



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Purdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

CERTIFIED MAIL
XXX xxx, 2009

Ms. Kelly Means
VP Manufacturing
Coats American, Sevier Plant
P.O. Box 368
Marion, North Carolina 28752

Dear Mr. Bertucchi:

Subject: **Air Permit No. 01895T22**
Facility ID: 1/56/00001
Coats American, Sevier Plant
Marion, McDowell County, North Carolina
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for a significant modification of the existing Title V air quality permit, received on June 19, 2008, we are forwarding herewith Air Quality Permit No. 01895T22 to Coats American, Marion, McDowell County, North Carolina authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. **The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.**

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

Permitting Section

1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, North Carolina 27604
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If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with **both** the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from XXX xxx, 2009 until November 28, 2010, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein. Should you have any questions concerning this matter, please contact Gautam Patnaik at (919) 715-6246.

Sincerely yours,

Donald R. van der Vaart, Ph.D., P.E.
Chief

Enclosure

c: Asheville Regional Office
Central Files
Gregg Worley, EPA Region 4

Table of changes made in this permit

Page Number	Condition Number	Change
5, 6, 7, 8, 9, 10, 12, 14, 16, 17, 20, 23, 25, 27, 28, 30, and 32	Testing.	Change all testing reference
3	Source table	Bonder 06 is included in source ES-03
4	Source table	Source ES-12 is corrected to include two thread bonders (MP-1 and MP-2)
4	Source table (current permit)	The foot note stating that the control device (CD-06) is permitted to control only the bonding machines (W19, W20 and W21) is removed
8	2.1. A. 3. e. ii.	Monitoring includes Method 9 for 12 minutes
12	2.1. C. 2. c. ii.	Monitoring includes Method 9 for 12 minutes
16	Regulation table for 2.1 D.	Source ES-12 is corrected to include two thread bonders (MP-1 and MP-2)
17	2.1. D. 2. c. ii.	Monitoring includes Method 9 for 12 minutes
22	2.1 F	Section 2.1 F. lists twelve thread bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21).
38	2.2 B. 1. B. a.	Added sources (ID Nos. ES-03, ES-07, ES-08, ES-12, ES-13, and ES-14) as applicable to the coating/printing operations
49 to 58	General Conditions	Updated

Activities Exempted from Permitting Under 15A NCAC 2Q .0503

Emission Source ID	Emission Source Description	Exemption Regulation	Basis for Exemption
I1	coal storage and handling	2Q .0503 (8)	< 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I2	cooling towers	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I3	water treatment operations	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I4	shipping and receiving	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I6	industrial and bobbin winding	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I7	Twisting operations	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I-QC-01	Quality Control Lab	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I- PW01	Parts Washers - Safety Kleen Type	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I8	Eco Bond	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I9	Feminine Hygiene "Pearl Room"	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs
I20	Cherokee Yarn Spinning Equipment	2Q .0503 (8)	source < 5 tpy of any criteria pollutant and < 1,000 lbs/y of any HAPs

State of North Carolina,

Department of Environment,
and Natural Resources
Division of Air Quality



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
1895T22	1895T21	XXX xxx, 2009	November 28, 2010

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: Coats-American, Sevier Plant
Facility ID: 5600001
Facility Site Location: 630 American Thread Road
City, County, State, Zip: Marion, McDowell County, North Carolina, 28752

Mailing Address: Post Office Box 368
City, State, Zip: Marion, North Carolina 28752

Application Number: 5600001.08A
Complete Application Date: April 21, 2009

Primary SIC Code: 2269
Division of Air Quality, Asheville Regional Office
Regional Office Address: 2090 US Highway 70
Swannanoa, North Carolina 28778

Permit issued this the xxnd day of XXX 2009

Donald R. van der Vaart, Ph.D., P.E., Chief
By Authority of the Environmental Management Commission

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SECTION 3: GENERAL PERMIT CONDITIONS

The Division of Air Quality (DAQ), the United States Environmental Protection Agency (EPA), and citizens as defined under the Federal Clean Air Act have the authority to enforce the terms, conditions, and limitations contained in the permit unless otherwise specified.

Under Title 15A NCAC 2Q, the operation of emission source(s) and associated air pollution control device(s) and appurtenances listed in this permit is based on plans, specifications, operating parameters, and other information as submitted in the Air Quality Permit Application.

SECTION 1- PERMITTED EMISSION SOURCE (S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE (S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-01 CAM	coal-fired boiler No. 1 (54.0 million Btu per hour heat input capacity; spreader stoker type)	CD-01 CD-02 CD-04	Multicyclone (90, six-inch diameter tubes) AND Plate impingement scrubber (minimum 110 gallons per minute liquid injection rate) OR Plate impingement scrubber (minimum 110 gallons per minute liquid injection rate)
ES-03 MACT OOOO NSPS CAM	thread bonding operation consisting of 9 heat bonder and setter machines (ID Nos. 01, 02, 06, 07 through 12, 0.42 tons per hour total process weight rate capacity)	CD-05	Natural gas/Propane-fired catalytic oxidizer (3.5 million Btu per hour heat input)
ES-07 MACT OOOO	WB thread bonding-Hilden bonder	NA	NA
ES-08 MACT OOOO	Twelve Watertown thread bonding machines (Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21).	CD-06	Natural gas/propane-fired catalytic oxidizer (3.0 million Btu per hour heat input)
ES-09	propane/natural gas/No. 2 fuel oil-fired boiler (50.0 million Btu per hour heat input capacity)	NA	NA
ES-10	propane/natural gas/No. 2 fuel oil-fired boiler (50.0 million Btu per hour heat input capacity)	NA	NA
ES-11 MACT OOOO	Dye house operation	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-12 MACT OOOO NSPS	Two thread bonders consisting of bonders (ID Nos. MP-1 and MP-2)	NA	NA
ES-13 MACT OOOO NSPS	Water repellant fiber coating station.	NA	NA
ES-14 MACT OOOO	Dressing	NA	NA

