

Facility Name: **Shaw Industries Group, Inc. – Plant 1 & 3**

City: Dalton

County: Whitfield

AIRS #: 04-13-313-00081

Application #: 16824

Date SIP Application Received: July 13, 2006

Date Title V Application Received: July 13, 3006

Permit No: 2273-313-0081-V-02-2

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Introduction

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Existing Permits**

Table 1 below lists the current Title V permit, and all administrative amendments, minor and significant modifications to that permit, and 502(b)(10) attachments. Comments are listed in Table 2 below.

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
2273-313-0081-V-02-0	September 27, 2006		X
2273-313-0081-V-02-1	December 12, 2006	X	

Table 2: Comments on Specific Permits

Permit Number	Comments
2273-313-0081-V-02-1	Administrative Amendment to correct base permit

B. Regulatory Status**1. PSD/NSR/RACT**

The Shaw Industries Group, Inc. – Plant 1 & 3 has previously been considered a PSD major source since potential emissions of sulfur dioxide were greater than 250 tons per year. The facility accepted a 40 ton per year limit on sulfur dioxide emissions from Boiler No. 1 to make the construction of Boiler No. 1 not PSD significant. This permit amendment changes the basis for the facility's PSD avoidance strategy from making the modification (installation of Boiler No. 1) insignificant to making the entire facility PSD minor by accepting of a facility-wide 249 ton per year sulfur dioxide emission limit.

Compliance with the sulfur dioxide emission limit in this amendment makes the Shaw Industries Group, Inc. – Plant 1 & 3 a minor source under PSD/NSR regulations.

2. Title V Major Source Status by Pollutant

Table 3: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	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			✓

NOTE: Sulfur dioxide (SO₂) emission limits contained in this permit amendment do not change the Title V applicability status for the facility. The SO₂ emission limits in this permit amendment make the facility a synthetic minor only for PSD/NSR applicability

II. Proposed Modification

A. Description of Modification

Permit application No. 16824 submitted by Shaw Industries proposes to change the PSD avoidance strategy. This permit amendment changes the basis for the facility's PSD avoidance strategy from making the modification (installation of Boiler No. 1) insignificant to making the entire facility PSD minor through a facility-wide 249 ton per year sulfur dioxide emission limit. No physical change or change in the method of operation is requested in Application 16824.

Although Shaw Industries did not request, the Division made certain changes to the permit to allow the combustion of any fuel oil in facility boilers, not just distillate.

B. Emissions Change

Table 4: Emissions Change Due to Modification

Pollutant	Is the Pollutant Emitted?	Net Actual Emissions Increase (Decrease) (tpy)	Net Potential Emissions Increase (Decrease) (tpy)
PM	Yes	0	
PM ₁₀	Yes	0	
SO ₂	Yes	0	(1012)
VOC	Yes	0	
NO _x	Yes	0	
CO	Yes	0	
TRS	Yes	0	
H ₂ S	Yes	0	
Individual HAP	Yes	0	
Total HAPs	Yes	0	

C. PSD/NSR Applicability

Permit application No. 16824 requests the replacement of the existing PSD avoidance condition (Condition 3.2.1) with a new PSD avoidance condition (Condition 2.1.1), which employs a different avoidance strategy. The existing PSD avoidance strategy limited SO₂ emissions from the 1984 modification (installation of Boiler No. 1 – BL01) such that the modification itself was considered PSD insignificant. The new PSD avoidance strategy replaces the SO₂ emission limit on BL01 with a 249 ton per year facility-wide SO₂ emission limit such that the entire facility is considered PSD minor.

III. Facility Wide Requirements

All applicable regulations are federally enforceable, if appropriate.

A. Emission and Operating Caps:

Permit Application 16824 requests a 249-ton per year facility-wide limit on SO₂ emissions in order for the entire facility to be considered a synthetic minor PSD source. Facilities not included in the list of 28 source categories are considered PSD major (i.e. significant modifications must undergo PSD review) if potential emissions from the facility equal or exceed 250 tons per year. Potential emissions of all other PSD-regulated pollutants are less than PSD applicability thresholds, without synthetic minor limits.

