsequent reductions in sulfur dioxide, hydrogen fluoride, and hydrogen chloride from the installation of dry limestone adsorbers in 2006. The 2006 inventory is not expected to be available before this permit goes to public comment.

The emissions from the 2005 calendar year are summarized below:

Total CO Emissions:	124.7 tons
Total SO ₂ Emissions:	110.1 tons
Total PM-10 Emissions:	83.9 tons
Total NO _x Emissions:	54.9 tons
Total VOC Emissions:	3.0 tons

Significant HAP Emissions

Hydrogen Fluoride:	21.9 tons
Hydrogen Chloride:	14.2 tons

EMISSION UNIT APPLICABLE REQUIREMENTS

New Source Review Permit Requirements

The underlying NSR permit dated December 30, 2003, as amended July 5, 2005, sets conditions related to the conversion of Plant 35 to mixed coal and gas fuel usage. A copy of this permit is attached as Appendix B. The conditions of the federal operating permit and the corresponding conditions of the NSR permit are displayed in the table below. A condition noted as B-X refers to condition X of the December 30, 2003 permit.

The underlying NSR permit dated February 15, 2006, sets conditions related to the conversion of Plant 36 to mixed coal and gas fuel usage. A copy of this permit is attached as Appendix D. The conditions of the federal operating permit and the corresponding conditions of the NSR permit are displayed in the table below. A condition noted as D-X refers to condition X of the February 15, 2006 permit.

The underlying NSR permit dated March 6, 2006, consolidates and updates several previous permits related to the material handling activities at the facility. A copy of this permit is attached as Appendix F. The conditions of the federal operating permit and the corresponding conditions of the NSR permit are displayed in the table below. A condition noted as F-X refers to condition X of the March 6, 2006 permit.

The underlying state operating permit dated March 16, 2006 sets federally enforceable Hazardous Air Pollutant limits and other requirements related to HAP control by the dry limestone adsorbers. A copy of this permit is attached as Appendix H. The conditions of the federal operating permit and the corresponding conditions of the state operating permit are displayed in the table below. A condition noted as H-X refers to condition X of the March 16, 2006 permit.

Title V Condition	NSR Condition	Description	VAC Applicable Requirement
IV-A-1	B-10, H-8	Plant 35 production limit	9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-2	D-9, H-7	Plant 36 production limit	9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-3	B-11, D-10, H-9	Approved fuels for kilns	9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-4	B-12, H-11	Plant 35 fuel limit	9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-5	D-11, H-10	Plant 36 fuel limit	9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-6	B-13, D-12, H-12	Fuel specifications	9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-80-850
IV-A-7	B-3, H-3	Adsorber required for Plant 35	9 VAC 5-50-260
IV-A-8	D-3, H-2	Adsorber required for Plant 36	9 VAC 5-50-260
IV-A-9	B-4, D-2	Kiln operation for reduced emissions	9 VAC 5-50-260
IV-A-10	D-4	PM controls for limestone storage	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-11	D-5	Enclosure of spent limestone hopper	9 VAC 5-50-260, 9 VAC 5-80-1180

Title V Condition	NSR Condition	Description	VAC Applicable Requirement
IV-A-12	B-5	Baghouse for coal handling system	9 VAC 5-50-260
IV-A-13	B-6	DLA-1 efficiency for SO ₂ control	9 VAC 5-50-260
IV-A-14	D-6	DLA-2 efficiency for SO ₂ control	9 VAC 5-50-260
IV-A-15	H-4	DLA efficiency for HF control	9 VAC 5-50-260
IV-A-16	H-5	DLA efficiency for HCl control	9 VAC 5-50-260
IV-A-17	F-2	Enclosure and moist feed to impactor	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-18	F-3	Baghouse for Plant 36 brick forming	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-19	F-4	Wet suppression on hammermill	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-20	F-5	Filter on bulk material silo	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-21	F-9	Hammermill throughput limit	9 VAC 5-80-1180
IV-A-22	F-10	Emission limits for hammermill	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-23	B-16	Emission limits for Plant 35 (DLA-1)	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-24	D-15	Emission limits for Plant 36 (DLA-2)	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-25	B-17	Emission limits coal handling baghouse	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-26	F-12	Opacity limit for impactor	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-27	F-13	Opacity limit for Plant 36 baghouse(s)	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-28	F-14	Opacity limit for hammermill	9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-410
IV-A-29	F-15	Opacity limit for conveyors & stockpiles	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-30	F-16	Opacity limit for bulk material silo	9 VAC 5-50-260, 9 VAC 5-80-1180, 9 VAC 5-50-410
IV-A-31	B-18, D-16	Opacity limit for DLAs	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-A-32	B-19	Opacity limit for coal handling system	9 VAC 5-50-260
IV-A-33	F-17	Requirements by reference - NSPS	9 VAC 5-80-1180, 9 VAC 5-50-410
IV-B-1	B-14, D-13, H-13	Fuel certification	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180, 9 VAC 5-80-850
IV-B-2	B-15, D-14, H-14	Fuel sampling	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180, 9 VAC 5-80-850
IV-B-3	F-7	Plant 36 baghouse monitoring	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-B-4	F-8	Plant 36 baghouse monitoring	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-B-5	B-8, D-8, H-6	Monitoring for DLAs	9 VAC 5-50-350, 9 VAC 5-80-1180, 9 VAC 5-80-850
IV-B-6	B-9	Monitoring coal system baghouse	9 VAC 5-50-260, 9 VAC 5-80-1180
IV-C-1	B-24a, D-21a, H-18a	Brick production records	9 VAC 5-50-50, 9 VAC 5-80-1180, 9 VAC 5-80-850
IV-C-2	B-24b, H-18a	Plant 35 kiln operating hour records	9 VAC 5-50-50
IV-C-3	D-21b, H-18b	Plant 36 kiln operating hour records	9 VAC 5-50-50
IV-C-4	F-22a	Hammermill throughput records	9 VAC 5-50-50
IV-C-5	B-24c, H-18c	Plant 35 fuel consumption records	9 VAC 5-50-50
IV-C-6	D-21c, H-18c	Plant 36 fuel consumption records	9 VAC 5-50-50
IV-C-7	B-24d, D-21d, H-18d	Fuel certifications and analyses	9 VAC 5-50-50
IV-C-8	B-24e, D-21e, H-18e	Records of shale sulfur content	9 VAC 5-50-50
IV-C-9	F-22b	Record of hammermill PM emissions	9 VAC 5-50-50
IV-C-10	B-24f	Record of emissions from Plant 35 kilns	9 VAC 5-50-50
IV-C-11	D-21f	Record of emissions from Plant 36 kiln	9 VAC 5-50-50
IV-C-12	H-18f	Record of HAP emissions from kilns	9 VAC 5-50-50
IV-C-13	B-24g, D-21g, H-18g	Records detailing emission factors	9 VAC 5-50-50

Title V Condition	NSR Condition	Description	VAC Applicable Requirement
IV-C-14	B-24g, D-21g, H-18g	Limestone feed rate records and limestone purchase records	9 VAC 5-50-50
IV-C-15	D-21i, H-18i	Record of differential pressure for DLAs	9 VAC 5-50-50
IV-C-16	D-21k, H-18k	Record of weekly VEE for DLAs	9 VAC 5-50-50
IV-C-17	D-21m	Record of DLA efficiency – SO ₂	9 VAC 5-50-50
IV-C-18	H-18m	Record of DLA efficiency – HF & HCl	9 VAC 5-50-50
IV-C-19	B-24i	Records of coal handling system baghouse differential pressure monitors	9 VAC 5-50-50
IV-C-20	F-22c	Records of Plant 36 baghouse differential pressure monitors	9 VAC 5-50-50
IV-C-21	B-24j, D-21j, F-22d, H-18j	Record of scheduled/unscheduled maintenance & operator training	9 VAC 5-50-50
IV-C-22	B-24k, D-21l, F-22e, H-18l	Records of stack tests & VEEs	9 VAC 5-50-50
IV-D-1	D-17	Plant 36 initial performance for SO ₂	9 VAC 5-50-30, 9 VAC 5-80-1200
IV-D-2	H-16	Plant 36 initial performance for HF & HCl	9 VAC 5-50-30, 9 VAC 5-80-880
IV-D-3	D-18	Plant 36 initial VEE	9 VAC 5-50-30, 9 VAC 5-80-1200
IV-D-4	B-22, D-19, H-17	Stack Tests, continuing compliance	9 VAC 5-80-880, 9 VAC 5-80-1200
IV-D-5	B-23, D-20, H-18	VEEs, continuing compliance	9 VAC 5-80-880, 9 VAC 5-80-1200
IV-D-6	B-25	Testing & monitoring ports	9 VAC 5-50-30
IV-E-1	F-20	NSPS Like-for-Like notification	9 VAC 5-80-1180, 9 VAC 5-50-410
V-A-1	H-15	Facility-wide HAP limits	9 VAC 5-80-850
V-A-2	B-7, D-7, F-6	Fugitive dust controls	9 VAC 5-50-90
V-A-3	B-32, D-30, F-30, H-27	Maintenance & operation practice	9 VAC 5-50-20
V-A-4	B-31, D-29, F-29, H-26	Reduction or shutdown to avoid violation	9 VAC 5-20-180
V-C-1a	H-18f	Record of HAP emissions	9 VAC 5-50-50
V-C-2	D-26, F-26, H-23	Record of malfunctions	9 VAC 5-20-180, 9 VAC 5-50-50
V-D-1	B-25	Testing & monitoring ports	9 VAC 5-50-30
V-E-1	B-29, D-25, F-25, H-22	Notice of control equipment maintenance	9 VAC 5-20-180
V-E-2	B-30, D-27, F-27, H-24	Malfunction causing exceedence notice	9 VAC 5-20-180
V-E-3	D-28, F-28, H-25	Malfunction causing exceedence report	9 VAC 5-20-180

Streamlined Conditions – NSR Permit

The following table summarizes NSR permit conditions that are no longer applicable to the source. No corresponding condition was included in the federal operating permit for these outdated requirements.

NSR Date	NSR Condition #	Condition Description	Reason for cessation of applicability
12/30/03	20	Initial performance test – DLA-1	Test satisfactorily completed
12/30/03	21	Initial VEE – DLA-1	Test satisfactorily completed
12/30/03	26	Initial construction notification	Notification received
12/30/03	27	Permit invalidation for failure to construct	Construction completed
2/15/06	17	Initial performance test DLA-2	Test satisfactorily completed
2/15/06	18	Initial VEE DLA-2	Test satisfactorily completed
2/15/06	22	Initial construction notification	Notification received
2/15/06	23	Permit invalidation for failure to construct	Construction completed
3/6/06	11	Emission limits for cage mill (removed)	Equipment permanently removed
3/6/06	19	Reactivation of dormant equipment	Equipment permanently removed
3/6/06	21	Initial construction notification	Notification received
3/6/06	23	Permit invalidation for failure to construct	Construction completed
3/16/06	16	Initial performance test DLA-2	Test satisfactorily completed
3/16/06	19	Initial construction notification	Notification received
3/16/06	20	Permit invalidation for failure to construct	Construction completed

Streamlined Conditions – Other

All equipment at this facility capable of producing visible emissions as regulated under 9 VAC 56-50-80 have visible emissions limits from NSR (BACT) requirements that are equal or more stringent than this standard. All equipment at this facility not explicitly subject to 9 VAC 5-40-260 (existing source emission standard for particulate matter) have emission limits based on 9 VAC 5-50-260 or 9 VAC 5-40-1840 that are more stringent than this standard. All equipment at this facility subject to 9 VAC 5-40-280 (existing source emission standard for sulfur dioxide) have emission limits based on 9 VAC 5-50-260 that are more stringent than this standard.