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements to which those requirements apply:

A. Coal-fired boiler (ID No. ES-01) and associated multicyclone (ID Nos. CD-01) and controlled by either the plate impingment scrubber (ID No. CD-02) OR plate impingment scrubber (ID No. CD-04)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.32 pounds per million Btu heat input	15A NCAC 2D .0503
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
visible emissions	40 percent opacity	15A NCAC 2D .0521
sulfur dioxide	less than 77 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
nitrogen oxides	less than 99.4 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
PM10	less than 33.85 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
CO	less than 121.95 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
HAPs	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
PM10 and sulfur dioxide	Continuous Assurance Monitoring 40 CFR 64. (See Section 2.4 A. and B.)	15A NCAC 2D .0614

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of coal, that are discharged from this source into the atmosphere shall not exceed **0.32 pounds per million Btu heat input**. [15A NCAC 2D .0503]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503

Monitoring [15A NCAC 02D .2601]

- c. Particulate matter emissions from the boiler shall be controlled by a multicyclone. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include the following:
- i. an inspection of the multicyclones' structural integrity; and
 - ii. visual inspection of the system ductwork, and material collection unit for leaks.
- d. Particulate matter emissions from the boiler shall be controlled by any of the two plate impingement scrubbers with a water scrubbing medium. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include:
- i. inspection of spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubbers; and
 - ii. inspection, cleaning, and calibration of all associated instrumentation.
- e. The Permittee shall install, operate, and maintain a pressure drop indicator, a liquid flowmeter, and high temperature outlet sensor/alarm on the scrubber. The pressure drop across the scrubbers shall be maintained between 2.0 and 6.4 inches of water. The liquid flow rate to the scrubber shall be maintained at a minimum of 110 gallons per minute. The maximum scrubber outlet temperature shall not exceed 160 degrees F.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503 if the pressure drop across the scrubbers, the liquid flow rate to the scrubber and the maximum scrubber outlet temperature is not maintained within the prescribed limits.

Recordkeeping [15A NCAC 2Q .0508(f)]

- f. The results of inspection and maintenance on the multicyclones and scrubbers shall be maintained in a logbook (written or electronic format) kept on site and made available to authorized representatives upon request. The logbook shall record the following:
- i. the date and time of actions;
 - ii. the results of each monthly inspection;
 - iii. the results of any maintenance performed on the multicyclones and scrubbers;
 - iv. for the scrubbers, the pressure drop and the liquid flow rate once daily at a minimum;
 - v. for the scrubbers, high outlet temperature alarms, with corrections made; and
 - vi. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- g. The Permittee shall submit the results of any maintenance performed on the multicyclone and scrubber systems within 30 days of a written request by the DAQ.
- i. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The maximum sulfur content of any coal received and burned in the boiler shall not exceed 1.6 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the coal exceeds this limit.
- d. To assure compliance, the Permittee shall monitor the sulfur content of the coal by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
- i. the name of the coal supplier;
 - ii. the maximum sulfur content of the coal received per total shipment;
 - iii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
 - (A) sampling -- ASTM Method D 2234;
 - (B) preparation -- ASTM Method D 2013;
 - (C) gross calorific value (Btu) -- ASTM Method D-5865
 - (D) moisture content --ASTM Method D 3173;
 - (E) sulfur content -- ASTM Method D 3177 or ASTM Method D 4239; and

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if the sulfur content of the coal is not monitored and recorded.

- e. Sulfur dioxide emissions from the boiler shall be controlled by either of the two plate impingement scrubbers (ID No. CD-02 OR ID No. CD-04) with a water-caustic scrubbing medium. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include:
- i. inspection of spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubber; and
 - ii. inspection, cleaning, and calibration of all associated instrumentation.
- f. The Permittee shall install, operate, and maintain a pressure drop indicator, a liquid flowmeter, high temperature outlet sensor/alarm, and pH monitor on the scrubbers. The pressure drop across the scrubbers shall be maintained between 2.0 and 6.4 inches of water. The liquid flow rate to the scrubber shall be maintained at a minimum of 110 gallons per minute. The maximum scrubbers outlet temperature shall not exceed 160 degrees F. The pH of the scrubbing medium shall be maintained equal to or greater than 7. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these values are not within range.
- g. The results of inspection and maintenance on the scrubbers shall be maintained in a log book (written or electronic form) kept on site and made available to authorized representatives upon request. The log book shall record the following:

