

Facility Name: **Shaw Industries, Inc. – Plant 2**  
 City: Dalton  
 County: Whitfield  
 AIRS #: 04-13-313-00061

Application #: TV-16813  
 Date Application Received: July 5, 2006  
 Permit No: 2273-313-0061-V-02-0

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

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained 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 2** 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 2

## 2. Parent/Holding Company Name

Shaw Industries Group, Inc.

## 3. Previous and/or Other Name(s)

Unique Processing Company

## 4. Facility Location

2207 South Hamilton Street Ext.  
Dalton, Georgia 30720

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

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

## 6. Class I Area Impacts

This facility is located within 100 km of the Cohutta Class I area.

**B. Site Determination**

Shaw Industries, Inc., has ten manufacturing plants in Whitfield County, Dalton, with eight of them classified as Title V major sources. Three Title V renewal applications are being submitted at the same time (Plant Nos. 2, 4 and 80) because the site determination as detailed in subsequent paragraphs has led the Division to conclude that these three facilities meet the definition of a Part 70 Single Site.

Shaw Plant #2 is located at 2207 South Hamilton Street Extension, Dalton, GA. This plant was purchased by Shaw Industries, Inc. in early 1987 from Unique Processing Co. On June 6, 1988, an Air Quality permit was issued to Shaw for the operation of Plant #2 and construction of two (2) 73.7 million Btu boilers. Shaw Plant #2 is located directly north of Plant #4, on contiguous property.

Shaw Plant #4 is located at 2225 South Hamilton Street Extension, on contiguous property with Plant #2; it is also adjacent to Shaw plant #80 which is separated by a public road (South Hamilton Extension). There is also a small chemical blending operation at Plant #4 that supplies auxiliary chemicals to other Shaw plants within and beyond Whitfield County. Shaw Plant #4 is

the oldest Shaw property at this site dating back to the early 1970's. On December 10, 1979 an Air Quality permit was issued to Shaw for the operation of Shaw Plant #4 and associated process equipment including boilers. In 1984, a second permit was issued for the construction and operation of three (3) coal fired boilers.

Shaw Plant #80 is located at 2230 South Hamilton Street Extension, adjacent to Plant #4. This plant was purchased by Shaw Industries, Inc. in late 1987 from West Point Pepperell, Inc. On April 27, 1988, an Air Quality permit was issued to Shaw for the operation of plant #80.

Plants 2, 4, and 80 are all one Part 70 source because they are under common control, located on contiguous and/or adjacent property, and have the same 2-digit SIC code.

For administrative purposes, Shaw requested separate Title V permits be issued for each facility. AIRS No. 313-00061 currently belongs to Plant #2, AIRS No. 313-00084 currently belongs to Plant #4, and AIRS No. 313-00003 currently belongs to Plant #80.

### 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
2273-313-0061-V-01-0	December 27, 2001	Initial Title V
2273-313-0061-V-01-1	May 8, 2002	Adding Condition No. 8.23.1
2273-313-0061-V-01-2	May 22, 2002	Allow the Beck Dryer and Latex Coater to burn propane as a backup fuel
2273-313-0061-V-01-3	April 1, 2003	Corrected fuel allowances contained within Condition No. 3.2.5
Off Permit Change	January 31, 2005	Installation of a 6.2 MMBtu/hr boiler

### D. Process Description

#### 1. SIC Codes(s)

2273

#### 2. Description of Product(s)

The final product of the facility is broadloom tufted carpet.

#### 3. Overall Facility Process Description

Processed yarn is tufted into greige goods. These greige goods are then dyed in a continuous process. Once the greige goods have been dyed, they are then coated with an SBR latex adhesive backing that adds durability. 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 consumer specified lengths. The steam produced by boilers is mainly used to power the continuous dye operation and coating processes.

4. Overall Process Flow Diagram

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

E. Regulatory Status

1. PSD/NSR

Plants 2, 4, and 80 are a major source under PSD because they have potential to emit (PTE) of PSD regulated pollutants over 100 tpy (they are one of the 28 named source categories under PSD because their combined site-wide boiler heat input is over 250 MMBtu/hr).

Please refer to the narrative for No. 2273-313-0003-V-01-0 for site history regarding PSD issues.

2. Title V Major Source Status by Pollutant

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

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

3. MACT Standards

None applicable.

## 4. Program Applicability (AIRS Program Codes)

<b>Program Code</b>	<b>Applicable (y/n)</b>
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	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

No noncompliance issues were identified in the application.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None applicable.

### III. Regulated Equipment Requirements

#### A. Brief Process Description

The carpet manufacturing processes at Shaw Plant #2 include tufting, atmospheric batch dyeing (source codes BK12-25), pressure Beck dyeing, and SBR latex coating (source code LC04). The Beck dryer (Source code DR02) and the latex curing oven are heated directly by burning natural gas at low fire conditions. With Permit Amendment No. 2273-313-0061-V-01-2, they are also allowed to burn propane as a backup fuel source. Steam for the Beck dryers and for all Beck dyeing is provided by two 73.7 MMBtu boilers (source codes BL09 and BL10, installed in 1987) capable of firing on natural gas or fuel oil. An “off permit change” notice was sent to the facility on January 31, 2005 for the installation of a 6.2 MMBtu/hr boiler to efficiently handle reduced steam demand at the facility. Boiler BL11 has been removed since the previous permit.