Existing Source Limits for Particulate Matter

Particulate emission standards for General Process Operations, 9 VAC 5-40-260, apply to the Steele Brick Machine in Plant 35 (Unit 02-01) and the brick texturing equipment in Plant 35 (Unit 02-02). Appropriate limits are required for both units in Condition III-A-3. Particulate emission standards for Stone Quarrying and Processing Operations, 9 VAC 5-40-1820 et seq., apply to the screening operation (Unit 01-04) and the conveyor system (Unit 01-05). Appropriate limits are required for both units in Condition III-A-2.

Voluntary Control Equipment Included

The brick texturing equipment in Plant 35 is controlled by a baghouse chiefly for the comfort of production workers in this area. The emission records kept by the facility for compliance with the control requirements of 9 VAC 5-40-260 are based on the use of this baghouse and the continued use of the baghouse is indicated in the permit application. Therefore a requirement to use the equipment is included in the permit (III-A-1) along with a requirement to monitor the operation of the equipment to insure proper performance (III-B-1).

Existing Source Visible Emission Limits

Existing sources are required to limit visible emissions to the limits cited in 9 VAC 5-40-90. The existing source equipment listed in Section III of the operating permit is subject to this limitation. A condition requiring compliance is included (III-A-4).

Maintenance Requirement

Proper maintenance practices for existing equipment are required as part of 9 VAC 5-40-20. Condition III-A-5 explicitly states this requirement in the operating permit.

Existing Source Record Keeping

Record keeping for existing sources to demonstrate continuing compliance with permit requirements is required by 9 VAC 5-40-50. Conditions III-C-1 and III-C-2 require the records necessary to demonstrate continuing compliance with Conditions III-A-1, III-A-2, III-A-3, III-A-5, and III-B-1.

Existing Source Testing

Condition III-D-1 stipulates the requirement from 9 VAC 5-40-30 to provide test ports at appropriate locations.

General and Periodic Monitoring

Weekly visible emission monitoring is required based on the stipulation of periodic monitoring for federal operating permits for all applicable requirements. This practice covers the monitoring necessary to show compliance with visible emission requirements from 9 VAC 5-40-90, 9 VAC 5-50-80, and the visible emission limits based on 9 VAC 5-50-260 for new equipment. Condition V-B-1 requires these evaluations and Condition V-C-1b requires the records to support the evaluations. For completeness, Condition III-C-3 stipulates the agency standard for analyses performed to demonstrate compliance. This is included to make the expectations for records to support fuel analysis and performance testing explicit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

STATE-ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

Toxic Pollutants 9 VAC 5-50-320

The permittee elected to exclude such requirements from this permit. A portion of the record keeping provisions of this section are still required under this permit as a subset of the HAPs record keeping requirements under 9 VAC 5-80-110. The Conditions designated state-only-enforceable are contained in the NSR permits in Appendices B and D.

FUTURE APPLICABLE REQUIREMENTS

This facility is a synthetic minor source for hazardous air pollutants. As long as that status is maintained, no future applicable requirements are anticipated at this time.

INSIGNIFICANT EMISSION UNITS

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
07	Texture Sand Processing	5-80-720 B	PM ₁₀	5 ton/hr
08	35 Kiln Car Vacuum Cleaner	5-80-720 B	PM ₁₀	N/A
09	36 Kiln Car Vacuum Cleaner	5-80-720 B	PM ₁₀	N/A
10	Oil (Lubricating) Tank	5-80-720 B	VOC	18,000 Gallon
11	Diesel Fuel Tank	5-80-720 B	VOC	2,000 Gallon
12	Sand Storage Silo	5-80-720 B	PM ₁₀	100 Ton Capacity.

These insignificant emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

COMPLIANCE ASSURANCE MONITORING

The facility has six control devices, four baghouses and two dry limestone adsorbers. The source submitted calculations demonstrating that the potential uncontrolled emissions from each baghouse was less than the 100 tons per year that require a compliance assurance monitoring plan. The agency rechecked the calculation using somewhat more conservative emission factors and confirmed that the uncontrolled emissions from all the baghouse controlled units are expected to be below 100 tons per year.

The monitoring requirements for the dry limestone adsorbers are the same monitoring required for the Brick and Structural Clay Products Manufacturing MACT (JJJJ). At this time the agency believes that compliance with the MACT monitoring is sufficient to satisfy CAM requirements for the adsorbers. Additional emissions testing for the Plant 36 adsorber is planned for 2007 as part of a process of empirically verifying emission factors for a pending state operating permit. If the pending permit indicates additional monitoring concerns, these will be addressed in the state operating permit and incorporated into this federal operating permit through reopening.

At a point when this federal operating permit was in the final stages of negotiation, the MACT referenced above was vacated by a federal court. As the renewal was already deferred awaiting the now-delayed issuance of a pending state operating permit, there is not sufficient time to develop a formal CAM plan for this facility and still issue the renewal within the timeframe stipulated by USEPA. Note that the pending state operating permit will require a reopening of this permit within twelve months. As no revision of the Brick MACT is expected at that time, a formal CAM plan for the adsorbers will be required for the reopening of this permit.

CONFIDENTIAL INFORMATION

No information contained in the permit application or in the specific records required by the permit is considered confidential.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was printed in the May 13, 2007, edition of the Roanoke Times. Public comments were accepted from May 13, 2007 through June 13, 2007. No public comments were received. USEPA reviewed this permit with concurrent processing as draft and proposed. The final day for USEPA comments was June 28, 2007, as no public comments were received to require a new proposed version of the permit. No comments were received from USEPA.

APPENDIX A: NSR/FOP Correspondence Table for December 30, 2003 Permit, as amended July 5, 2005

The following table is a modification of the table in the section Emission Unit Applicable Requirements – New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix B.

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
3	IV-A-7	Adsorber required for Plant 35 kilns	9 VAC 5-50-260
4	IV-A-9	Kiln operation for reduced emissions	9 VAC 5-50-260
5	IV-A-12	Baghouse for coal handling system	9 VAC 5-50-260
6	IV-A-13	DLA-1 efficiency for SO ₂ control	9 VAC 5-50-260
7	V-A-2	Fugitive dust controls	9 VAC 5-50-90
8	IV-B-5	Monitoring for DLA-1	9 VAC 5-50-260
9	IV-B-6	Monitoring for coal handling baghouse	9 VAC 5-50-260
10	IV-A-1	Plant 35 production limit	9 VAC 5-80-1180
11	IV-A-3	Approved fuels for kilns	9 VAC 5-80-1180
12	IV-A-4	Plant 35 fuel throughput limit	9 VAC 5-80-1180
13	IV-A-6	Fuel specifications	9 VAC 5-50-260, 9 VAC 5-80-1180
14	IV-B-1	Fuel certification	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180
15	IV-B-2	Fuel sampling	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180
16	IV-A-23	Emission limits for Plant 35 (DLA-1)	9 VAC 5-50-260, 9 VAC 5-80-1180
17	IV-A-25	Emission limits coal handling baghouse	9 VAC 5-50-260, 9 VAC 5-80-1180
18	IV-A-31	Opacity limit for Plant 35 (DLA-1)	9 VAC 5-50-260, 9 VAC 5-80-1180
19	IV-A-32	Opacity limit for coal handling system	9 VAC 5-50-260
20	N/A	Initial performance test – DLA-1	9 VAC 5-50-30, 9 VAC 5-80-1200
21	N/A	Initial VEE – DLA-1	9 VAC 5-50-30, 9 VAC 5-80-1200
22	IV-D-1	Stack tests on request – DLA-1, coal system	9 VAC 5-50-30
23	IV-D-2	VEEs on request – DLA-1, coal system	9 VAC 5-50-30
24a	IV-C-1	Plant 35 brick production records	9 VAC 5-50-50
24b	IV-C-2	Record of Plant 35 operating hours	9 VAC 5-50-50
24c	IV-C-5	Record of Plant 35 coal & gas consumption	9 VAC 5-50-50
24d	IV-C-7	Coal sulfur & ash content records	9 VAC 5-50-50
24e	IV-C-8	Shale sulfur content records	9 VAC 5-50-50
24f	IV-C-10	Record of Plant 35 emission estimates	9 VAC 5-50-50
24g	IV-C-13	Record of emission factors	9 VAC 5-50-50
24h	IV-C-14	Record of limestone feeder settings & limestone purchase records	9 VAC 5-50-50
24i	IV-C-19	Coal fabric filter monitoring records	9 VAC 5-50-50
24j	IV-C-21	Records of maintenance & operator training	9 VAC 5-50-50
24k	IV-C-22	Records of stack tests & VEEs	
25	IV-D-6, V-D-1	Testing & monitoring ports as required	9 VAC 5-50-30
26	N/A	Initial construction notifications	9 VAC 5-50-50
27	N/A	Permit invalidation for failure to construct	9 VAC 5-80-1210
28	IX-Q	Right of entry	9 VAC 5-170-130
29	V-E-1	Notice of control equipment maintenance	9 VAC 5-20-180
30	V-E-2, IX-F	Malfunction causing exceedence notice	9 VAC 5-20-180
31	V-A-4	Reduction or shutdown to avoid violation	9 VAC 5-20-180

General Shale Brick
 June 29, 2007 VA-20447
 Statement of Basis for Permit Signed July 9, 2007
 Appendices

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
32	V-A-3	Maintenance & operation practice	9 VAC 5-50-20
33	IX-V	Permit suspension/revocation	9 VAC 5-80-10
34	IX-T	Change of ownership	9 VAC 5-80-10
35	IX-L	Registration/update	9 VAC 5-170-60, 9 VAC 5-20-160
36	IX-S	Permit copy on premises	9 VAC 5-170-160
SO-1	SO/NA	DLA-1 required for plant 35	9 VAC 5-80-1180
SO-2	SO/NA	Control efficiency for DLA-1	9 VAC 5-50-260
SO-3	SO/NA	Emission limits for phosphorus	9 VAC 5-50-260
SO-4	SO/NA	Initial stack test for HF from DLA-1	9 VAC 5-80-1120
SO-5	SO/NA	Dispersion modeling for phosphorus	9 VAC 5-50-50
SO-6	SO/NA	Record keeping for toxic compounds	9 VAC 5-5030

APPENDIX B: NSR PERMIT DATED December 30, 2003, as amended July 5, 2005

A copy of the permit follows. The page numbering is consistent with the permit, not with this statement of basis.

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

General Shale Brick, Inc.
P. O. Box 3547
Johnson City, TN 37602

Registration No.: 20447
County / Plant No.: 023-0006

is authorized to modify and operate

Kiln 35 "A" and 35 "B" by adding coal burning equipment and a coal handling system at Plant 35

located at

770 Webster Road, Blue Ridge
Botetourt County, Virginia

in accordance with the Conditions of this permit.

Approved on **December 30, 2003.**
Amended on: **July 5, 2005.**

Robert G. Burnley
Director, Department of Environmental Quality

Permit consists of 15 pages.
Permit Conditions 1 to 36.
State-Only Conditions 1 to 6.
Source Testing Report Format.

PERMIT CONDITIONS - the regulatory reference or authority for each condition is listed in parentheses () after each condition.

