

Facility Name: **Shaw Industries, Inc – Plant 20**
 City: Dalton
 County: Whitfield
 AIRS #: 04-13-313-00079

Application #: TV-15863
 Date Application Received: November 30, 2004
 Permit No: 2273-313-0079-V-02-0

Program	Review Engineers	Review Managers
SSPP	Bert Pearce	Michelle Keith
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SSCP	Mansour Alaeddini	Stacey Wix
Toxics	Not applicable	Not applicable

Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained herein simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Shaw Industries Inc., Plant 20**, and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Facility Identification**

1. Facility Name:

Shaw Industries, Inc., Plant 20

2. Parent/Holding Company Name

Shaw Industries, Inc.

3. Previous and/or Other Name(s)

E & B Carpet Mills, Inc.
Armstrong World Industries, Inc.

4. Facility Location

1020 Riverbend Drive, Dalton, Georgia

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

This site, located in Whitfield County, is in an attainment area for all criteria pollutants.

6. Class I Area Impacts

This facility is located within 200 km of the Cohutta Class I area .

B. Site Determination

Yarn warehouse storage is located adjacent to Plant 20 on Riverbend Drive. There are a number of other Shaw operations that are contiguous or adjacent to Shaw Plant 20, including two sample plants, and offices for Corporate Engineering and Corporate Assets. The offices and sample plants not only have a different SIC, but also they do not directly support the operations of Plant 20. There is limited product flow from Plant 20 to the sample plants, and they have different operational management. According to the site determination procedure, the other plants are not part of this Title V site.

C. Existing Permits

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

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2273-313-0079-V-01-0	5-31-2000	Original permit
Off-permit Change	4-3-2002	Construction and operation of two 1.5 MMBtu/hr burners for the Kuster carpet dyeing range.
2273-313-0079-V-01-1	9-16-2002	Reduced maximum allowable sulfur content of fuel oil to 1.8 percent
2273-313-0079-V-01-2	10-17-02; effective 5-31-2000	Corrected PSD avoidance limit on SO ₂ emissions from Boiler BL03
Off-permit Change	2-28-2006	Replaced 28 MMBtu/hr dryer section with new 19 MMBtu/hr dryer section.

D. Process Description

1. SIC Codes(s)

2273

2. Description of Product(s)

The final product from Plant 20 is finished, broadloom, residential carpet.

3. Overall Facility Process Description

Process yarn is tufted into greige goods. These greige goods are then dyed using one of two distinct operations. Greige goods can be dyed in a continuous process or they can be dyed using a batch (beck) operation. Steam heat from the oil and natural gas fired boilers aids in the dyeing process. Once the greige goods have been dyed, a backing material (latex or urethane foam) is applied that adds dimensional stability. During this process, the yarn fibers are sheared for consistent length. At the end of this process the finished carpet is inspected and cut to customer-specified lengths.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their original Title V permit application. The renewal application states that there has been no change since the original permit was issued.

E. Regulatory Status

1. PSD/NSR

The facility is an existing major source under PSD/NSR regulations, as it has potential emissions of NO_x, PM, and SO₂ that each exceed 250 tons per year (it is not one of the 28 named source categories under PSD). The facility has taken SO₂ limits to avoid a future modification on Boiler BL02 or Boiler BL03 becoming subject to PSD/NSR review.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

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

3. MACT Standards

The facility is not major for HAPs, so MACT standards are not applicable.

4. Program Applicability (AIRS Program Codes)

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

Regulatory Analysis

II. Facility Wide Requirements

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

III. Regulated Equipment Requirements

A. Brief Process Description

A brief process description is specified in the narrative for Title V Permit No. 2273-313-0079-V-01-0. Please refer to this narrative.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions*	ID No.	Description
BL01	Boiler #1	391-3-1-.02(2)(d)1(ii) 391-3-1-.02(2)(b)1 391-3-1-.02(2)(g)2	3.4.2, 3.4.4, 3.4.7, 5.2.1, 6.2.1	none	NA
BL02	Boiler #2	391-3-1-.02(2)(d)1(ii) 391-3-1-.02(2)(b)1 391-3-1-.02(2)(g)2	3.2.1, 3.4.2, 3.4.4, 3.4.7, 5.2.1, 5.2.2, 6.2.1, 6.2.2, 6.2.3	none	NA
BL03	Boiler #3	391-3-1-.02(2)(d)2(ii) 391-3-1-.02(2)(d)3 391-3-1-.02(2)(g)2	3.2.2, 3.4.1, 3.4.7, 3.4.8, 5.2.1, 5.2.2, 6.2.1, 6.2.2, 6.2.3	none	NA
DR01	Beck dryer	Rule 391-3-1-.02(2)(b) Rule 391-3-1-.02(2)(e)1(ii)	3.4.5, 3.4.6	none	NA
DR02	Beck dryer	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	3.4.5, 3.4.6	none	NA
LC01	Latex coater # 1	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	none	NA
LC02	Latex coater # 2	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	none	NA
BK01 through BK08	Dye beck	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	3.4.9, 3.4.10	none	NA
CD01	Dye range	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii) Rule 391-3-1-.02(2)(g)2	3.4.3, 3.4.4, 3.4.5	none	NA