- i. the date and time of actions;
 - ii. the results of each monthly inspection;
 - iii. the results of any maintenance performed on the scrubbers;
 - iv. the pressure drop, liquid flow rate, and pH once daily at a minimum;
 - v. high temperature outlet alarms with corrections made; and
 - vi. any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- h. The Permittee shall submit a summary report of the coal supplier certifications by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.
- i. The Permittee shall submit the results of any maintenance performed on the scrubbers within 30 days of a written request by the DAQ.
- j. The Permittee shall submit for the scrubbers a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source shall not be more than 40 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of the test are above the limits given in 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. Particulate matter emissions from each boiler shall be controlled by a multicyclone. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include the following:
 - i. an inspection of the multicyclones' structural integrity; and
 - ii. visual inspection of the system ductwork, and material collection unit for leaks.Particulate matter emissions from the boiler shall be controlled by either of the two plate impingement scrubbers (ID No. CD-02 OR ID No. CD-04) with a water scrubbing medium. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include:
 - i. inspection of spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubber; and
 - ii. inspection, cleaning, and calibration of all associated instrumentation.
- d. The Permittee shall install, operate, and maintain a pressure drop indicator, a liquid flowmeter, and high temperature outlet sensor/alarm on the scrubbers. The pressure drop across the scrubbers shall be maintained between 2.0 and 6.4 inches of water. The liquid flow rate to the scrubbers shall be maintained at a minimum of 110 gallons per minute. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these values are not within range.

- e. To assure compliance, once a month Permittee shall observe the emission points of this source for any visible emissions above normal. The monthly observation must be made for each of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.3. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- f. The results of inspection and maintenance on the multicyclones and scrubbers shall be maintained in a logbook (written or electronic format) kept on site and made available to authorized representatives upon request. The logbook shall record the following:
 - i. the date and time of actions;
 - ii. the results of each monthly inspection;
 - iii. the results of any maintenance performed on the multicyclones and scrubbers;
 - iv. for the scrubbers, the pressure drop and the liquid flow rate once daily at a minimum;
 - v. for the scrubbers, high outlet temperature alarms with corrections made; and
 - vi. any variance from manufacturer’s recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- g. The Permittee shall submit the results of any maintenance performed on the multicyclone and scrubber systems within 30 days of a written request by the DAQ.
- h. The Permittee shall submit for the multicyclones and scrubbers a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.
- i. The Permittee shall submit a summary report of the visible observations by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

B. Two propane/natural gas/No. 2 fuel oil-fired boilers (50.0 million Btu per hour heat input capacity, each; ID Nos. ES-09 and ES-10)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.27 pounds per million Btu heat input	15A NCAC 2D .0503
sulfur dioxide	2.3 pounds per million Btu heat input while firing propane and natural gas	15A NCAC 2D .0516
visible emissions	20 percent opacity while firing propane and natural gas	15A NCAC 2D .0521
visible emissions	20 percent opacity while firing No. 2 fuel oil	15A NCAC 2D .0524
sulfur dioxide	0.5 percent sulfur content by weight, of the fuel oil	

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	less than 77 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
nitrogen oxides	less than 99.4 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
PM10	less than 33.85 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
CO	less than 121.95 tons per consecutive twelve (12) month period (See Section 2.2 A.)	15A NCAC 2Q .0317
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of natural gas, propane and No. 2 fuel oil, that are discharged from these sources into the atmosphere shall not exceed 0.27 pounds per million Btu heat input. [15A NCAC 2D .0503(a)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas, propane and No. 2 fuel oil in these sources.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. While firing natural gas and propane the emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(4) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 B. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f) and 15A NCAC 2D .0501(c)(4)(A)]

- c. No monitoring/recordkeeping is required for sulfur dioxide emissions from natural gas and propane from these sources.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. While firing natural gas and propane at these sources the visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas and propane in these sources.

4. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Dc

- a. While firing No. 2 fuel oil at these sources the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524]

- b. The maximum sulfur content of any fuel oil received and burned in the boiler shall not exceed 0.5 percent by weight.
- c. Visible emissions from this source shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity.

Monitoring [15A NCAC 2Q .0508(f)]

- d. Distillate Oil – Fuel supplier certification shall be used to demonstrate compliance as described under 40 CFR § 60.44c(e).

Recordkeeping [15A NCAC 2Q .0508(f)]

- e. In addition to any other recordkeeping required by 40 CFR § 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- f. In addition to any other reporting required by 40 CFR § 60.48c or notification requirements to the EPA, the Permittee is required to NOTIFY the DAQ in writing of the following:
 - i. a summary report , acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate oil fired, by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June as follows:
 - (A) Distillate Oil - Fuel supplier certification shall include the following information:
 - (1) the name of the oil supplier;
 - (2) a statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
 - (3) a certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi annual period.
 - ii. All instances of deviations from the requirements of this permit must be clearly identified.

C. Thread Bonding Operation (ID No. ES-03) and associated catalytic oxidizer (ID No. CD-05)

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$, where: E = allowable emission rate in pounds per hour. P = process weight in tons per hour.	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
volatile organic compounds	work practice standards	15A NCAC 2D .0958
volatile organic compound	less than 250 tons per consecutive twelve (12) month period	15A NCAC 2Q .0317
volatile organic compound	Continuous Assurance Monitoring 40 CFR 64. See 2.4 B.	15A NCAC 2D .0614
toxic air pollutants (TAPs)	State Only Requirement toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(3) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 C. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the thread bonding operation shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 C. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the visible observations by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the combustion of natural gas or propane for the catalytic oxidizer.

4. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958 and 2D .0902, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
- (i) store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - (ii) clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - (iii) store wipe rags containing volatile organic compounds in closed containers,
 - (iv) not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - (v) transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - (vi) clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- (i) flush parts in the freeboard area,
 - (ii) take precautions to reduce the pooling of solvent on and in the parts,
 - (iii) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - (iv) not fill cleaning machines above the fill line,
 - (v) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds and shall immediately initiate any corrective actions required to meet the requirements of paragraphs (a) and (b) above. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed and whether or not corrective actions were taken to restore compliance.
- If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2Q .0317: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

- a. To avoid the applicability of 15A NCAC 2D .0530(g) "Prevention of Significant Deterioration" as requested by the Permittee, the above emission source shall discharge less than 250 tons of volatile organic compounds (VOCs) into the atmosphere in any rolling 12 month period.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(17) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 C. 5. a., the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain an emissions logbook (written or electronic format) which demonstrates that actual 12 month emissions of volatile organic compounds (VOCs) from the above sources are less than 250 tons. The following data shall be measured, recorded, and calculations performed to obtain actual monthly volatile organic compound emissions. The logbook must be made available to an authorized representative upon request.
- i. Monthly, measure and record, the total quantity of each bonding material consumed in the process which contains VOCs.¹
 - ii. Maintain for each type of bonding material as applied, information which documents the percent by weight VOC content of the material.¹
 - iii. The actual VOC emissions will be calculated on a monthly basis for each type of bonding material as applied.¹ VOC emissions from the 12 heat bonder and setter machines may be either uncontrolled or controlled by a catalytic oxidizer. Total VOC use shall be determined by multiplying the total amount of each type of VOC containing bonding material consumed during the month by the VOC percent by weight content of the material.¹ Actual VOC emissions shall equal the sum of the following equations (A through D):

(A) VOC emissions not captured by the exhaust hoods:

$$\text{Emissions} = (\text{total VOC use}) \times (1 - 0.981)$$

(B) VOC emissions captured by the hoods, but not routed to the oxidizer:

$$\text{Emissions} = (\text{total VOC use}) \times (0.981) \times (1 - \% \text{ routed to oxidizer})$$

(C) VOC emissions captured by the hoods, routed to the oxidizer, but not destroyed by the oxidizer:

$$\text{Emissions} = (\text{total VOC use}) \times (0.981) \times (\% \text{ routed to oxidizer}) \times (1 - 0.90)$$

(D) VOC emissions from mixing operation or "kitchen":

$$\text{Emissions} = (\text{total VOC use}) \times (\% \text{ loss during mixing})$$

capture efficiency = 98.1%
destruction efficiency = 90.0%

- d. When required, VOC emissions from the Thread Bonding Operation shall be controlled by the catalytic oxidizer from capture provided by the machine enclosures/exhaust hoods. To ensure that optimum control efficiency is maintained by the oxidizer and Data Acquisition System (DAS), the Permittee shall perform

1 In lieu of tracking each type of bonding material, a generic bonding material may be assumed which is "worst case" from a VOC percent by weight content.

inspections and maintenance as recommended by the manufacturer. In addition, to ensure that capture efficiencies are maintained, a visual inspection of the machine enclosures/exhaust hoods and system ductwork shall be performed on a monthly basis with repairs made as necessary.

- e. The Permittee shall operate and maintain instrumentation (Data Acquisition System) to measure and record on a daily basis the following oxidizer operating parameters: flowrate to the oxidizer, the combustion temperature (minimum - 400 degrees F.), and the temperature rise and pressure drop across the catalyst bed. Operating ranges for temperature rise and pressure drop across the catalyst bed shall be based on the latest performance testing. In addition, the Data Acquisition System shall continuously track the run time of each heat bonder and setter machine and whether the machine is venting to the atmosphere or to the oxidizer.
- f. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) kept on site and made available to authorized representatives upon request. The logbook shall record the following:
 - i. the date and time of actions;
 - ii. the results of each monthly inspection on the machine enclosures/exhaust hoods and system ductwork;
 - iii. the results of any maintenance performed on the catalytic oxidizer and Data Acquisition System;
 - iv. the flowrate to the oxidizer, the combustion temperature, and the temperature rise and pressure drop across the catalyst bed once daily at a minimum;
 - v. continuous readings on each bonder and setter machine to indicate run times and whether emissions are vented to the atmosphere or the oxidizer; and
 - vi. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the above records are not maintained or if the sulfur dioxide emissions exceed the limit in Section 2.1 C.5.a.