APPLICATION

1. Except as specified in this permit, the permitted facility is to be modified and operated as represented in the permit application dated August 4, 2003, including addendum information dated October 29, 2003, and the amended permit application dated April 29, 2005, including addendum information dated May 25, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to modification may result in enforcement action.
(9 VAC 5-50-390 and 9 VAC 5-80-1210 D)

PROCESS REQUIREMENTS

2. **Equipment List** - Equipment to be modified at this facility consists of:

- 04** - 35 "A" Dryer / Kiln at Plant 35 - Harrop 8 (brick) wide x 417 feet long fired with coal and natural gas rated at 18.2 MMBtu/hr
- 05** - 35 "B" Dryer / Kiln at Plant 35 - Harrop 8 (brick) wide x 417 feet long fired with coal and natural gas rated at 18.2 MMBtu/hr

Equipment to be added at this facility consists of:

- 07** - C.E. Raymond / Custom Coal Processing System rated at 2.6 tons/hr
(9 VAC 5-80-1100 A)

3. **Emission Controls** - Sulfur dioxide emissions from Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall be controlled by a single Ohlmann type dry lime adsorber (DLA). The shared dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when one/both of the associated kiln(s) is/are operating.
(9 VAC 5-50-260)
4. **Emission Controls** - Particulate and sulfur dioxide emissions from Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall be controlled by:
 - a. Installation of target firing reducing solid fuel requirements;
 - b. Operating the dryer/kilns under reduced draft conditions;
 - c. Use of supplemental fuel (natural gas) to reduce solid fuel requirement.

d. Fuel specifications to include low sulfur and ash content of coal.
(9 VAC 5-50-260)

5. **Emission Controls** – Particulate emissions from Unit # 07 (Coal Processing System) shall be controlled by a fabric filter baghouse. The baghouse shall be provided with adequate access for inspection and shall be in operation when the Unit # 07 (Coal Processing System) is operating.

(9 VAC 5-50-260)

6. **Control Efficiency** - The dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) shall demonstrate a control efficiency by stack test for sulfur dioxide of no less than 10 percent (10%). Subsequent to the initial stack test, this permit may be modified to require the DLA to meet or exceed the control efficiencies established by initial stack test, using similar fuels, operating practices, and lime.

(9 VAC 5-50-260)

7. **Fugitive Dust Emission Controls** - Fugitive dust emission controls shall include the following, or equivalent, as a minimum:

- a. Dust from material handling and load-outs, shall be controlled by wet suppression or equivalent (as approved by the DEQ). The wet suppression spray systems shall be operated at optimum design, and shall be installed with adequate access for inspection.
- b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.
- c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-50-260, 9 VAC 5-50-20, and 9 VAC 5-50-90)

8. **Monitoring Devices / Observations** – The permittee shall monitor the operational parameters listed below for the dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”):

- a. Maintain pressure drop at or above average pressure established during the initial performance test.

- b. Visually verify limestone hopper and storage bin contains adequate limestone daily.
- c. Record limestone feeder setting daily and maintain at or above level established during the initial performance test.
- d. Use same grade limestone established during the initial performance test. Retain purchase records.
- e. Record visible emissions from the DLA exhaust stack weekly during normal operation of the kiln(s). The visible emissions evaluation (VEE) shall be conducted using 40 CFR 60 Appendix A Method 9 for at least six (6) minutes. 40 CFR 60 Appendix A Method 9 requires the observer to have a Method 9 certification that is current at the time of the VEE. All visible emission observations, VEE results, and corrective actions taken shall be recorded.

Monitoring device(s) shall be installed, maintained, calibrated and operated in accordance with approved procedures that shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the dry lime adsorber is operating. (9 VAC 5-80-1180 and 9 VAC 5-50-20 C)

9. **Monitoring Device / Observation** – The fabric filter baghouse controlling PM / PM₁₀ emissions from Unit # 07 (Coal Processing System) shall be equipped with a magnehelic gauge to continuously measure the differential pressure drop across the fabric filter. The gauge shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The magnehelic gauge shall be provided with adequate access for inspection and shall be in operation when the baghouse is operating. The gauge shall be observed by the permittee weekly to ensure good performance of the baghouse. The permittee shall keep a log of the observations from the magnehelic gauge. (9 VAC 5-80-1180, 9 VAC 5-50-20 C and 9 VAC 5-50-50-H)

OPERATING/EMISSION LIMITATIONS

10. **Plant 35 - Plantwide Production** – Plant 35, which is comprised of Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall produce no more than **143,664** tons of brick per year, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Fuel** - The approved fuels for Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") are coal and natural gas (with propane backup). The kilns may be fired with 100% natural gas, or a mix of coal with natural gas supplement. A change in the approved fuels may require a permit to modify and operate.
(9 VAC 5-80-1180)
12. **Fuel Throughput** – For optimum kiln combustion, Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall each consume no more than 1,020 lbs/hr (0.51 tons/hr) of coal, calculated monthly as total pounds (tons) of coal divided by total kiln operating hours; and 4,468 tons of coal per year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
13. **Fuel Specifications** - The coal, natural gas, and propane used for fuel in Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall meet the specifications below:
- COAL:
- | | |
|--------------------------------------|------|
| Maximum sulfur content per shipment: | 1.0% |
| Maximum ash content per shipment: | 6.0% |
- NATURAL GAS:
- | | |
|-----------------------|--------------|
| Minimum heat content: | 1,000 Btu/cf |
|-----------------------|--------------|
- LPG, including butane and propane, which meets ASTM specification D1835.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
14. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of coal. Each fuel supplier certification shall include the following:
- The name of the fuel supplier;
 - The date on which the coal shipment was received;
 - The volume of coal delivered in the shipment;
 - The sulfur content (% sulfur) and ash content (% ash) of the coal;
 - The method(s) used to determine the sulfur content and ash content of the coal.
- (9 VAC 5-170-160 and 9 VAC 5-80-1180)

15. **Coal/Coke Sulfur Content:** If the fuel supplier certification as required in Condition 13 does not contain sufficient data for coal sulfur content and ash content, a sample of the coal delivered to the kiln burner(s) shall be collected at least once per week and composited for a monthly analysis. The composite shall be analyzed for percent (%) sulfur by weight and percent (%) ash by weight. The analyses shall meet the requirements of ASTM Methods D3177 or D4239 (sulfur content) and ASTM Methods D2795 or D3174 (ash content) or a DEQ approved equivalent method. The approved procedure for collecting the samples shall list all pertinent information regarding sample size and number, where sample is taken, etc. (9 VAC 5-170-160 and 9 VAC 5-80-1180)

16. **Emission Limits: Plant 35** – Total emissions from the operation of Plant 35 kilns - Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) - shall not exceed the limits specified below:

Particulate Matter	26.76 lbs/hr	117.23 tons/yr
PM-10	21.22 lbs/hr	92.95 tons/yr
Sulfur Dioxide	38.92 lbs/hr	170.46 tons/yr
Nitrogen Oxides (as NO ₂)	7.84 lbs/hr	34.34 tons/yr
Carbon Monoxide	19.68 lbs/hr	86.20 tons/yr
Volatile Organic Compounds	1.13 lbs/hr	4.94 tons/yr

Annual emissions calculated monthly as the sum of each consecutive 12-month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 3, 4, 6, 8, 10, 11, 12, 13, 14, 15 and 18.
 (9 VAC 5-50-260)

17. **Emission Limits** – Baghouse exhaust emissions from the operation of the Unit # 07 (Coal Processing System) shall not exceed the limits specified below:

Particulate Matter	0.02 gr/dscf	0.37 lb/hr	1.62 tons/yr
PM ₁₀	0.02 gr/dscf	0.37 lb/hr	1.62 tons/yr

Annual emissions calculated monthly as the sum of each consecutive 12-month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 5, 9 and 19.
(9 VAC 5-50-260)

18. **Visible Emission Limit** - Visible emissions from Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") exhaust stacks shall not exceed ten percent (10%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed twenty percent (20%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80 and 9 VAC 5-50-260)
19. **Visible Emission Limit** - Visible emissions from Unit #07 (coal handling system) baghouse exhaust stack shall not exceed five percent (5%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed ten percent (10%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-50-80 and 9 VAC 5-50-260)

INITIAL COMPLIANCE DETERMINATION

20. **CONDITION SATISFIED: Stack Test** - Initial performance tests shall be conducted for PM, PM₁₀, and sulfur dioxide from Units # 04 (Kiln 35 "A") and # 05 (Kiln 35 "B") (DLA scrubber stack) using reference methods 5, 201A and 6 respectively (or other as approved by the Department) to determine compliance with the emission limits and control efficiency requirements contained in Conditions 6 and 16. The tests shall be performed within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Director, West Central Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)
21. **CONDITION SATISFIED: Visible Emissions Evaluation** - Concurrently with the initial performance tests, visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the following equipment: Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B"). Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional

Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed, reported and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Should conditions prevent concurrent opacity observations, the Director, West Central Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. One copy of the test result shall be submitted to the Director, West Central Regional Office and shall conform to the test report format enclosed with this permit. (9 VAC 5-50-30 and 9 VAC 5-80-1200)

CONTINUING COMPLIANCE DETERMINATION

22. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance tests to demonstrate compliance with the emission limits and/or control efficiency requirements contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-50-30 G)
23. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-50-30 G)

RECORDS

24. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, West Central Regional Office. These records shall include, but are not limited to:
 - a. Daily, monthly and annual production of brick. Annual production shall be calculated monthly as the sum of each consecutive 12 month period.
 - b. Daily, monthly and hourly total operating hours of Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B"). Annual operating hours shall be calculated monthly as the sum of each consecutive 12 month period.

- c. Hourly and annual consumption of coal and natural gas (or propane as backup fuel). Annual consumption shall be calculated monthly as the sum of each consecutive 12-month period.
- d. All records showing coal specifications for sulfur and ash content of 1% and 6% respectively for use in sulfur dioxide emission calculations, including records of any fuel supplier certifications and fuel analyses.
- e. All records and analyses of representative sulfur content (%) in shale.
- f. Hourly and annual records of PM, PM₁₀, SO₂, NO_x, CO and VOC and emissions from Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") using calculation methods approved by the Air Compliance Manager, West Central Regional Office to verify compliance with the lb/hr and ton/yr emissions limitations in Condition 16.
- g. Records identifying the relevant, pollutant-specific emission factors used in calculating emissions and the equations used in the calculations.
- h. Daily limestone feeder settings of the DLA, purchase records for limestone used in DLA.
- i. Operation and control device monitoring records for the baghouse which controls Unit #07 (coal handling system).
- j. Scheduled and unscheduled maintenance, and operator training.
- k. Results of all stack tests, visible emission evaluations and performance evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-50-50)

25. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).

(9 VAC 5-50-30 F)

NOTIFICATIONS

26. ***CONDITION SATISFIED: Initial Notifications*** - The permittee shall furnish written notification to the Director, West Central Regional Office:
- a. The actual date on which modification of Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") and installation of Unit #07 (coal handling system) commenced within 30 days after such date.
 - b. The anticipated start-up date of the modified Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") and installation of Unit #07 (coal handling system) postmarked not more than 60 days nor less than 30 days prior to such date.
 - c. The actual start-up date of the modified Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") and installation of Unit #07 (coal handling system) within 15 days after such date.
 - d. The anticipated date of performance tests of Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B"), postmarked at least 30 days prior to such date.
(9 VAC 5-50-50)

GENERAL CONDITIONS

27. **Permit Invalidation** - This permit to modify Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") and install Unit #07 shall become invalid, unless an extension is granted by the DEQ, if:
- a. A program of continuous modification is not commenced before the latest of the following:
 - i. 18 months from the date of this permit;
 - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
 - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
 - b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

28. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
 - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
 - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
 - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130)

29. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Director, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:
- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
 - d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

30. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, West Central Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be

made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the West Central Regional Office in writing.(9 VAC 5-20-180 C)

31. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I)
32. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:
- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
 - b. Maintain an inventory of spare parts.
 - c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
 - d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E)

33. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:
- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
 - b. Fails to comply with the conditions of this permit;

- c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
- f. Fails to modify or operate this facility in accordance with the application for this permit or any amendments to it; or
- g. Allows the permit to become invalid.

(9 VAC 5-80-1210)

34. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, West Central Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-1240)

35. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

(9 VAC 5-170-60 and 9 VAC 5-20-160)

36. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-170-160)

STATE-ONLY ENFORCEABLE CONDITIONS

The following terms and conditions are included in this permit to implement the requirements of 9 VAC 5-60-300 et seq. and are not required under the federal Clean Air Act or under any of its applicable federal requirements. Neither their inclusion in this minor new/modified source review permit nor any subsequent public comment period make these terms federally enforceable.