B. Applicable Rules and Regulations

Rules and Regulations Assessment – This amendment directly addresses the PSD requirements in 40 CFR 52, as adopted by the State of Georgia in Air Quality Rules. However, the replacement of the post-1980 PSD avoidance emission limit on Boiler BL01 with a facility-wide PSD avoidance limit does not make PSD requirements applicable to the previous modification or the facility.

Emission and Operating Standards – The facility previously accepted a 200,000 gallon per year residual fuel oil usage limit for Boiler No. 1 to limit SO₂ emissions for the modification to less than 40 tons of SO₂ per year. This amendment removes the fuel oil usage limit from boiler No. 1 and replaces it with a 249 ton per year facility-wide SO₂ emission limit.

C. Compliance Status

The facility is currently in compliance with the fuel oil consumption limit in existing permit condition 3.2.1. Actual emission data submitted by Shaw Industries for the previous 24-month period was 119 tons of SO₂ per year, which indicates that the facility can comply with a 249 ton per year facility-wide SO₂ emission limit.

D. Operational Flexibility

No operational flexibility was requested in Application 16824.

E. Permit Conditions

Condition 2.1.1 includes the 249-ton per year facility-wide limit on SO₂ emissions in order for the entire facility to be considered a synthetic minor PSD source. Monitoring, reporting and recordkeeping conditions supporting the facility-wide SO₂ emission limit are included in other sections of the permit.

IV. Regulated Equipment Requirements**A. Brief Process Description**

The carpet manufacturing operations at Plant 1 & 3 include tufting, dyeing and latex coating. This permit amendment does not change the manufacturing process or the method of operation, other than Boiler No. 1 can fire more residual fuel oil.

B. Equipment List for the Process

Due to the inclusion of new and revised permit conditions, the Equipment List (Permit Section 3.1) is revised and added to this permit amendment.

3.1 Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
BL01 (Plant 1)	Boiler #1	391-3-1-.02(2)(d)3 391-3-1-.02(2)(d)2(ii) 391-3-1-.02(2)(g)2	2.1.1, 3.4.1, 3.4.4, 3.4.7, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4	None	None
BL02 (Plant 1)	Boiler #2	391-3-1-.02(2)(b)1 391-3-1-.02(2)(d)1(ii) 391-3-1-.02(2)(g)2	2.1.1, 3.4.2, 3.4.5, 3.4.7, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4	None	None
BL03 (Plant 1)	Boiler #3	391-3-1-.02(2)(b)1 391-3-1-.02(2)(d)1(ii) 391-3-1-.02(2)(g)2	2.1.1, 3.4.2, 3.4.5, 3.4.7, 5.2.1, 6.1.7, 6.2.1, 6.2.2, 6.2.3, 6.2.4	None	None
CD01 (Plant 1)	Rotary dye range	391-3-1-.02(2)(b)1 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	None	None
LC01 (Plant 1)	Latex coater oven	391-3-1-.02(2)(b)1 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	None	None
CD02 (Plant 3)	Printer dye range #2	391-3-1-.02(2)(b)1 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	None	None
CD03 (Plant 3)	Printer dye range #1	391-3-1-.02(2)(b)1 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	None	None
UC01 (Plant 3)	Urethane coater oven	391-3-1-.02(2)(b)1 391-3-1-.02(2)(e)1(ii)	3.4.3, 3.4.5, 3.4.6	None	None

C. Equipment & Rule Applicability**Emission and Operating Caps –**

The PSD avoidance limit for Boiler No. 1 is deleted from the facility Title V permit by this amendment. No other changes to emission or operating caps for specific equipment are included in this amendment.

Applicable Rules and Regulations -

No equipment specific rules or regulations need to be considered for this amendment.

Emission and Operating Standards:

No equipment specific emission or operating standards are applicable to this amendment.

D. Compliance Status

Not applicable

E. Operational Flexibility

No operational flexibility was requested for specific equipment in this amendment.

F. Permit Conditions

Permit condition 3.2.1 is deleted by this permit amendment.

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

- A. General Testing Requirements: The references to Method 19 in conditions 4.1.3 h. and 4.1.3 j. are modified in this amendment to agree with current language in the Division's Procedures for Testing and Monitoring of Sources of Air Pollutants.
- B. Equipment Groups (all subject to the same test requirements): No changes made
- C. Equipment Groups (all subject to the same test requirements): No changes made.

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

- A. Individual Equipment: No changes made.
- B. Equipment Groups (all subject to the same monitoring requirements): No changes made.

