

AIR PERMIT REVIEW

APPLICANT: Interface Fabrics Elkin, Inc.	SITE LOCATION: Elkin	COUNTY: Surry	
TECHNICAL CONTACT: Wendy Porter	PHONE: (207) 876-3331	RESPONSIBLE OFFICIAL: Nick Caldwell	TITLE: Director of Operations
REVIEW ENGINEER: Mark J. Cuilla	SIGNATURE:	DATE: date, 2004	
REGIONAL CONTACT: Ray Stewart	REGIONAL OFFICE: WSRO	SIC CODE: 2221, 2262, 2281, 2297	
APPLICATION NUMBER: 8600006.04A	EXISTING PERMIT NUMBER: 01315T19	NEW PERMIT NUMBER: 01315T20	

I. Purpose of Application

As part of the recent renewal process for this facility's title V permit, the Permittee identified two boilers (ES02 and ES03) as being subject to the CAM rule. As a result, the permit was re-issued with a specific condition that required emissions testing for both boilers. The purpose of the testing was to monitor control device operating parameters and determine compliance with the particulate standard. If it was determined that CAM was applicable to one or both boilers, the permit condition required that a permit modification be completed to incorporate CAM requirements.

In December of 2003, the Permittee informed DAQ that boiler (ID No. ES03) would be permanently shut down as well as its associated ash handling system. A permit to remove this boiler was issued to the facility in January 2004. Along with that modification, the permit condition for CAM testing was modified to only apply to boiler (ID No. ES02).

This permit application (8600006.04A) is the submittal of those testing results and subsequent request to include CAM requirements to satisfy the permit condition.

II. Facility Description

Interface Fabrics Group South, Inc.'s operations include the manufacture of yarn, weaving operations, dyeing operations, fabric coating and finishing operations, and associated ancillary operations and equipment. The facility is also currently equipped with two steam-generating boilers that provide process steam and steam for comfort heating. The facility is classified as a major source for all criteria pollutants; except carbon monoxide and lead.

III. History/Background/Application Chronology

August 18, 2003 – Permit 01315T18 issued for renewal and modification of the facility's permit.

January 8, 2004 – Permit 01305T19 issued for modification of the facility's permit.

March 15, 2004 – Application 8600006.04A received and deemed complete for processing.

April 22, 2004 – Winston-Salem Regional Office application review received.

May 5, 2004 – DRAFT permit sent to regional office, title V coordinator, and applicant for comment. See Section XV of this document for a discussion.

May 17, 2004 – Facility requested that a name change be completed. Specifically “Interface Fabrics Group South, Inc” should be changed to “Interface Fabrics Elkin, Inc”. The proper A forms were faxed in and the name change is allowed as part of this permit activity.

IV. Permit Modification/Changes

The following table describes the modifications to the current permit.

Page(s)	Condition	Change
Cover	-	-amended all dates and permit revision numbers
All	Header	-amended permit revision number
Attachment	Insignificant Activities List	-amended permit revision number -added new heated parts washer (ID No. IES46)
3-4	Equipment table	-removed all asterisks and references to 502(b)(10) additions; therefore, extending the permit shield to all new equipment
5	2.1 A.1.c-h	-removed testing requirement for boiler (ID No. ES02) because testing has been completed (renumbered remaining paragraphs accordingly)
7-9	2.1 A.4.a-d	-added CAM requirements
36	Part II, Section 1 (Equipment table)	-removed references to all constructed equipment that written notifications have been received (leaving written notification requirement)

V. Regulatory Review

The facility is currently subject to the following permit conditions:

1. 15A NCAC 2D .0503,
2. 15A NCAC 2D .0512,
3. 15A NCAC 2D .0515,
4. 15A NCAC 2D .0516,
5. 15A NCAC 2D .0521,
6. 15A NCAC 2D .0524 (Subparts Dc and Kb),
7. 15A NCAC 2D .0958,
8. 15A NCAC 2D .1100 (Avoidance), and
9. 15A NCAC 2Q .0317 (PSD Avoidance).

The modification associated with this permit activity does not change these requirements. However, the facility will now be subject to 40 CFR Part 64, Compliance Assurance Monitoring. These requirements are added per specific permit condition (see Section VI of this document for a discussion).