Reporting [15A NCAC 2Q .0508(f)]

- g. By January 30 and July 30 of each year, submit the calculated actual monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.
- h. The Permittee shall submit the results of any maintenance performed on the catalytic oxidizer, Data Acquisition System, and exhaust capture system within 30 days of a written request by the DAQ.
- i. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

D. Two thread Bonders (ID No. ES-12) and water repellant fiber coating station (ID No. ES-13).

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	only for ES-12: $E = 4.10P^{0.67}$, where: E = allowable emission rate in pounds per hour. P = process weight in tons per hour.	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
volatile organic compounds	work practice standards for ES-12	15A NCAC 2D .0958
volatile organic compounds	less than 104.69 tons per consecutive 12 month period for each of the bonders (ID No. ES-12, consisting of bonding stations MP-1 and MP-2) and the fiber coating station (ID No. ES-13)	15A NCAC 2D .0524 (40 CFR 60, Subpart VVV)

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	less than 159 tons per consecutive 12 month period for both the bonders (ID No. ES-12, consisting of bonding stations MP-1 and MP-2) and the fiber coating station (ID No. ES-13)	15A NCAC 2Q .0317
toxic air pollutants (TAPs)	State Only Requirement toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from ES-12 shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(3) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the thread bonding operation shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 D. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a week the Permittee shall observe the emission points of these sources for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1D. 2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
 - the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the visible observations by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958 and 2D .0902, for source ES-12 that will use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
- store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - store wipe rags containing volatile organic compounds in closed containers,
 - not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- flush parts in the freeboard area,
 - take precautions to reduce the pooling of solvent on and in the parts,

- (iii) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
- (iv) not fill cleaning machines above the fill line,
- (v) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds and shall immediately initiate any corrective actions required to meet the requirements of paragraphs (a) and (b) above. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed and whether or not corrective actions were taken to restore compliance.If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

**4. 15A NCAC 2D .0524: New Source Performance Standards for
“Polymeric Coating of Supporting Substrates - 40 CFR 60, Subpart VVV”**

- a. For the two thread bonders (ID No. ES-12, consisting of bonding stations MP-1 and MP-2) and the fiber coating station ES-13, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart VVV, including Subpart A "General Provisions." The emissions of VOCs shall be less than 104.69 tons per consecutive 12 month period for each of the bonders MP-1 and MP-2. The emissions of VOCs shall be less than 104.69 tons per consecutive 12 month period for the coating station ES-13. The Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0524 if the emissions of VOCs exceed these limits.

40 CFR § 60.747 (c)

Monitoring [40 CFR § 60.747 (c)]

- b. The Permittee shall:
 - 1) Make semiannual estimates of the projected annual amount of VOC to be used for the each bonding and coating operation in that year; and
 - 2) Maintain records of actual VOC use at each bonding and coating operation.

Recordkeeping [40 CFR § 60.747 (c)]

- c. The Permittee shall estimate and maintain on record the projected annual use of VOC at each bonding and coating operation every six months for that year (i.e. estimate projected annual emissions in January and re-estimate the projected annual emissions at end of June for the same year.

Reporting [40 CFR § 60.747 (c)]

- d. The Permittee shall submit a report to DAQ containing notification of the anticipated startup per NSPS General Provision - 40 CFR 60.7(a)(2) and a material flow chart indicating projected VOC use.

- e. The Permittee shall submit to DAQ records of actual VOC use at the end of the first year of operation.
- e. The Permittee shall report any projected or actual VOC emissions that will or did exceed the 104.72 tons per year exemption cutoff.

5. 15A NCAC 2Q .0317: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

- a. To avoid the applicability of 15A NCAC 2D .0530 “Prevention of Significant Deterioration” as requested by the Permittee, the two thread Bonders (ID No. ES-12) and the coating station (ID No. ES-13) shall discharge less than 159 tons of volatile organic compounds into the atmosphere in any 12-month rolling period.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The Permittee shall maintain an emissions log book (written or electronic format) which demonstrates that actual 12 month emissions of volatile organic compounds from the two thread Bonders (ID No. ES-12) and the coating station (ID No. ES-13) are less than 159. The following data shall be measured, recorded, and calculations performed to obtain actual monthly VOC emissions. The logbook must be made available to an authorized representative upon request.
 - i. Monthly, measure and record, the total quantity of each bonding material consumed in each process which contains VOCs.
 - ii. Maintain for each type of bonding material as applied, information which documents the percent by weight VOC content of the material.
 - iii. The actual VOC emissions will be calculated on a monthly basis for each type of bonding material as applied.

Reporting [15A NCAC 2Q .0508(f)]

- c. By January 30 and July 30 of each year, submit the calculated actual monthly VOC emissions for the previous 17 months. Provide the monthly emissions summed for each of the three 12-month periods over the previous 17 months.
- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

E. WB Thread Bonding-Hilden Bonder (ID No. ES-07)

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$, where: E = allowable emission rate in pounds per hour. P = process weight in tons per hour.	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
volatile organic compounds	work practice standards	15A NCAC 2D .0958
toxic air pollutants (TAPs)	<u>State Only Requirement</u> toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(3) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the thread bonding operation shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 E. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a day the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If visible emissions from this source are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the visible observations by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the combustion of natural gas or propane for the catalytic oxidizer.

4. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958 and 2D .0902, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
 - (i) store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - (ii) clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - (iii) store wipe rags containing volatile organic compounds in closed containers,
 - (iv) not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - (v) transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - (vi) clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
 - (i) flush parts in the freeboard area,
 - (ii) take precautions to reduce the pooling of solvent on and in the parts,
 - (iii) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - (iv) not fill cleaning machines above the fill line,
 - (v) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds and shall immediately initiate any corrective actions required to meet the requirements of paragraphs (a) and (b) above. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed and whether or not corrective actions were taken to restore compliance.