#### 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
BL09	Boiler #1	Rule 391-3-1-.02(2)(d)2(ii) Rule 391-3-1-.02(2)(d)3 Rule 391-3-1-.02(2)(g)2	3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.4.1, 3.4.2, 6.2.1 through 6.2.6	none	none
BL10	Boiler #2	Rule 391-3-1-.02(2)(d)2(ii) Rule 391-3-1-.02(2)(d)3 Rule 391-3-1-.02(2)(g)2	3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.4.1, 3.4.2, 6.2.1 through 6.2.6	none	none
DR02	Beck dryer	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	3.2.5, 3.4.3, 3.4.4	none	none
LC04	Latex coater	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	3.2.5, 3.4.3, 3.4.4	none	none
BK12 through BK25	Atmospheric Becks	Rule 391-3-1-.02(2)(b)1 Rule 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.4	none	none

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

#### C. Equipment & Rule Applicability

##### Emission and Operating Caps:

Emission and operating caps specified in Permit No. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

##### Rules and Regulations Assessment:

Applicable rules and regulations specified in Permit No. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

D. Compliance Status

The facility has not indicated that it is operating out of compliance with any applicable rules or regulations.

E. Operational Flexibility

None applicable.

F. Permit Conditions

Permit Conditions specified in Permit No. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative. Conditions 3.4.1 through 3.4.5 have been modified by deleting language pertaining to boiler BL11 because the boiler has been removed from operation. Condition 3.4.5 has been deleted because it is subsumed by Condition 3.2.5.

Condition 3.2.6 was added with Permit Amendment No. 2273-313-0061-V-01-2 to allow the use of propane as a backup fuel source in the Beck Dryer (source code DR02) and Latex Coater (source code LC04). This condition has been renumbered to 3.2.5.

Condition 3.2.5 was modified with Permit Amendment No. 2273-313-0061-V-01-3 to allow Boiler BL11 to burn only natural gas as a result of the facility's changes in the past. This condition will be deleted from this permit because boiler BL11 has been removed from operation.

**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. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

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

Monitoring requirements specified in Permit No. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

**C. Compliance Assurance Monitoring (CAM)**

Not Applicable - No Control Devices

## 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 semi-annual basis. The Division has decided that quarterly reporting is no longer necessary so it has been changed from quarterly to semi-annual.

### B. Specific Record Keeping and Reporting Requirements

Record keeping and reporting requirements specified in Permit No. 2273-313-0061-V-01-0 are discussed in the initial Title V permit narrative for this permit. Please refer to this narrative.

Condition 6.2.2 from Permit No. 2273-313-0061-V-01-0 has been omitted from the current permit. This condition is a standard used for boilers subject to 40 CFR 60 Subpart Dc and is not needed for this facility. Conditions 6.2.2 through 6.2.9 have been deleted or renumbered for the current permit. Conditions 6.2.4 and 6.2.9 from this permit have been deleted and implemented in Condition 6.1.7.d.i through 6.1.7.d.iv. A reporting requirement for any exceedance over 40 tons per twelve-months rolling total was added to Conditions 3.2.7 and 3.2.8 of the original permit but they are now renumbered to Conditions 3.2.5 and 3.2.5, respectively.

The facility has requested a modification to Condition 6.2.5 of Permit No. 2273-313-0061-V-01-0 in their Title V Renewal application. The current SO<sub>2</sub> emissions calculation formula uses maximum allowable fuel oil sulfur content of 0.5% and does not allow the facility to be credited with emissions reductions due to burning lower sulfur fuel oil. The formula in the condition was modified to allow the calculation of lower sulfur fuel oil in the monthly SO<sub>2</sub> emissions rate. The condition is now renumbered to Condition 6.2.3.

**VII. Specific Requirements**

## A. Operational Flexibility

None Applicable.

## B. Alternative Requirements

None Applicable.

## C. Insignificant Activities

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

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

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

## D. Temporary Sources

None Applicable.

## E. Short-Term Activities

None Applicable.

## F. Compliance Schedule/Progress Reports

The Division's files indicate that the facility does not currently have any compliance issues.

## G. Emissions Trading

None Applicable.

## H. Acid Rain Requirements

None Applicable.

## I. Stratospheric Ozone Protection Requirements

The facility has indicated that they have air conditioners or refrigeration equipment that use CFC's, HFC's or other stratospheric ozone-depleting substances. The facility has indicated that they are subject to Title VI. The standard permit condition pursuant to 40 CFR 82 Subpart F was included in the initial Title V Permit and will be included in the renewal.

J. Pollution Prevention

None 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**

The 30-day public review ended on September 4, 2007. Comments were not received by the Division.