1. **Emission Controls** – Hydrogen fluoride emissions from Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) shall be controlled by a single Ohlmann type dry lime adsorber (DLA). The shared dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when one/both of the associated kiln(s) is/are operating.
(9 VAC 5-170-160 and VAC 5-80-1120 F)
2. **Control Efficiency** - The dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) shall demonstrate a control efficiency by stack test for hydrogen fluoride of no less than 90 percent (90%). Subsequently to the initial stack test, this permit may be modified to require the DLA to meet or exceed the control efficiencies established by initial stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

OPERATING/EMISSION LIMITATIONS

3. **Emission Limits: Plant 35** – Total phosphorous emissions from the operation of Plant 35 kilns - Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) - shall not exceed the limits specified below:

Phosphorous	0.01	lb/hr	0.42	tons/yr
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Annual emissions calculated monthly as the sum of each consecutive 12-month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 10, 11, 12, 13, 14, 15 and State-Only Condition 5.
(9 VAC 5-170-160, 9 VAC 5-60-320, 9 VAC 5-80-1120 F and 9 VAC 5-80-1180C)

COMPLIANCE DEMONSTRATION

4. **CONDITION SATISFIED: Stack Test** - Initial performance tests shall be conducted for hydrogen fluoride emissions from Units # 04 (Kiln 35 "A") and # 05 (Kiln 35 "B") (DLA scrubber stack) using EPA reference methods or as approved by the Department to determine compliance with the control efficiency requirements contained in State Only Condition 2. The tests shall be performed within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Director, West Central Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

5. **CONDITION SATISFIED: Air Dispersion Modeling for Phosphorous** – Before the date of initial start-up of Unit #04 (Kiln 35 "A") and Unit #05 (Kiln 35 "B"), the permittee shall perform air dispersion modeling for ambient air concentrations for phosphorous, on an hourly and annual basis, to show compliance with the limits set forth in State-Only Condition 3. According to the results of the phosphorous dispersion modeling, this permit will be amended to reflect appropriate limits. The details of the modeling are to be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-170-160, 9 VAC 5-60-320, 9 VAC 5-60-330, 9 VAC 5-60-350 and 9 VAC 5-80-1120 F)

RECORDS

6. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, West Central Regional Office. These records shall include, but are not limited to:
 - a. Records identifying the relevant phosphorous and HF emission factors used in calculating emissions and the equations used in the calculations.
 - b. Results of stack tests for hydrogen fluoride and air dispersion modeling for phosphorous emissions.

(9 VAC 5-170-160, 9 VAC 5-60-360 and 9 VAC 5-80-1120 F)

SOURCE TESTING REPORT FORMAT

Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

Certification

1. Signed by team leader / certified observer (include certification date)
- * 2. Signed by reviewer

Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
- * 4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
- * 4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix

- * 1. Process data and emission results example calculations
2. Raw field data
- * 3. Laboratory reports
4. Raw production data
- * 5. Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

* Not applicable to visible emission evaluations.

APPENDIX C: NSR/FOP Correspondence Table for February 15, 2006 Permit

The following table is a modification of the table in the section Emission Unit Applicable Requirements – New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix D.

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
2	IV-A-9	Kiln operation for reduced emissions	9 VAC 5-50-260
3	IV-A-8	Adsorber required for Plant 36 kiln	9 VAC 5-50-260
4	IV-A-10	Filter for limestone storage silo PM control	9 VAC 5-50-260
5	IV-A-11	Enclosure for spent limestone hopper PM control	9 VAC 5-50-260
6	IV-A-14	DLA-2 efficiency for SO ₂ control	9 VAC 5-50-260
7	V-A-2	Fugitive dust controls	9 VAC 5-50-90
8	IV-B-5	Monitoring for DLA-2	9 VAC 5-50-260
9	IV-A-2	Plant 36 production limit	9 VAC 5-80-1180
10	IV-A-3	Approved fuels for kilns	9 VAC 5-80-1180
11	IV-A-5	Plant 36 fuel throughput limit	9 VAC 5-50-260, 9 VAC 5-80-1180
12	IV-A-6	Fuel specifications	9 VAC 5-50-260, 9 VAC 5-80-1180
13	IV-B-1	Fuel certification	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180
14	IV-B-2	Fuel sampling	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-1180
15	IV-A-24	Emission limits for DLA-2	9 VAC 5-50-260, 9 VAC 5-80-1180
16	IV-A-31	Opacity limit for DLA-2	9 VAC 5-80-1180, 9 VAC 5-50-260
17	N/A	Initial performance test DLA-2	9 VAC 5-50-30, 9 VAC 5-80-1200
18	N/A	Initial VEE DLA-2	9 VAC 5-50-30, 9 VAC 5-80-1200
19	IV-D-1	Stack tests on request, Plant 36	9 VAC 5-50-30
20	IV-D-2	VEEs on request, Plant 36	9 VAC 5-50-30
21a	IV-C-1	Record of Plant 36 brick production	9 VAC 5-50-50
21b	IV-C-3	Record of Plant 36 operating hours	9 VAC 5-50-50
21c	IV-C-6	Record of Plant 36 coal & gas consumption	9 VAC 5-50-50
21d	IV-C-7	Record of coal sulfur & ash content	9 VAC 5-50-50
21e	IV-C-8	Record of shale sulfur content	9 VAC 5-50-50
21f	IV-C-11	Record of Plant 36 emissions from DLA-2	9 VAC 5-50-50
21g	IV-C-13	Records of emission factors used	9 VAC 5-50-50
21h	IV-C-14	Limestone feeder rates for DLA-2 & limestone purchase records	9 VAC 5-50-50
21i	IV-C-15	Record of DLA-2 differential pressure	9 VAC 5-50-50
21j	IV-C-21	Record of maintenance & operator training	9 VAC 5-50-50
21k	IV-C-16	Weekly VE records for DLA-2	9 VAC 5-50-50
21l	IV-C-22	Records of stack tests and VEEs	9 VAC 5-50-50
21m	IV-C-17	SO ₂ control efficiency for DLA-2	9 VAC 5-50-50
22	N/A	Initial construction notifications	9 VAC 5-50-50
23	N/A	Permit invalidation for failure to construct	9 VAC 5-80-1210
24	IX-Q	Right of entry	9 VAC 5-170-130
25	V-E-1	Notice of control equipment maintenance	9 VAC 5-20-180
26	V-C-2	Record of malfunctions	9 VAC 5-20-180, 9 VAC 5-50-50
27	V-E-2, IX-F	Malfunction causing exceedence notice	9 VAC 5-20-180

General Shale Brick
 June 29, 2007 VA-20447
 Statement of Basis for Permit Signed July 9, 2007
 Appendices

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
28	V-E-3, IX-F	Malfunction causing exceedence report	9 VAC 5-20-180
29	V-A-4	Reduction or shutdown to avoid violation	9 VAC 5-20-180
30	V-A-3	Maintenance & operation practice	9 VAC 5-50-20
31	IX-V	Permit suspension/revocation	9 VAC 5-80-10
32	IX -T	Change of ownership	9 VAC 5-80-10
33	IX -S	Permit Copy	9 VAC 5-170-160
34	SO/NA	DLA-2 required for HF, HCl control	9 VAC 5-60-320
35	SO/NA	HF control efficiency for DLA-2	9 VAC 5-60-320
36	SO/NA	HCl control efficiency for DLA-2	9 VAC 5-60-320
37	SO/NA	Plant 36 emission limits for manganese, phosphorus	9 VAC 5-60-320
38	SO/NA	Initial stack test for HF, HCl from DLA-2	9 VAC 5-60-30
39a	SO/NA	Record of HAP emission factors	9 VAC 5-60-50
39b	SO/NA	Dispersion modeling for manganese, phosphorus	9 VAC 5-60-50
39c	SO/NA	Records of stack tests	9 VAC 5-60-50
39d	SO/NA	Records of control efficiencies of DLA-2	9 VAC 5-60-50

APPENDIX D: NSR Permit Dated February 15, 2006

A copy of the permit follows. The page numbering is consistent with the permit, not with this statement of basis.

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit supersedes your Permit to Construct and Operate dated August 2, 1973.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

General Shale Brick, Inc.
P. O. Box 3547
Johnson City, TN 37602

Registration No.: 20447
County / Plant No.: 023-0006

is authorized to modify and operate

Kiln #06 by adding coal burning capabilities to Plant 36

located at

770 Webster Road, Blue Ridge
Botetourt County, Virginia

in accordance with the Conditions of this permit.

Approved on **February 15, 2006.**

David K. Paylor
Director, Department of Environmental Quality

Permit consists of 15 pages.
Permit Conditions 1 through 33.
State-Only Conditions 34 through 39.
Source Testing Report Format.

INTRODUCTION

This permit approval is based on the permit application dated October 18, 2005, including amendment information dated November 1, 2005 and supplemental information dated November 17, 2005, December 21, 2005 and January 18, 2006. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will be either in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. Equipment List - Equipment to be modified at this facility consists of:

Unit #06 - 36 Dryer / Kiln at Plant 36 – Interkiln 18 (brick) wide x 389 feet long fired with coal and natural gas rated at 25 MMBtu/hr and 17.6 tons per hour production.

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 80-1180 D 3)

2. Emission Controls – Particulate and sulfur dioxide emissions from Unit # 06 (Kiln 36) shall be controlled by:

a. Installation of target firing reducing solid fuel requirements;

- b. Operating the dryer/kiln under reduced draft conditions;
- c. Use of supplemental fuel (natural gas) to reduce solid fuel requirement;
- d. Fuel specifications to include low sulfur and low ash content of coal.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

- 3. **Emission Controls** – Sulfur dioxide emissions from Unit # 06 (Kiln 36) shall be controlled by a single Ohlmann type dry lime adsorber (DLA). The dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when the associated kiln is operating.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
- 4. **Emission Controls** - Particulate emissions from the Ohlman dry lime adsorber lime storage tower shall be controlled by a fabric filter or equivalent. The control device shall be provided with adequate access for inspection and shall be in operation when the Ohlman dry lime adsorber is operating.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
- 5. **Emission Controls** - Particulate emissions from the Ohlman dry lime adsorber spent lime hopper shall be controlled by enclosure. The enclosure shall be provided with adequate access for inspection and shall be installed and operated according to manufacturer's specifications, at a minimum.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
- 6. **Control Efficiency** - The dry lime adsorber (DLA) controlling emissions from Unit # 06 (Kiln 36) shall demonstrate a control efficiency by stack test for sulfur dioxide of no less than twelve percent (12%). Subsequent to the most recent stack test that verifies compliance, this permit may be modified to require the DLA to meet or exceed the control efficiency established by such stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
- 7. **Fugitive Dust Emission Controls** - Fugitive dust emission controls shall include the following, or equivalent, as a minimum:
 - a. Dust from material handling and load-outs, shall be controlled by wet suppression, enclosure or equivalent (as approved by the DEQ). The wet suppression spray systems shall be operated at optimum design, and shall be installed with adequate access for inspection.
 - b. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.

- c. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.
- d. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.

(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-90)

8. **Monitoring Devices / Observations** – The permittee shall monitor the operational parameters listed below for the dry lime adsorber (DLA) controlling emissions from Unit # 06 (Kiln 36):

- a. Maintain pressure drop at or above average pressure established during the most recent performance test that verifies compliance. The device used to monitor differential pressure shall be observed by the permittee with a frequency sufficient to ensure good performance of the Ohlman dry lime adsorber. The permittee shall keep a log of the observations from the device used to monitor differential pressure.
- b. Visually verify limestone hopper and storage bin contains adequate limestone daily.
- c. Record limestone feeder setting daily and maintain at or above level established during the most recent performance test that verifies compliance.
- d. Use same grade limestone established during the most recent performance test that verifies compliance. Retain purchase records of limestone.
- e. Record visible emissions from the DLA exhaust stack once per week during normal operation of the kiln. The visible emissions evaluation (VEE) shall be conducted using 40 CFR 60 Appendix A Method 9 for at least six (6) minutes. 40 CFR 60 Appendix A Method 9 requires the observer to have a Method 9 certification that is current at the time of the VEE. All visible emission observations, VEE results, and corrective actions taken shall be recorded.