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

C. Equipment & Rule Applicability

Equipment and Rule Applicability is discussed in the narrative for the original permit, Permit No. 2273-313-0079-V-01-0. Please refer to that narrative. No equipment subject to an air quality rule has been added through subsequent Title V permit amendments. Permit condition changes made through amendments to the original permit are discussed below.

Emission and Operating Caps:

Amendment No. 2273-313-0079-V-01-1 lowered the allowable sulfur content of the fuel oil burned in the facility's boilers from 2.5% to 1.8% (Condition No. 3.4.7). This change was associated with Consent Order No. EPD-AQC-1877 for prior PSD violations at other Shaw Plants.

In addition, this amendment inadvertently changed the SO₂ exceedance threshold for Boiler BL03 in Condition No. 5.2.6.b.ii. This threshold is the limit needed for PSD avoidance. Amendment No. 2273-313-0079-V-01-2 changed the 12-month SO₂ exceedance threshold for Boiler BL03 back to 420 tons.

Rules and Regulations Assessment:

The assessment of rules and regulations that apply to equipment at the facility is discussed in the narrative for Permit No. 2273-313-0079-V-01-0. Please refer to that narrative.

D. Compliance Status

The permit application indicates that the facility is in compliance.

E. Operational Flexibility

None applicable.

F. Permit Conditions

Permit Conditions are discussed in the narrative for the original permit, Permit No. 2273-313-0079-V-01-0, and in Amendment Nos. 2273-313-0079-V-01-1 and 2273-313-0079-V-01-2. This permit renewal will incorporate the reduction of maximum allowable fuel oil sulfur content to 1.8 percent (renewal Condition No. 3.4.7) that was implemented in Amendment No. 2273-313-0079-V-01-1.

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

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

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

None applicable.

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

None applicable.

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

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

B. Specific Monitoring Requirements**1. Individual Equipment:**

Monitoring requirements specified in Permit No. 2273-313-0079-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

A new condition, Condition No. 5.2.2, has been added to require monitoring devices for the measurement of the volume of fuel oil burned in each of Boilers BL02 and BL03. These devices are needed to support the requirement for tracking of SO₂ emissions from fuel oil combustion in each of the two boilers. In addition, language in Condition No. 5.2.2 includes requirements for measurement and recording of fuel oil burned and therefore replaces former Condition No. 5.2.3.

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

None applicable.

C. Compliance Assurance Monitoring (CAM)

Not applicable.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

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

This permit renewal incorporates the correction, made in Amendment No. 2273-313-0079-V-01-2, of the SO₂ exceedance threshold for Boiler BL03 to 420 tons per 12 consecutive months (renewal Condition No. 6.1.7.b.ii).

B. Specific Record Keeping and Reporting Requirements

Record keeping and reporting requirements specified in Permit No. 2273-313-0079-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

With this renewal, the equation for tracking SO₂ emissions in Condition No. 6.2.2 (former Condition No. 5.2.4) has been revised to reflect that the permit limit on the sulfur content of fuel oil is no longer 2.5 percent. Also, the equation is now based on the AP-42 factor for SO₂ emissions from residual oil combustion (AP-42 Table 1.3-1).

Condition No. 6.1.7.d.i has been added to require submission of monthly 12-consecutive-month SO₂ emissions totals, calculated in Condition No. 6.2.3, with the report required by renewal Condition No. 6.1.4.

VII. Specific Requirements

A. Operational Flexibility

None applicable.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

There are no unusual activities at the facility.

D. Temporary Sources

None applicable.

E. Short-Term Activities

None applicable.

F. Compliance Schedule/Progress Reports

None applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

The applicant has indicated that the facility is not subject to Title VI .

J. Pollution Prevention

Not applicable.

K. Specific Conditions

None applicable.

VIII. General Provisions

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

Addendum to Narrative

EPD issued draft Title V Permit No. 2273-313-0079-V-02-0 to the applicant on September 1, 2006. The 30-day public comment period started on September 22, 2006, and ended on October 23, 2006. No comments were received by the Division.