VII. Other Record Keeping and Reporting Requirements

The reportable excess emissions, exceedances, and excursions in condition 6.1.7 are modified to reflect the revised PSD avoidance limit and streamline reporting requirements.

Condition 6.1.7 b. ii. is modified to require reporting of any 12-month period where SO₂ emissions equal or exceed 249 tons. Previously, condition 6.1.7 b. ii. required reporting of residual fuel oil use in Boiler No. 1 that exceeded 200,000 gallon per 12-month period. This change is necessary due to the change in strategy for avoiding PSD requirements.

Condition 6.1.7 d. i. is deleted from the permit. This condition required the submission of each fuel oil certification for each shipment of fuel oil received during the reporting period. This condition was deemed excessive by the Stationary Source Compliance Program since the facility already has to report, via condition 6.1.7 b. i, the consumption of any fuel oil that does not comply with the sulfur content limit in condition 3.4.7. Additionally, NSPS Dc is not applicable to any boiler currently installed at the facility.

Condition 6.1.7 d. ii. is modified to require reporting of facility-wide monthly SO₂ emissions and 12-month rolling total SO₂ emissions for each month of the reporting period, using the records retained in accordance with condition 6.2.3 and 6.2.4. This condition previously required the reporting of the monthly, 12-month rolling fuel oil usage total to demonstrate compliance with the old PSD avoidance limit. This change is necessary due to the change in strategy for avoiding PSD requirements.

Condition 6.2.1 is modified to require a record of all distillate fuel oil and all residual fuel oil consumed by all facility boilers (Boiler Nos. 1, 2, and 3). This condition was modified to allow the combustion of any fuel oil. The boilers are the only combustion devices at the facility capable of combusting fuel oil and are therefore, the major contributors to SO₂ emissions. Condition 6.2.1 previously required a record of the residual fuel oil combusted only in Boiler No. 1 since the PSD avoidance limit only applied to Boiler No. 1. This change is necessary due to the change in strategy for avoiding PSD requirements.

Condition 6.2.3 is a new condition added to the permit by this amendment. This condition requires calculation of the monthly SO₂ emissions based on actual distillate oil and residual oil consumption and the highest sulfur content in residual oil received during previous month. If no fuel oil is received during the previous month, the Permittee must use the sulfur content last used to calculate SO₂ emissions. The SO₂ emission calculation is based on AP-42 emission factors for fuel oil combustion (Chapter 1.3).

Condition 6.2.4 is a new condition added to the permit by this amendment. This condition requires calculation of the 12-month rolling total SO₂ emissions based on monthly SO₂ emissions calculated by new condition 6.2.3. The results of this calculation demonstrate compliance with the facility-wide SO₂ limit in condition 2.1.1.

VIII. Specific Requirements

A. Operational Flexibility

Not Applicable

B. Alternative Requirements

Not Applicable

C. Insignificant Activities

No new insignificant activities are associated with this amendment.

D. Temporary Sources

Not Applicable

E. Short-Term Activities

Not Applicable

F. Compliance Schedule/Progress Reports

Not applicable

G. Emissions Trading

Not Applicable

H. Acid Rain Requirements

Not Applicable

I. Prevention of Accidental Releases

Not Applicable

J. Stratospheric Ozone Protection Requirements

Not Applicable

K. Pollution Prevention

No Applicable

L. Specific Conditions

Not Applicable

Addendum to Narrative

The 30-day public review started on February 5, 2007 and ended on March 6, 2007. Comments were received by the Division from Shaw Industries, Inc. on February 19, 2007.

Comments from Shaw Industries, Inc.

Comment No. 1

Shaw proposes that all data related to monthly SO₂ calculations be based upon the data specific for that month – the distillate oil usage, the residual oil usage, and the highest values of sulfur content for the residual oil received during the month. At high normal to max fuel oil usage rates, Shaw has enough on-site storage inventory [capacity] to last less than one week. Therefore, it is highly unlikely that fuel oil would be burned without there also being receipts during the month. Were this to happen, Shaw would use the highest [fuel oil sulfur content] value from the most recently received month. Using this approach more accurately ensures that calculated SO₂ emissions represent that month's emissions.

Response

The Division agrees with the change to the SO₂ monitoring and calculation strategy proposed by Shaw Industries.