Monitoring device(s) shall be installed, maintained, calibrated and operated in accordance with approved procedures that shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the dry lime adsorber is operating.

(9 VAC 5-80-1180 D and 9 VAC 5-50-220)

OPERATING/EMISSION LIMITATIONS

9. **Plant 36 - Production** – Plant 36 - Unit # 06 (Kiln 36) shall produce no more than 154,000 tons of brick per year, calculated monthly as the sum of each consecutive 12-month period. (9 VAC 5-80-1180 and 9 VAC 5-50-260)

10. **Fuel** - The approved fuels for Unit # 06 (Kiln 36) are coal and natural gas (with propane backup). The kiln may be fired with 100% natural gas, or a mix of coal with natural gas supplement. A change in the approved fuels may require a permit to modify and operate. (VAC 5-80-1180)

11. **Fuel Throughput** – For optimum kiln combustion, Unit # 06 (Kiln 36) shall consume no more than 1,540 lbs/hr (0.77 tons/hr) of coal, calculated monthly as total pounds (tons) of coal divided by total kiln operating hours; and 6,764 tons of coal per year, calculated monthly as the sum of each consecutive 12-month period. (9 VAC 5-80-1180 and 9 VAC 5-50-260)

12. **Fuel Specifications** - The coal, natural gas, and propane used for fuel in Unit # 06 (Kiln 36) shall meet the specifications below:

COAL:

Maximum sulfur content per shipment: 1.0% as determined
by ASTM D3177, D4239, or a DEQ-approved equivalent method.

Maximum ash content per shipment: 6.0% as determined
by ASTM D2795, D3174, or a DEQ-approved equivalent method.

NATURAL GAS:

Minimum heat content: 1,000 Btu/cf HHV as
determined by ASTM D1826, D2382, or a DEQ-approved equivalent method.

LPG, including butane and propane, which meets ASTM specification D1835.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

13. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of coal. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the coal shipment was received;
- c. The quantity of coal delivered (in pounds or tons) in the shipment;

- d. The sulfur content (% sulfur) and ash content (% ash) of the coal;
- e. Documentation of sampling of the coal indicating the location of the fuel when the sample was taken, and;
- f. The method(s) used to determine the sulfur content and ash content of the coal.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ or as required by Condition 14 may be used to determine compliance with the fuel specifications stipulated in Condition 12. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits. (9 VAC 5-170-160 and 9 VAC 5-80-1180)

14. Fuel Sampling and Analysis: If the fuel supplier certification as required in Condition 13 does not contain sufficient data for coal sulfur content and ash content, a sample of the coal delivered to the kiln burner(s) shall be collected at least once per week and composited for a monthly analysis. The composite shall be analyzed for percent (%) sulfur by weight and percent (%) ash by weight. The analyses shall meet the requirements of ASTM Methods D3177 or D4239 (sulfur content) and ASTM Methods D2795 or D3174 (ash content) or a DEQ approved equivalent method. The approved procedure for collecting the samples shall list all pertinent information regarding sample size and number, where sample is taken, etc. (9 VAC 5-170-160 and 9 VAC 5-80-1180)

15. Emission Limits: Plant 36 – Total emissions from the operation of Plant 36 Kiln - Unit # 06 shall not exceed the limits specified below:

Particulate Matter	16.89 lbs/hr	74.0 tons/yr
PM-10	15.31 lbs/hr	67.07 tons/yr
Sulfur Dioxide	18.58 lbs/hr	81.40 tons/yr
Nitrogen Oxides (as NO ₂)	8.97 lbs/hr	39.31 tons/yr
Carbon Monoxide	21.12 lbs/hr	92.50 tons/yr
Volatile Organic Compounds	1.41 lbs/hr	6.17 tons/yr

Annual emissions calculated monthly as the sum of each consecutive 12-month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, and 21.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

16. **Visible Emission Limit** - Visible emissions from Unit # 06 (Kiln 36) exhaust stack shall not exceed ten percent (10%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed twenty percent (20%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

INITIAL COMPLIANCE DETERMINATION

17. **Stack Test** - Initial performance tests shall be conducted for sulfur dioxide from Unit # 06 (Kiln 36) (DLA scrubber stack) using Reference Method 6 (or other as approved by the Department) to determine compliance with the control efficiency requirements and emission limits contained in Conditions 6 and 15. The tests shall be performed, reported and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)
18. **Visible Emissions Evaluation** - Concurrently with the initial performance tests, visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the following equipment: Unit # 06 (Kiln 36). Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. The evaluation shall be performed, reported and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Should conditions prevent concurrent opacity observations, the Air Compliance Manager, West Central Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests.

One copy of the test result shall be submitted to the Air Compliance Manager, West Central Regional Office and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

CONTINUING COMPLIANCE DETERMINATION

19. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance tests to demonstrate compliance with the emission limits and/or control efficiency requirements contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-50-30 G)
20. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-50-30 G)

RECORDS

21. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, West Central Regional Office. These records shall include, but are not limited to:
 - a. Monthly and annual production of brick from Unit # 06 (Kiln 36). Annual production shall be calculated monthly as the sum of each consecutive 12-month period.
 - b. Monthly and annual total operating hours of Unit # 06 (Kiln 36). Annual operating hours shall be calculated monthly as the sum of each consecutive 12-month period.
 - c. Monthly and annual consumption of coal and natural gas (or propane as backup fuel) in Unit # 06 (Kiln 36). Annual consumption shall be calculated monthly as the sum of each consecutive 12- month period.
 - d. All records showing the percentage of sulfur and ash content in coal specifications for use in sulfur dioxide and particulate emission calculations, including records of any fuel supplier certifications and fuel analyses.
 - e. All records and analyses of representative sulfur content (%) in shale.

- f. Records of PM, PM₁₀, SO₂, NO_x, CO and VOC emissions from Unit # 06 (Kiln 36) using calculation methods approved by the Air Compliance Manager, West Central Regional Office to verify compliance with the lb/hr and ton/yr emissions limitations in Condition 15.
- g. Records identifying the relevant, pollutant-specific emission factors used in calculating emissions and the equations used in the calculations.
- h. Daily limestone feeder settings of the DLA, and purchase records and grade rating for limestone used in DLA.
- i. Log of the observations from the device used to monitor differential pressure from the DLA filter.
- j. Scheduled and unscheduled maintenance and operator training.
- k. Weekly visible emission observation results from the DLA exhaust stack.
- l. Results of all stack tests, visible emission evaluations and performance evaluations.
- m. Control efficiency of the DLA for sulfur dioxide emission reduction using a calculation method approved by the Air Compliance Manager, West Central Regional Office.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-1180 and 9 VAC 5-50-50)

NOTIFICATIONS

22. **Initial Notifications** - The permittee shall furnish written notification to the Air Compliance Manager, West Central Regional Office:
- a. The actual date on which modification of Unit # 06 (Kiln 36) commenced within 30 days after such date.
 - b. The anticipated start-up date of the modified Unit # 06 (Kiln 36) postmarked not more than 60 days nor less than 30 days prior to such date.
 - c. The actual start-up date of the modified Unit # 06 (Kiln 36) within 15 days after such date.

- d. The anticipated date of performance tests of Unit # 06 (Kiln 36), postmarked at least 30 days prior to such date.

(9 VAC 5-50-50)

GENERAL CONDITIONS

23. **Permit Invalidation** - This permit to modify Unit # 06 (Kiln 36) shall become invalid, unless an extension is granted by the DEQ, if:

- a. A program of continuous modification is not commenced before the latest of the following:
 - i. 18 months from the date of this permit;
 - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
 - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
- b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

24. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130)

25. Notification for Control Equipment Maintenance - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B and 9 VAC 5-80-1180)

26. Record of Malfunctions – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.

(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

27. Notification for Facility or Control Equipment Malfunction - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Air Compliance Manager, West Central Regional Office in writing.

(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

28. **Reports for Facility or Control Equipment Malfunction** - Within 30 days of a failure or malfunction that is expected to exist for 30 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Air Compliance Manager, West Central Regional Office, that contain the following:
- a. Identification of the specific facility that is affected as well as its location and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period;
 - d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period;
 - e. A statement as to why the owner was unable to obtain repair parts or perform repairs that which would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;
 - f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations; and
 - g. Any other pertinent information as may be requested by the board.

(9 VAC 5-20-180 D)

29. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.

(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

30. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.

- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E)

31. Permit Suspension/Revocation - This permit may be revoked if the permittee:

- a. Knowingly makes material misstatements in the permit application or any amendments to it;
- b. Fails to comply with the terms or conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted;
- f. Fails to comply with the applicable provisions of Articles 6, 8 and 9 of 9 VAC 5 Chapter 80.

(9 VAC 5-80-1210)

32. Change of Ownership - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, West Central Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-1240)

33. Permit Copy - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-170-160)

STATE-ONLY ENFORCEABLE CONDITIONS

The following terms and conditions are included in this permit to implement the requirements of 9 VAC 5-60-300 et seq. and are not required under the federal Clean Air Act or under any of its applicable federal requirements. Neither their inclusion in this permit nor any subsequent public comment period make these terms federally enforceable.

OPERATING/EMISSION LIMITATIONS

- 34. **Emission Controls** – Hydrogen fluoride and hydrogen chloride emissions from Unit # 06 (Kiln 36) shall be controlled by a single Ohlmann type dry lime adsorber (DLA). The dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when the kiln is operating.
(9 VAC 5-50-260)

- 35. **Control Efficiency** - The dry lime adsorber (DLA) controlling emissions from Unit # 06 (Kiln 36) shall demonstrate a control efficiency by stack test for hydrogen fluoride of no less than ninety percent (90%). Subsequently to the most recent stack test that verifies compliance, this permit may be modified to require the DLA to meet or exceed the control efficiency established by such stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

- 36. **Control Efficiency** - The dry lime adsorber (DLA) controlling emissions from Unit # 06 (Kiln 36) shall demonstrate a control efficiency by stack test for hydrogen chloride (HCl) of no less than thirty percent (30%). Subsequently to the most recent stack test that verifies compliance, this permit may be modified to require the DLA to meet or exceed the control efficiency established by such stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

- 37. **Emission Limits: Plant 36** – Emissions from the operation of Plant 36 kiln - Unit # 06 (Kiln 36) - shall not exceed the limits specified below:

Manganese	N/A	1.20	tons/yr
Phosphorous	0.021 lb/hr	0.091	tons/yr

Annual emissions calculated monthly as the sum of each consecutive 12-month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 8, 9, 10, 11, 12, 13, 14, 21 and State-Only Conditions 34, 35, 36, 38 and 39.

(9 VAC 5-170-160, 9 VAC 5-60-320 and 9 VAC 5-80-1180C)

38. **Stack Test** - Initial performance tests shall be conducted for hydrogen fluoride and hydrogen chloride emissions from Unit # 06 (Kiln 36) (DLA scrubber stack) using EPA reference methods or as approved by the Department to determine compliance with the control efficiency requirements contained in State-Only Conditions 35 and 36. The tests shall be performed, reported and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office and shall conform to the test report format enclosed with this permit.
(9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

RECORDS

39. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, West Central Regional Office. These records shall include, but are not limited to:
- a. Records identifying the relevant hydrogen chloride, hydrogen fluoride, manganese and phosphorous emission factors used in calculating emissions and the equations used in the calculations.
 - b. Results of air dispersion modeling for manganese and phosphorous emissions.
 - c. Results of air compliance tests.
 - d. Control efficiency of the DLA for hydrogen fluoride and hydrogen chloride emission reduction using a calculation method approved by the Air Compliance Manager, West Central Regional Office.