If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

F. Twelve thread bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21) and associated (1.55 million Btu per hour heat input capacity) propane-fired ovens.

Note - (Only three of these machines are controlled by catalytic oxidizer, ID No. CD-06)

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10P^{0.67}$, where: E = allowable emission rate in pounds per hour. P = process weight in tons per hour.	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
volatile organic compounds	work practice standards	15A NCAC 2D .0958
volatile organic compounds	less than then 40 tons per year from twelve bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21)	15A NCAC 2Q .0317 PSD avoidance
toxis air pollutants (TAPs)	<u>State Only Requirement</u> toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]
- $$E = 4.10 \times P^{0.67}$$
- Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 F. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance, once a day the Permittee shall observe the emission points of these sources for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
- i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 F.2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;

- ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the combustion of natural gas or propane in the oven.

4. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958 and 2D .0902, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
 - (i) store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - (ii) clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - (iii) store wipe rags containing volatile organic compounds in closed containers,
 - (iv) not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - (v) transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - (vi) clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
 - (i) flush parts in the freeboard area,
 - (ii) take precautions to reduce the pooling of solvent on and in the parts,
 - (iii) tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - (iv) not fill cleaning machines above the fill line,
 - (v) not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds and shall immediately initiate any corrective actions required to meet the requirements of paragraphs (a) and (b)

above. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed and whether or not corrective actions were taken to restore compliance.
- If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 2Q .0317: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

- a. To avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration" as requested by the Permittee, the twelve thread bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21) shall discharge less than 40 tons of volatile organic compounds into the atmosphere in any 12-month rolling period;

Testing [15A NCAC 02D .2601]

- b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emissions limit above by:
- i. determination of a **Total Enclosure** per **Procedure T of 40 CFR 52.741**, or by determining capture efficiency using any capture efficiency protocol and test methods that satisfy the criteria of either **Data Quality Objective** or **Lower Confidence Limit** approach as described in 40 CFR 63, Appendix A to Subpart KK, for *one or more* of the thread bonding lines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21) to be controlled by the oxidizer ID No. CD-06.
 - ii. determination of the catalytic oxidizer (CD-06) destruction efficiency by simultaneously testing the inlet and outlet of the catalytic oxidizer using EPA reference methods 18, 25, or 25A (40 CFR 60, Appendix A) in accordance with a testing protocol approved by the DAQ.
 - iii. The testing of this oxidizer (ID No. CD-06) shall be done within six months of the initial use of this control device to control emissions from the Watertown thread bonding lines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21).

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain an emissions log book (written or electronic format) which demonstrates that actual 12 month emissions of volatile organic compounds from the twelve thread bonding machines (ID Nos. W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21) are less than 40 tons. The following data shall be measured, recorded, and calculations performed to obtain actual monthly VOC emissions. The logbook must be made available to an authorized representative upon request.
- i. Monthly, measure and record, the total quantity of each bonding material consumed in each process which contains VOCs.
 - ii. Maintain for each type of bonding material as applied, information which documents the percent by weight VOC content of the material.
 - iii. The actual VOC emissions will be calculated on a monthly basis for each type of bonding material as applied. VOC emissions from thread bonding lines may be either uncontrolled or controlled by a catalytic oxidizer. Total VOC use shall be determined by multiplying the total amount of each type of VOC containing bonding material consumed during the month by the VOC percent by weight content of the material. Actual VOC emissions shall equal the sum of the following equations (A through B):

- (A) VOC emissions to the thread bonding lines which are controlled:
Emissions = VOC as applied x [(1-0.961) + capture efficiency x (1-0.942)].
- (B) VOC emissions to the thread bonding lines which are not controlled:
Emissions = VOC as applied

capture efficiency = *96.1%
destruction efficiency = *94.2%

*capture and destruction efficiency shall be determined from the results of the most recent performance test(s) approved by DAQ or the values given in this permit prior to approval of any test results subsequent to the effective date of this permit.

- d. When required, VOC emissions captured by enclosures/exhaust hoods on the thread bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18 and W19) shall be controlled by a catalytic oxidizer. To ensure that optimum control efficiency is maintained by the oxidizer, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition, to ensure that capture efficiencies are maintained, a visual inspection of machine enclosures/exhaust hoods and system ductwork shall be performed on a monthly basis with repairs made as necessary.
- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) kept on site and made available to authorized representatives upon request. The log book shall record the following:
- i. the date and time of actions;
 - ii. the results of each monthly inspection on the machine enclosures/exhaust hoods and system ductwork;
 - iii. the results of any maintenance performed on the catalytic oxidizer;
 - iv. any variance from manufacturer’s recommendations, if any, and corrections made.