VI. NSPS, NESHAPS, PSD, 112(r), CAM

NSPS

The facility is currently subject to two NSPS subparts (Dc and Kb) for the operation of three natural gas fired boilers with low NOx burners and a 20,000 gallon storage tank, respectively. The modification of the permit to add CAM requirements does not affect this status.

NESHAP/MACT

The facility is currently not subject to any NESHAP/MACT requirements. However, the Permittee has accepted a permit condition limiting the emissions of hazardous air pollutants to below the major source thresholds. By accepting this limitation, the Permittee has guaranteed that the facility will remain small for the purposes of NESHAP/MACT applicability. The modification of the permit to add CAM requirements does not affect this status.

PSD

The facility currently operates under a facility-wide PSD avoidance condition for PM, PM10, and VOCs. The modification of the permit to add CAM requirements does not affect this status.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule.

CAM

Emissions testing was conducted on December 16 and 17, 2003 and a copy of the final test report was included with this permit application. The testing was in response to a DAQ request that the facility measure particulate matter emission rates at the inlet to and outlet from the boiler scrubber to verify compliance with the applicable emission standards and to confirm that the boiler is subject to CAM while firing coal. The Permittee states

“that due to safety and accessibility concerns, only scrubber outlet emission rates were measured during the test. However, based on the anticipated annual average particulate matter emission rate while firing coal (5.48 pounds per hour), and the estimated control efficiency for the scrubber (98%), the uncontrolled potential to emit particulate matter from boiler (ID No. ES02) was confirmed to be greater than 100 tons per year. Therefore, the boiler is subject to CAM while firing coal.”

The Permittee is required to monitor the pressure drop across the scrubber and the liquid inlet flowrate to the scrubber when firing coal. The permit also requires that the pressure drop be maintained between 5 and 10 inches of water and that the inlet flowrate be maintained above 50 gallons per minute. Any deviation from these established ranges is deemed non-compliance with the particulate matter standard. During the test, the scrubber inlet flowrate and pressure drop across the scrubber were monitored at five-minute intervals while firing coal. The scrubber inlet flowrate ranged from 57 to 61 gallons per minute and the pressure drop ranged from 7.3 to 7.6 inches of water. Based on this information and that suggested by EPA’s CAM Technical Guidance Document, the Permittee submitted the following CAM language which has been incorporated into the permit as necessary to fulfill the federal requirements as established in Part 64.

Background

- i. Emission Unit.
 - (A) *Description. One 80 million Btu per hour coal/No. 2 fuel oil-fired boiler.*
 - (B) *Identification. Boiler No. 3 (ID No. ES02)*
- ii. Applicable Regulation, Emission Limit, and Monitoring Requirements.
 - (A) *Regulation. 15A NCAC 2D .0503*
 - (B) *Emission Limits. 0.25 pounds particulate matter per million Btu heat input.*
 - (C) *Control Technology. Impinger-type wet scrubber (ID No. CD02)*

Monitoring Approach. The key elements of the monitoring approach are presented in the following table.

Indicator(s)	Pressure Differential across scrubber	Scrubber liquid inlet flowrate
Measurement Approach	Pressure differential monitored daily while the boiler is operating and firing coal using the monitor installed in accordance with the facility's title V permit (01315T18)	Scrubber inlet flowrate monitored daily while the boiler is operating and firing coal using the monitor installed in accordance with the facility's title V permit (01315T18)
Indicator Range	An excursion is defined as any reading of the pressure differential below 5 inches water or above 10 inches water	An excursion is defined as any reading of the scrubber liquid flowrate inlet monitor of less than 50 gallons per minute
Performance Criteria	The differential pressure monitor measures the static pressure at the inlet and outlet to the scrubber. Its minimum accuracy in +/- 2.0%	The flowrate monitor measures the water inlet flowrate to the scrubber. Its minimum accuracy is +/- 1.5%
Data Representativeness		
Verification of Operational Status	The pressure differential will be monitored and recorded daily while the boiler is firing coal.	Scrubber inlet flowrate readings will be monitored and recorded daily while the boiler is firing coal.
QA/QC Practices and Criteria	The pressure differential monitor is operated and maintained in accordance with manufacturer's recommendations. The monitor is recalibrated quarterly in accordance with manufacturer's specifications.	The scrubber inlet flowrate monitor is operated and maintained in accordance with manufacturer's recommendations. The monitor is recalibrated quarterly in accordance with manufacturer's specifications.
Monitoring Frequency	Pressure differential is monitored and recorded daily while the boiler is operating and the boiler is firing coal.	Scrubber inlet flowrate is monitored and recorded daily while the boiler is operating and the boiler is firing coal.
Data Collection Procedure	Daily while the boiler is operating and the boiler is firing coal; otherwise, the operator will indicate in the log that the boiler is not firing coal. Daily reading checklists and calibration records are maintained by the Environmental Department.	Daily while the boiler is operating and the boiler is firing coal; otherwise, the operator will indicate in the log that the boiler is not firing coal. Daily reading checklists and calibration records are maintained by the Environmental Department.