(9 VAC 5-170-160, 9 VAC 5-60-360 and 9 VAC 5-80-1120 F)

SOURCE TESTING REPORT FORMAT

Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

Certification

1. Signed by team leader / certified observer (include certification date)
- * 2. Signed by reviewer

Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
- * 4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
- * 4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix

- * 1. Process data and emission results example calculations
2. Raw field data
- * 3. Laboratory reports
4. Raw production data
- * 5. Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

* Not applicable to visible emission evaluations.

APPENDIX E: NSR/FOP Correspondence Table for March 6, 2006 Permit

The following table is a modification of the table in the section Emission Unit Applicable Requirements – New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix F.

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
2	IV-A-17	Enclosure for impactor PM control	9 VAC 5-50-260
3	IV-A-18	Baghouse(s) for brick machine PM control	9 VAC 5-50-260
4	IV-A-19	Wet suppression for hammermill PM control	9 VAC 5-50-260
5	IV-A-20	Filter for storage silo PM control	9 VAC 5-50-260
6	V-A-2	Fugitive dust controls	9 VAC 5-50-90
7	IV-B-3	dP monitor for brick machine baghouse(s)	9 VAC 5-50-260, 9 VAC 5-80-1180
8	IV-B-4	dP monitor observation frequency	9 VAC 5-80-1180
9	IV-A-21	Hammermill throughput limit	9 VAC 5-80-1180
10	IV-A-22	Emission limits for hammermill	9 VAC 5-50-260, 9 VAC 5-80-1180
11	N/A	Emission limits for cage mill (removed)	9 VAC 5-50-260, 9 VAC 5-80-1180
12	IV-A-26	Opacity limit for impactor	9 VAC 5-50-260
13	IV-A-27	Opacity limit for Plant 36 brick machine	9 VAC 5-50-260
14	IV-A-28	Opacity limit for hammermill	9 VAC 5-50-410
15	IV-A-29	Opacity limit for conveyors, bins & stockpiles	9 VAC 5-50-260
16	IV-A-30	Opacity limit for bulk material storage silo	9 VAC 5-50-260
17	IV-A-33	Requirements by reference - NSPS OOO	9 VAC 5-50-400, 9 VAC 5-50-410
18	IV-D-2	VEEs on request	9 VAC 5-50-30, 9 VAC 5-80-1200
19	N/A	Reactivation of dormant equipment	9 VAC 5-80-1180
20	IV-E-1	NSPS Like-For-Like replacement notification	9 VAC 5-50-410
21	N/A	Initial construction notification	9 VAC 5-50-50
22a	IV-C-4	Record of hammermill throughput	9 VAC 5-50-50
22b	IV-C-9	Record of hammermill estimated emissions	9 VAC 5-50-50
22c	IV-C-20	Record of Plant 36 baghouse dP monitor(s)	9 VAC 5-50-50
22d	IV-C-21	Records of maintenance	9 VAC 5-50-50
22e	IV-C-22	Records of stack tests & VEEs	9 VAC 5-50-50
23	N/A	Permit invalidation for failure to construct	9 VAC 5-80-1210
24	IX-Q	Right of entry	9 VAC 5-170-130
25	V-E-1	Notice of control equipment maintenance	9 VAC 5-20-180
26	V-C-2	Record of malfunctions	9 VAC 5-20-180, 9 VAC 5-50-50
27	V-E-2, IX-F	Malfunction causing exceedence notice	9 VAC 5-20-180
28	V-E-3, IX-F	Malfunction causing exceedence report	9 VAC 5-20-180
29	V-A-4	Reduction or shutdown to avoid violation	9 VAC 5-20-180
30	V-A-3	Maintenance & operation practice	9 VAC 5-50-20
31	IX-V	Permit suspension/revocation	9 VAC 5-80-10
32	IX -T	Change of ownership	9 VAC 5-80-10
33	IX -S	Permit Copy	9 VAC 5-170-160

APPENDIX F: NSR Permit Dated March 6, 2006

A copy of the permit follows. The page numbering is consistent with the permit, not with this statement of basis.

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit includes designated equipment subject to New Source Performance Standards (NSPS) 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants.

This permit supersedes your minor source permit for the Hammermill (Unit #01-02) and Cage Mill (Unit #01-03) dated July 1, 2005, your minor source permit for a bulk material storage silo (Unit # 01-06) dated January 4, 1999 as amended September 25, 2001 and the material handling portions of your permit to construct and operate shale crushing and brick making and texturing equipment (Units #01-01, #03-01 and #03-02) dated August 2, 1973.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

General Shale Brick, Inc.
P. O. Box 3547
Johnson City, TN 37602

Registration No.: 20447
County / Plant No.: 023-0006

is authorized to modify and operate: Material handling equipment at your structural brick manufacturing facility

located at: 770 Webster Road, Blue Ridge, Botetourt County, Virginia

in accordance with the Conditions of this permit.

Approved on: **March 6, 2006.**

David K. Paylor (for)
Director, Department of Environmental Quality

Permit consists of 12 pages.
Permit Conditions 1 to 33.

INTRODUCTION

This permit approval is based on the letter request dated February 8, 2006 for permit amendment in response to increased throughput in Grinding Room limit. The increased throughput for material handling corresponds to the Plant 36 NSR modification, dated February 15, 2006. The letter requests the change to minor source permit for the Hammermill (Unit #01-02) and Cage Mill (Unit #01-03) dated July 1, 2005; and also incorporates updated conditions of the permit to construct and operate a bulk material storage silo, dated January 4, 1999, amended September 25, 2001 and permit to construct and operate shale crushing and brick making and texturing equipment dated August 2, 1973. This permit approval builds upon historical permit applications for each source contained in this permit. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

- Equipment List** - Equipment at this facility consists of the following:

Equipment to be Modified			
Reference No.	Equipment Description / control	Rated Capacity	Federal Requirements
Unit #01-01	(2) Steele Primary Crushers / 15-20% inherent moisture & Enclosure	75 tons/hr each	N/A
Unit # 01-02	Steele Hammermill-Model 36-24 / wet suppression	100 tons/hr	NSPS - 40 CFR 60 Subpart OOO
Unit # 01-03	#1 Cage Mill / wet suppression	80 tons/hr	NSPS - 40 CFR 60 Subpart OOO
Unit #03-01	Steele Brick Machine / Gold Series Collector Model GS-12	65 tons/hr	N/A
Unit #03-02	Custom-built brick texturing equipment / Enviro-Systems, BU-136 Pulse-Jet Baghouse	2 tons/hr	N/A

Equipment permitted prior to the date of this permit			
Reference No.	Equipment Description / control	Rated Capacity	Original Permit Date
Unit # 01-06	Bulk Material Storage Silo 33' 7" x 10' / fabric filter	10 tons/hr; 60 Yd ³ / 75 tons capacity	January 4, 1999; amended September 25, 2001.

Other Material Handling/ Equipment installed prior to the date of this permit			
Reference No.	Equipment Description / control	Rated Capacity	Installation Date
Unit #01-04	(8) 4' x 10' Leahy Screen(s) / 15-20% inherent moisture) & Enclosure	75 tons/hr total	Existing source (pre-1972)
Unit #01-05	(11) Custom belt conveyors Various capacities / 15-20% inherent moisture) & Enclosure	75 tons/hr each maximum	Existing source (pre-1972)
02-01	Steele Brick Machine / building	70 tons/hr	Existing source 1954
02-02	Custom-built brick texturing equipment / Enviro-Systems, BU-80 Pulse-Jet Baghouse	2 tons/hr	Existing source 1954

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
 (9 VAC 80-1180 D 3)

2. **Emission Controls** – Particulate emissions from each Steele primary crusher (Unit # 01-01) shall be controlled by inherent moisture of product and enclosure. The material and enclosure shall be provided with adequate access for inspection.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Emission Controls** – Particulate emissions from the Steele brick machine (Unit # 03-01) and custom-built texturing equipment (Unit #03-02) shall be controlled by the use of a fabric filter baghouse. The baghouse shall be provided with adequate access for inspection and shall be in operation when the Steele brick machine (Unit # 03-01) and custom-built texturing equipment (Unit #03-02) is operating.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)

4. **Emission Controls** – Particulate emissions from the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03) shall be controlled by wet suppression. The wet suppression spray systems shall be provided with adequate access for inspection and shall be in operation when the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03) are operating.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)

5. **Emission Controls** – Particulate emissions from the bulk material storage silo (Unit # 01-06) shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
6. **Fugitive Dust Controls** – Fugitive dust controls shall include the following, or equivalent, as approved by DEQ:
- a. Use of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, grading of roads, or clearing of land;
 - b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; paving of roadways, and maintenance of roadways in a clean condition;
 - c. Installation and use of hoods, fans and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations;
 - d. Open equipment for conveying or transporting materials likely to create objectionable air pollution when airborne shall be covered, or treated in an equally effective manner at all times when in motion;
 - e. Prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion;
 - f. Dust from material handling and load-outs, shall be controlled by wet suppression or equivalent. The wet suppression spray systems shall be operated at optimum design. Pressure gauges shall be installed with adequate access for inspection to indicate system operating pressures; and
 - g. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Dirt, product, or raw material spilled or tracked onto paved surfaces shall be promptly removed to prevent particulate matter from becoming airborne.
- (9 VAC 5-50-90 and 9 VAC 5- 80-1180 and 9 VAC 5-50-260)
7. **Monitoring Devices** - The fabric filter baghouse controlling particulate emissions from the Steele brick machine (Unit # 03-01) and custom-built texturing equipment (Unit #03-02) shall be equipped with a device to continuously measure the pressure differential across the filter. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection

and maintained by the permittee such that it is proper working order at all times when the control device is operating.

(9 VAC 5-80-1180 D and 9 VAC 5-50-260)

8. **Monitoring Device Observation** – To ensure good performance, the fabric filter monitoring device used to continuously measure differential pressure across the filter shall be observed by the permittee with a frequency of not less than once per week. The permittee shall keep a log of the observations from the control monitoring device.

(9 VAC 5-80-1180 D)

OPERATING/EMISSION LIMITATIONS

9. **Throughput** - The annual throughput of crushed stone from the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03) shall not exceed 336,384 tons per year, calculated monthly as the sum of each consecutive 12-month period.

(9 VAC 5-80-1180)

10. **Emission Limits** - Particulate emissions from the operation of the Steele hammermill (Unit #01-02) shall not exceed the limits specified below:

Particulate Matter	3.0	lbs/hr	5.05	tons/yr
PM ₁₀	2.76	lbs/hr	4.64	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 4, 9, 14 and 18.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Emission Limits** -Emissions from the operation of the of the #1 cage mill (Unit #01-03) shall not exceed the limits specified below:

Particulate Matter	2.40	lbs/hr	5.05	tons/yr
PM ₁₀	2.21	lbs/hr	4.64	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 4, 9, 14 and 18.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

12. **Visible Emission Limit** - Visible emissions from each Steele primary crusher (Unit # 01-01) shall not exceed fifteen percent (15%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

13. **Visible Emission Limit** - Visible emissions from the Steele brick machine (Unit # 03-01) and custom-built texturing equipment (Unit #03-02) fabric filter exhaust stack shall not exceed seven percent (7%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
14. **Visible Emission Limit** - Visible emissions from the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03) shall not exceed seven percent (7%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-410)
15. **Visible Emission Limit** - Visible emissions from stockpiles, surge bins, conveyor transfers and fugitive emission sources shall not exceed ten percent (10%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
16. **Visible Emission Limit** - Visible emissions from the bulk material storage silo fabric filter shall not exceed five percent (5%) opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
17. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the NSPS equipment as described in Condition 1 shall be operated in compliance with the requirements of 40 CFR 60, Subpart OOO – *Standard of Performance for Nonmetallic Mineral Processing Plants*.
(9 VAC 5-80-1180, 9 VAC 5-50-400 and 9 VAC 5-50-410)

CONTINUING COMPLIANCE DETERMINATION

18. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct visible emission evaluations to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

MISCELLANEOUS

19. **Reactivation** – Existing #2 cage mill and 7 existing belt conveyors have been removed and replaced with the Steele Model 36-24A Hammermill. Reactivation of the old replaced units may require a permit.
(9 VAC 5-80-1180 D.3.)