Reporting [15A NCAC 2Q .0508(f)]

- f. By January 30 and July 30 of each year, submit the calculated actual monthly VOC emissions for the previous 17 months. Provide the monthly emissions summed for each of the three 12-month periods over the previous 17 months.
- g. The Permittee shall submit the results of any maintenance performed on an catalytic oxidizer and exhaust capture system within 30 days of a written request by the DAQ.
- h. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

G. Dye house operation (ID No. ES11).

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$, where: E = allowable emission rate in pounds per hour. P = process weight in tons per hour.	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521
volatile organic compounds	work practice standards	15A NCAC 2D .0958
toxic air pollutants (TAPs)	State Only Requirement toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705

Regulated Pollutant	Limits/Standards	Applicable Regulation
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{Where } E = \text{allowable emission rate in pounds per hour}$$

$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(3) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 G. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain production records which specify the types of materials and finishes processed and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the dye house operation shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(8) and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 G. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

Monitoring [15A NCAC 2Q .0508(f)]

- c. None.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. None.

Reporting [15A NCAC 2Q .0508(f)]

- e. None

3. 15A NCAC 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:
- i. store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
 - ii. clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
 - iii. store wipe rags containing volatile organic compounds in closed containers,
 - iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
 - v. transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
 - vi. clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act. [15A NCAC 2D .0958(c)]
- b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
- i. flush parts in the freeboard area,
 - ii. take precautions to reduce the pooling of solvent on and in the parts,
 - iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - iv. not fill cleaning machines above the fill line,
 - v. not agitate solvent to the point of causing splashing. [15A NCAC 2D .0958(d)]

Monitoring [15A NCAC 2Q .0508(f)]

- c. To assure compliance with paragraphs (a) and (b) above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Recordkeeping [15A NCAC 2Q .0508(f)]

- d. The results of the inspections shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each inspection; and
 - ii. the results of each inspection noting whether or not noncompliant conditions were observed.
- If the required records are not maintained the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

Reporting [15A NCAC 2Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the

preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

H. Dressing (ID No. ES14).

The following table provides a summary of limits and standards for the emission source described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants (TAPs)	State Only Requirement toxics demonstration. See Section 2.3 A.	15A NCAC 2Q .0705
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs See Section 2.2 C.	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 (40 CFR Part 63, Subpart DDDDD)
hazardous air pollutants	See Section 2.2. B.	15A NCAC 2D .1111 (MACT Subpart OOOO)

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

A. - Coal-fired boiler (ID No. ES-01) and associated multicyclone (ID Nos. CD-01) and controlled by either the plate impingment scrubber (ID No. CD-02) OR plate impingment scrubber (ID No. CD-04)

- **Two propane/natural gas/No. 2 fuel oil-fired boilers (50.0 million Btu per hour heat input capacity, each; ID Nos. ES-09 and ES-10)**

The following table provides a summary of limit and standard for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
sulfur dioxide	less than 77 tons per consecutive twelve (12) month period	15A NCAC 2Q .0317 PSD avoidance
nitrogen oxides	less than 99.4 tons per consecutive twelve (12) month period	15A NCAC 2Q .0317 PSD avoidance
PM10	less than 33.85 tons per consecutive twelve (12) month period	15A NCAC 2Q .0317 PSD avoidance
CO	less than 121.95 tons per consecutive twelve (12) month period	15A NCAC 2Q .0317 PSD avoidance

1. 15A NCAC 2Q .0317: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

- a. To avoid the applicability of 15A NCAC 2D .0530(g) “Prevention of Significant Deterioration” as requested by the Permittee, these sources (boilers ID Nos. ES-01, ES-09 and ES-10) shall discharge less than 77 tons of sulfur dioxide into the atmosphere in any rolling 12 month period.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) or General Condition JJ found in Section 3.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall maintain an emissions log book (written or electronic format) and the following data shall be measured and recorded, and calculations performed to obtain actual monthly sulfur dioxide emissions. The log book must be made available to an authorized representative upon request.
- i. The total quantity in tons of coal, and percent weight sulfur, burned in the boilers on a monthly basis.
 - ii. The Permittee shall monitor the sulfur content of the coal by using a coal supplier certification per total shipment received. The coal supplier certification shall be recorded per total shipment and include the following information:
 - the name of the coal supplier;
 - the maximum sulfur content of the coal received per total shipment;
 - a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
 1. sampling -- ASTM Method D-2234;
 2. preparation -- ASTM Method D-2013;
 3. gross calorific value (Btu) -- ASTM Method D-5865;
 4. moisture content -- ASTM Method D 3173;
 5. sulfur content -- ASTM Method D-3177 or ASTM Method D-4239; and
 - a certified statement signed by the responsible official that the records of coal supplier certification submitted represent all of the coal combusted during the reporting period.
 - iii. The actual sulfur dioxide emissions shall be calculated and recorded on a monthly basis using the following equation for each percent by weight sulfur grade of coal combusted:

$$\text{SO}_2 \text{ emissions (tons)} = (\text{tons burned})(S)(EF)(1 \text{ ton}/2000 \text{ pounds})(1 - 0.742)$$

where:

S = the percent by weight of sulfur in the coal burned.

EF = SO₂ emission factor (pounds SO₂ per ton of coal) from latest edition of AP-42
scrubber efficiency = 74.2%

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the records are not kept.