Justification.

i. Background.

Boiler No. 3 (ID No. ES02) is capable of firing No. 2 fuel oil and coal, and is required to operate an impinger-type wet scrubber (ID No. CD02) for particulate matter control only during periods of coal firing. The scrubber is not operated and is bypassed during periods of No. 2 fuel oil firing.

- ii. Rationale for Selection of Performance Indicators.
The scrubber differential pressure and scrubber inlet flowrate were selected as the indicators of control device performance. The differential pressure is proportional to the water flow and air flow through the scrubber and is an indicator of the energy across the scrubber and the proper operation of the scrubber within established conditions. A minimum liquid water flowrate at the scrubber inlet is necessary for proper operation of the control device. Maintaining the pressure drop within the aforementioned range will also provide reasonable assurance that the scrubber is not being bypassed during periods of coal firing.
- iii. Rationale for Selection of Indicator Ranges.
The selected pressure differential and scrubber inlet flowrate indicator ranges are based on the scrubber manufacturer's recommended operating parameters and results of the performance test conducted on Boiler No. 3 on December 17, 2003 while the boiler was firing coal. The facility proposes to use the established indicator ranges and to monitor and record the pressure differential and inlet flowrate on a daily basis while the boiler is firing coal.

The boiler is equipped with two stacks, each with a dedicated ID fan. The first stack is equipped with an impinger-type scrubber and is used during periods of coal firing. The second stack is uncontrolled and is used only during periods of oil firing. Flow is directed to the appropriate stack by manually inserting/removing plates in the exhaust ductwork to divert flow to the appropriate stack, and the configuration is noted in the Operator Log Book. A pressure differential reading of between 5 and 10 inches water will indicate that the coal stack ID fan is operating and thus indicate which stack is being used. These readings, along with records of the fuel being fired will provide reasonable assurance that the scrubber is not being bypassed during periods of coal firing.

VII. Facility Wide Air Toxics

The facility currently operates under a toxics air pollutant avoidance condition for the coating operations consisting of two natural gas-fired tenter frames. This equipment, in order to avoid being subject to the air toxics provisions, is not allowed to process materials containing formaldehyde.

In addition, as discussed above, the facility operates under a facility-wide emissions limit for hazardous air pollutants to below the major source thresholds. The modification of this permit does not affect this status.

VIII. Statement of Compliance

The facility was last inspected by Mr. Ray Stewart of the Winston-Salem Regional Office on April 15, 2003. At the time of the inspection, the facility was found to be "likely in compliance with all applicable DAQ regulations and with the existing title V air permit."

IX. Stipulation Review

There are no required permit condition modifications needed at this time.

X. Public Notice / EPA and Affected State Review

Pursuant to 15A NCAC 2Q .0521, a notice of the draft title V permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the draft title V permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States for this facility.

XI. Conclusions, Comments, and Recommendations

WSRO recommends issuance of the modified permit and does request a draft prior to issuance. RCO concurs with this decision.

The Permittee had the following comments on the DRAFT permit:

1. Will the permit require that written notification be necessary as stated in the cover letter? *No, this should have been removed. Notice periods are sufficient.*
2. Include CAM Recordkeeping requirements. *Agree, recordkeeping and reporting requirements will be included as requested*