NOTIFICATIONS AND RECORDS

20. **NSPS Like-for-Like Replacement Notification** - Within thirty (30) days of completion, the permittee shall furnish written notification to the EPA Region III office of equipment replacement; to include the following information, as applicable pertaining to NSPS equipment as described in Condition 1:
- a. The rated capacity, in tons per hour, of the existing operation being replaced,
 - b. The rated capacity, in tons per hour, of the replacement equipment,
 - c. The total surface area of the top screen of:
 - i. the existing screening operation being replaced
 - ii. the replacement screening operation
 - d. The conveyor belt width of:
 - i. the existing belts being replaced
 - ii. the replacement belts
 - e. The rated storage capacity, in tons, of:
 - i. the existing bins being replaced
 - ii. the replacement bins
 - f. A description of the control device used to reduce particulate matter emissions from the existing operation, and a list of all other pieces of equipment controlled by the same device, and
 - g. The estimated age of the existing equipment.

(9 VAC 5-80-1180, 9 VAC 5-170-160 and 9 VAC 5-50-410)

21. **Initial Notifications** - The permittee shall furnish written notification to the Air Compliance Manager, West Central Regional Office of the actual date on which modification of the material handling equipment commenced within 30 days after such date. Copies of the written notification are to be sent to:

Associate Director / NSPS OOO Coordinator
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency - Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-50-50 and 9 VAC 5-80-1180)

22. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, West Central Regional Office. These records shall include, but are not limited to:
- a. Monthly and annual throughput of material processed through the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period.
 - b. Emission records of PM and PM₁₀ from the Steele hammermill (Unit # 01-02) and #1 cage mill (Unit #01-03) using calculation methods approved by the Department to verify compliance with the lb/hr and ton/yr emission limitations as contained in Conditions 10 and 11 of this permit.
 - c. Operation and control device monitoring records for the air pollution control device as required in Conditions 7 and 8.
 - d. Scheduled and unscheduled maintenance.
 - e. Results of all visible emission evaluations and performance evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-1180 and 9 VAC 5-50-50)

GENERAL CONDITIONS

23. **Permit Invalidation** - This permit to modify and operate shall become invalid, unless an extension is granted by the DEQ, if:
- a. A program of continuous modification is not commenced before the latest of the following:
 - i. 18 months from the date of this permit;
 - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
 - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
 - b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

24. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
 - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
 - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
 - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130)

25. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B and 9 VAC 5-80-1180)

26. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.

(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

27. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Air Compliance Manager, West Central Regional Office in writing.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)
28. **Reports for Facility or Control Equipment Malfunction** - Within 30 days of a failure or malfunction that is expected to exist for 30 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Air Compliance Manager, West Central Regional Office, that contain the following:
- a. Identification of the specific facility that is affected as well as its location and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period;
 - d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period;
 - e. A statement as to why the owner was unable to obtain repair parts or perform repairs that which would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;
 - f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations; and
 - g. Any other pertinent information as may be requested by the board.
- (9 VAC 5-20-180 D)
29. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

30. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E)

31. **Permit Suspension/Revocation** - This permit may be revoked if the permittee:

- a. Knowingly makes material misstatements in the permit application or any amendments to it;
- b. Fails to comply with the terms or conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted;
- f. Fails to comply with the applicable provisions of Articles 6, 8 and 9 of 9 VAC 5 Chapter 80.
(9 VAC 5-80-1210)

32. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, West Central Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

33. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-170-160)

APPENDIX G: SOP/FOP Correspondence Table for March 16, 2006 Permit

The following table is a modification of the table in the section Emission Unit Applicable Requirements – New Source Review Permit Requirements. This table is ordered corresponding to the NSR permit conditions as an aid to reference the corresponding federal operating permit conditions. The NSR permit follows in Appendix B.

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
2	IV-A-8	DLA for control of HF/HCl from Plant 36	9 VAC 5-80-850, 9 VAC 5-60-320
3	IV-A-7	DLA for control of HF/HCl from Plant 35	9 VAC 5-80-850, 9 VAC 5-60-320
4	IV-A-15	HF control efficiency for DLAs	9 VAC 5-80-850, 9 VAC 5-60-320
5	IV-A-16	HCl control efficiency for DLAs	9 VAC 5-80-850, 9 VAC 5-60-320
6a	IV-B-5a	dP monitor for each DLA	9 VAC 5-80-850, 9 VAC 5-50-20
6b	IV-B-5b	Daily visual inspection of limestone hopper and storage bin	9 VAC 5-80-850, 9 VAC 5-50-20
6c	IV-B-5c	Daily reading of limestone feed rate	9 VAC 5-80-850, 9 VAC 5-50-20
6d	IV-B-5d	Verify limestone grade	9 VAC 5-80-850, 9 VAC 5-50-20
6e	IV-B-5e	Weekly Method 9 VEE of each DLA	9 VAC 5-80-850, 9 VAC 5-50-20
7	IV-A-2	Plant 36 production limit	9 VAC 5-80-850
8	IV-A-1	Plant 35 production limit	9 VAC 5-80-850
9	IV-A-3	Approved fuels for kilns	9 VAC 5-80-850
10	IV-A-5	Plant 36 fuel throughput limit	9 VAC 5-50-260, 9 VAC 5-80-850
11	IV-A-4	Plant 35 fuel throughput limit	9 VAC 5-50-260, 9 VAC 5-80-850
12	IV-A-6	Fuel specifications	9 VAC 5-50-260, 9 VAC 5-80-850
13	IV-B-1	Fuel certification	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-850
14	IV-B-2	Fuel sampling	9 VAC 5-50-50, 9 VAC 5-170-160, 9 VAC 5-80-850
15	V-A-1	Plantwide HAP emission limits	9 VAC 5-80-850
16	N/A	Initial performance test for DLA-2	9 VAC 5-80-1120
17	IV-D-1	Stack testing upon request	VAC 5-50-30
18a	IV-C-1	Record of brick production for each kiln	9 VAC 5-50-50
18b	IV-C-2 & 3	Record of operating hours for each kiln	9 VAC 5-50-50
18c	IV-C-5 & 6	Record of coal & gas consumption for each kiln	9 VAC 5-50-50
18d	IV-C-7	Records of coal sulfur & ash content, fuel certification	9 VAC 5-50-50
18e	IV-C-8	Record of shale sulfur content	9 VAC 5-50-50
18f	IV-C-12, V-C-1a	Record of estimated HAP emissions each DLA	9 VAC 5-50-50
18g	IV-C-13	Record of emission factors	9 VAC 5-50-50
18h	IV-C-14	Record of limestone feeder settings & limestone purchase records	9 VAC 5-50-50
18i	IV-C-15	Record of dP monitor for each DLA	9 VAC 5-50-50
18j	IV-C-21	Record of maintenance & operator training	9 VAC 5-50-50
18k	IV-C-16	Weekly Method 9 DLA observation records	9 VAC 5-50-50
18l	IV-C-22	Records of stack tests & VEEs	9 VAC 5-50-50
18m	IV-C-18	Record of DLA efficiency – HF & HCl	9 VAC 5-50-50
19	N/A	Initial construction notification	9 VAC 5-50-50
20	N/A	Permit invalidation for failure to construct	9 VAC 5-80-1210
21	IX-Q	Right of entry	9 VAC 5-170-130
22	V-E-1	Notice of control equipment maintenance	9 VAC 5-20-180

General Shale Brick
June 29, 2007 VA-20447
Statement of Basis for Permit Signed July 9, 2007
Appendices

NSR Condition	Title V Condition	Description	VAC Applicable Requirement
23	V-E-2	Record of malfunctions	9 VAC 5-20-180, 9 VAC 5-50-50
24	V-E-2, IX-F	Malfunction causing exceedence notice	9 VAC 5-20-180
25	V-E-3, IX-F	Malfunction causing exceedence report	9 VAC 5-20-180
26	V-A-4	Reduction or shutdown to avoid violation	9 VAC 5-20-180
27	V-A-3	Maintenance & operation practice	9 VAC 5-50-20
28	IX-V	Permit suspension/revocation	9 VAC 5-80-10
29	IX -T	Change of ownership	9 VAC 5-80-10
30	IX -S	Permit Copy	9 VAC 5-170-160

APPENDIX H: STATE OPERATING PERMIT DATED March 16, 2006

A copy of the permit follows. The page numbering is consistent with the permit, not with this statement of basis.

STATIONARY SOURCE PERMIT TO OPERATE

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

General Shale Brick, Inc.
P. O. Box 3547
Johnson City, TN 37602

Registration No.: 20447
County / Plant No.: 023-0006

is authorized to operate

A brick manufacturing facility

located at

770 Webster Road, Blue Ridge
Botetourt County, Virginia

in accordance with the Conditions of this permit.

Approved on **March 16, 2006.**

David K. Paylor
Director, Department of Environmental Quality

Permit consists of 12 pages.
Permit Conditions 1 to 30.
Source Testing Report Format.

INTRODUCTION

This permit approval is based on the permit application dated October 18, 2005, including amendment information dated November 1, 2005 and supplemental information dated November 17, 2005, December 21, 2005, January 18, 2006 and January 23, 2006. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will be either in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. Equipment List - Equipment to be installed at the facility consists of:

One - Ohlmann type dry lime adsorber (DLA) on:
Unit #06 - Kiln 36 – Interkiln 18 (brick) wide x 389 feet long fired with natural gas and coal rated at 25 MMBtu/hr and 17.6 tons per hour production.

Equipment installed and permitted prior to the date of this permit at the facility consists of:

One - Ohlmann type dry lime adsorber (DLA) on:
Unit #04 - 35 “A” Dryer / Kiln at Plant 35 - Harrop 8 (brick) wide x 417 feet long fired with coal and natural gas rated at 18.2 MMBtu/hr and 8.2 tons per hour production; and

Unit #05 - 35 “B” Dryer / Kiln at Plant 35 - Harrop 8 (brick) wide x 417 feet long fired with coal and natural gas rated at 18.2 MMBtu/hr and 8.2 tons per hour production.

(9 VAC 5-80-850)

2. **Emission Controls - Plant 36**– Hydrogen fluoride and hydrogen chloride emissions from Unit # 06 (Kiln 36) shall be controlled by a single Ohlmann type dry lime adsorber (DLA). The dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when the kiln is operating. The DLA shall be installed and in operation on or before May 16, 2006. If circumstances prevent the installation and operation of the DLA on Unit # 06 (Kiln 36) by then, Unit #06 (Kiln 36) shall cease operation until the DLA is installed and operational.
(9 VAC 5-80-850)
3. **Emission Controls – Plant 35** – Hydrogen fluoride and hydrogen chloride emissions from Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) shall continue to be controlled by a single Ohlmann type dry lime adsorber (DLA). The shared dry lime adsorber shall be provided with adequate access for inspection and shall be in operation when one/both of the associated kiln(s) is/are operating.
(9 VAC 5-80-850)
4. **Control Efficiency** - Each dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”), Unit # 05 (Kiln 35 “B”) and Unit # 06 (Kiln 36) shall demonstrate a control efficiency by stack test for hydrogen fluoride of at least ninety percent (90%). Subsequent to the most recent stack test which verifies compliance, this permit may be modified to require each DLA to meet or exceed the control efficiencies established by such stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-80-850 and 9 VAC 5-170-160)
5. **Control Efficiency** – Each dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”), Unit # 05 (Kiln 35 “B”) and Unit # 06 (Kiln 36) shall demonstrate a control efficiency by stack test for hydrogen chloride (HCl) of at least thirty percent (30%). Subsequent to the most recent stack test which verifies compliance, this permit may be modified to require each DLA to meet or exceed the control efficiencies established by such stack test, using similar fuels, operating practices, and lime.
(9 VAC 5-80-850 and 9 VAC 5-170-160)
6. **Monitoring Devices / Observations** – The permittee shall monitor the operational parameters listed below for each dry lime adsorber (DLA) controlling emissions from Unit # 04 (Kiln 35 “A”), Unit # 05 (Kiln 35 “B”) and Unit # 06 (Kiln 36):
 - a. Maintain pressure drop at or above average pressure established during the most recent performance test that verifies compliance. The device used to monitor differential pressure shall be observed by the permittee with a frequency sufficient to ensure good performance of each Ohlman dry lime adsorber. The permittee shall keep a log of the observations from each device used to monitor differential pressure.
 - b. Visually verify limestone hopper and storage bin contains adequate limestone daily.

- c. Record limestone feeder setting daily and maintain at or above level established during the most recent performance test that verifies compliance.
- d. Use same grade limestone established during the most recent performance test that verifies compliance. Retain purchase records of limestone.
- e. Record visible emissions from each DLA exhaust stack once per week during normal operation of the kiln. The visible emissions evaluation (VEE) shall be conducted using 40 CFR 60 Appendix A Method 9 for at least six (6) minutes. 40 CFR 60 Appendix A Method 9 requires the observer to have a Method 9 certification that is current at the time of the VEE. All visible emission observations, VEE results, and corrective actions taken shall be recorded.

Monitoring device(s) shall be installed, maintained, calibrated and operated in accordance with approved procedures that shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the dry lime adsorber is operating.
(9 VAC 5-80-850 and 9 VAC 5-50-20 C)

OPERATING/EMISSION LIMITATIONS

7. **Plant 36 - Production** – Plant 36 Unit # 06 (Kiln 36) shall produce no more than 154,000 tons of brick per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-850)
8. **Plant 35 - Production** – Plant 35, which is comprised of Unit # 04 (Kiln 35 “A”) and Unit # 05 (Kiln 35 “B”) shall produce no more than 143,664 tons of brick per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-850)
9. **Fuel** - The approved fuels for Unit # 04 (Kiln 35 “A”), Unit # 05 (Kiln 35 “B”) and Unit # 06 (Kiln 36) are coal and natural gas (with propane backup). Each kiln may be fired with a mix of coal with natural gas supplement, or 100% natural gas. A change in the approved fuels may require a permit to modify and operate.
(9 VAC 5-80-850)
10. **Fuel Throughput – Plant 36** – For optimum kiln combustion, Unit # 06 (Kiln 36) shall consume no more than 1,540 lbs/hr (0.77 tons/hr) of coal, calculated monthly as total pounds (tons) of coal divided by total kiln operating hours; and 6,764 tons of coal per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-850)

11. **Fuel Throughput - Plant 35** - For optimum kiln combustion, Unit # 04 (Kiln 35 "A") and Unit # 05 (Kiln 35 "B") shall each consume no more than 1,020 lbs/hr (0.51 tons/hr) of coal, calculated monthly as total pounds (tons) of coal divided by total kiln operating hours; and 4,468 tons of coal per year, calculated monthly as the sum of each consecutive 12-month period.
(9 VAC 5-80-850)

12. **Fuel Specifications** - The coal, natural gas, and propane used for fuel in Unit # 04 (Kiln 35 "A"), Unit # 05 (Kiln 35 "B") and Unit # 06 (Kiln 36) shall meet the specifications below:

COAL:

Maximum sulfur content per shipment: 1.0% as determined
by ASTM D3177, D4239, or a DEQ-approved equivalent method.

Maximum ash content per shipment: 6.0% as determined
by ASTM D2795, D3174, or a DEQ-approved equivalent method.

NATURAL GAS:

Minimum heat content: 1,000 Btu/cf HHV as
determined by ASTM D1826, D2382, or a DEQ-approved equivalent method.

LPG, including butane and propane, which meets ASTM specification D1835.
(9 VAC 5-80-850 and 9 VAC 5-50-260)

13. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of coal. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the coal shipment was received;
- c. The quantity of coal delivered (in pounds or tons) in the shipment;
- d. The sulfur content (% sulfur) and ash content (% ash) of the coal;
- e. Documentation of sampling of the coal indicating the location of the fuel when the sample was taken; and;
- f. The method(s) used to determine the sulfur content and ash content of the coal.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ or as required by Condition 14 may be used to determine compliance with the fuel specifications stipulated in Condition 12. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-80-850 and 9 VAC 5-170-160)

14. **Fuel Sampling and Analysis:** If the fuel supplier certification as required in Condition 13 does not contain sufficient data for coal sulfur content and ash content, a sample of the coal delivered to the kiln burner(s) shall be collected at least once per week and composited for a monthly analysis. The composite shall be analyzed for percent (%) sulfur by weight and percent (%) ash by weight. The analyses shall meet the requirements of ASTM Methods D3177 or D4239 (sulfur content) and ASTM Methods D2795 or D3174 (ash content) or a DEQ approved equivalent method. The approved procedure for collecting the samples shall list all pertinent information regarding sample size and number, where sample is taken, etc. (9 VAC 5-80-850 and 9 VAC 5-170-160)
15. **Plant wide Emission Limits** – On or before May 16, 2006, hazardous air pollutant (HAP) emissions, as defined by §112(b) of the Clean Air Act, from the operation of Unit # 04 (Kiln 35 “A”), Unit # 05 (Kiln 35 “B”) and Unit # 06 (Kiln 36) shall not exceed 9.9 tons per year of any individual HAP or 24.9 tons per year of any combination, calculated monthly as the sum of each consecutive 12-month period. (9 VAC 5-80-850)

INITIAL COMPLIANCE DETERMINATION

16. **Stack Test** - Initial performance tests shall be conducted for hydrogen fluoride and hydrogen chloride emissions from Unit # 06 (Kiln 36) (DLA scrubber stack) using EPA reference methods or as approved by the Department to determine compliance with the control efficiency requirements contained in Conditions 4 and 5. The tests shall be performed, reported and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, West Central Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Air Compliance Manager, West Central Regional Office and shall conform to the test report format enclosed with this permit. (9 VAC 5-80-850, 9 VAC 5-170-160 and 9 VAC 5-80-1120 F)

CONTINUING COMPLIANCE DETERMINATION

17. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance tests to demonstrate compliance with the emission limits and/or control efficiency requirements contained in this permit. The details of the tests shall be arranged with the Air Compliance Manager, West Central Regional Office. (9 VAC 5-80-850, 9 VAC 5-50-30 G)

RECORDS

18. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, West Central Regional Office. These records shall include, but are not limited to:
- a. Monthly and annual production of brick from Unit # 04 (Kiln 35 "A"), Unit # 05 (Kiln 35 "B") and Unit # 06 (Kiln 36). Annual production shall be calculated monthly as the sum of each consecutive 12-month period.
 - b. Monthly and annual total operating hours of Unit # 04 (Kiln 35 "A"), Unit # 05 (Kiln 35 "B") and Unit # 06 (Kiln 36). Annual operating hours shall be calculated monthly as the sum of each consecutive 12-month period.
 - c. Monthly and annual consumption of coal and natural gas (or propane as backup fuel) in Unit # 04 (Kiln 35 "A"), Unit # 05 (Kiln 35 "B") and Unit # 06 (Kiln 36). Annual consumption shall be calculated monthly as the sum of each consecutive 12-month period.
 - d. Records of fuel supplier certifications and fuel analyses.
 - e. All records and analyses of representative sulfur content (%) in shale.
 - f. Records of emissions HAP from Unit # 04 (Kiln 35 "A"), Unit # 05 (Kiln 35 "B") and Unit # 06 (Kiln 36) using calculation methods approved by the Air Compliance Manager, West Central Regional Office to verify compliance with the ton/yr emissions limitations in Condition 15.
 - g. Records identifying the relevant, pollutant-specific emission factors used in calculating emissions and the equations used in the calculations.
 - h. Daily limestone feeder settings of each DLA, , and purchase records and grade rating for limestone used in DLA.
 - i. Log of the observations from the device used to monitor differential pressure from each DLA filter.
 - j. Scheduled and unscheduled maintenance and operator training.
 - k. Weekly visible emission observation results from each DLA exhaust stack.
 - l. Results of all stack tests, visible emission evaluations and performance evaluations.

- m. Records of control efficiency of each DLA for hydrogen fluoride and hydrogen chloride emission reduction using calculation methods approved by the Air Compliance Manager, West Central Regional Office.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.

(9 VAC 5-80-900 and 9 VAC 5-50-50)

NOTIFICATIONS

19. **Initial Notifications** - The permittee shall furnish written notification to the Air Compliance Manager, West Central Regional Office:

- a. The actual date on which installation of the Ohlmann type dry lime adsorber (DLA) on Unit # 06 (Kiln 36) commenced within 30 days after such date.
- b. The anticipated start-up date of the Ohlmann type dry lime adsorber (DLA) on Unit # 06 (Kiln 36) postmarked not more than 60 days nor less than 30 days prior to such date.
- c. The actual start-up date of the Ohlmann type dry lime adsorber (DLA) on Unit # 06 (Kiln 36) at Plant 36 within 15 days after such date.
- d. The anticipated date of required performance tests of Unit # 06 (Kiln 36), as indicated in Condition 16 of this permit, postmarked at least 30 days prior to such date.

(9 VAC 5-80-850 and 9 VAC 5-50-50)

GENERAL CONDITIONS

20. **Permit Invalidation** - This permit to operate Unit # 06 (Kiln 36) shall become invalid, unless an extension is granted by the DEQ, if:

- a. A program of continuous modification is not commenced before the latest of the following:
 - i. 18 months from the date of this permit;
 - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental agency;
 - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or

- b. A program of modification is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-850)

21. Right of Entry - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130 and 9 VAC 5-80-850)

22. Notification for Control Equipment Maintenance - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B and 9 VAC 5-80-850)

23. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-80-850 and 9 VAC 5-20-180 J)
24. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Air Compliance Manager, West Central Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Air Compliance Manager, West Central Regional Office in writing.
(9 VAC 5-20-180 C and 9 VAC 5-80-850)
25. **Reports for Facility or Control Equipment Malfunction** - Within 30 days of a failure or malfunction that is expected to exist for 30 days or more, and semi-monthly thereafter until the failure or malfunction is corrected, the permittee shall furnish written reports to the Air Compliance Manager, West Central Regional Office, that contain the following:
- a. Identification of the specific facility that is affected as well as its location and registration number;
 - b. The expected length of time that the air pollution control equipment will be out of service;
 - c. The nature and quantity of air pollutant emissions likely to occur during the breakdown period;
 - d. Measures taken to reduce emissions to the lowest amount practicable during the breakdown period;
 - e. A statement as to why the owner was unable to obtain repair parts or perform repairs that which would allow compliance with the provisions of these regulations within 30 days of the malfunction or failure;
 - f. An estimate, with reasons given, of the duration of the shortage of repairs or repair parts which would allow compliance with the provisions of these regulations; and
 - g. Any other pertinent information as may be requested by the board.
- (9 VAC 5-80-850 and 9 VAC 5-20-180 D)

26. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-850)

27. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-80-850 and 9 VAC 5-50-20 E)

28. **Permit Suspension/Revocation** - This permit may be revoked if the permittee:

- a. Knowingly makes material misstatements in the permit application or any amendments to it;
- b. Fails to comply with the terms or conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted;

- f. Fails to comply with the applicable provisions of Articles 6, 8 and 9 of 9 VAC 5 Chapter 80.

(9 VAC 5-80-1010)

- 29. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, West Central Regional Office of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-940)

- 30. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-80-860 D and 9 VAC 5-170-160)