- d. Sulfur dioxide emissions from each boiler (ID No. ES-01) shall be controlled by a plate impingement scrubbers (ID No. CD-02 OR ID No. CD-04) with a water-caustic scrubbing medium. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, monthly, the inspection and maintenance requirement must include:
- i. inspection of spray nozzles to detect clogging or corrosion damage of nozzles and perform maintenance and repair when necessary to assure proper operation of the scrubbers; and
 - ii. inspection, cleaning, and calibration of all associated instrumentation.
- e. The Permittee shall install, operate, and maintain a pressure drop indicator, a liquid flowmeter, high temperature outlet sensor/alarm and pH monitor on the scrubbers. The pressure drop across the scrubbers shall be maintained between 2.0 and 6.4 inches of water. The liquid flow rate to the scrubbers shall be maintained at a minimum of 110 gallons per minute. The maximum scrubbers outlet temperature shall not exceed 160 degrees F. The pH of the scrubbing medium shall be maintained equal to or greater than 7.

If the pressure drop across the scrubbers is not within 2.0 and 6.4 inches of water, or if the liquid flow rate to the scrubbers is less than 110 gallons per minute, or the scrubbers outlet temperature exceeds 160 degrees F, or the pH of the scrubbing medium is less than 7, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

- f. The results of inspection and maintenance on the scrubbers shall be maintained in a logbook (written or electronic format) kept on site and made available to authorized representatives upon request. The logbook shall record the following:
- the date and time of actions;
 - the results of each monthly inspection;
 - the results of any maintenance performed on the scrubbers;
 - the pressure drop, liquid flow rate, and temperature once daily;
 - high outlet temperature alarms with corrections made; and
 - any variance from manufacturer's recommendations, if any, and corrections made.

for daily monitoring activities the Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission sources is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. Exceeding three (3) days of absent observations per semi-annual period while the sources are operating will deem the Permittee in noncompliance with 15A NCAC 2D .0530.

Calculations of sulfur dioxide emissions from boilers (ES-9 and ES-10) shall be made monthly and recorded in a logbook (written or in electronic format), according to the following formula:

$$X = Y \times 0.6 \left(\frac{\text{lbs sulfur dioxide}}{\text{million cubic feet}} \right) + Z \times \left(\frac{142 \text{ lbs sulfur dioxide}}{1000 \text{ gallon fuel oil}} \right) \times S$$

Where

X is the total actual emissions of sulfur dioxide in pounds

Y is the total amount of natural gas used in the boilers in cubic feet

Z is the amount of No. 2 fuel oil used in the boilers in gallons

S is the percent sulfur in the No. 2 fuel oil

The Permittee shall use the latest AP-42 factors to determine the emissions of sulfur dioxides emissions from the burning of propane from these boilers. Failure to keep any of these records by the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

- g. The Permittee shall keep monthly records of the amount of natural gas, propane and No. 2 fuel oil used and the sulfur content in the No. 2 fuel oil, including certification of the fuel, in a logbook (written or in electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur content and the amount of fuel burned are not monitored.

The total actual emissions of sulfur dioxide from the facility is the sum of the emissions of sulfur dioxide from the three boilers (ID Nos. ES-01, ES-09 and ES-10). If the sum is greater than 77 tpy for any rolling 12 month period the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508(f)]

- h. By January 30 and July 30 of each year, submit the calculated actual monthly sulfur dioxide emissions for the previous 17 months. Also, furnish the basis for the scrubber efficiency used in the above calculation. Provide the monthly emissions summed for each of the three twelve month periods over the previous fourteen months. The report shall also contain the following:
- The monthly quantities of natural gas, propane and No. 2 fuel oil consumed for the previous 17 months and the average sulfur content for the fuel oil.
 - The Permittee shall submit a summary report of the coal supplier certifications by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

- j. The Permittee shall submit the results of any maintenance performed on the scrubbers within 30 days of a written request by the DAQ.
- k. The Permittee shall submit for the scrubbers a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2Q .0317: PREVENTION OF SIGNIFICANT DETERIORATION (Avoidance)

- a. To avoid the applicability of 15A NCAC 2D .0530(g) "Prevention of Significant Deterioration" as requested by the Permittee, these sources (boilers ID Nos. ES-01, ES-09 and ES-10) shall discharge
 - i) less than 99.4 tons of nitrogen oxides into the atmosphere in any rolling 12 month period,
 - ii) less than 33.85 tons of PM10 into the atmosphere in any rolling 12 month period,
 - iii) less than 121.95 tons of CO into the atmosphere in any rolling 12 month period.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required by the DAQ, the Permittee shall perform such testing in accordance with 15A NCAC 2D .0501(c)(4) or General Condition JJ found in Section 3.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- c. The Permittee shall use the latest AP-42 factors to determine the emissions of nitrogen oxides, PM10 and CO each month from burning of propane, natural gas and No. 2 fuel oil from these sources. The Permittee shall record this data in a log book (written or electronic format), which must be made available to an authorized representative upon request.

The total actual emissions of nitrogen oxides, PM10 and CO from the three boilers (ID Nos. ES-01, ES-09 and ES-10). If the sum is greater than the value for nitrogen oxides, PM10 and carbon dioxide given in 2.2 A.2. a. above for any rolling 12 month period the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508(f)]

- d. By January 30 and July 30 of each year, submit the calculated actual monthly nitrogen oxides, PM10 and CO for the previous 17 months.

B.

- **Thread Bonding Operation (ID No. ES-03) and associated catalytic oxidizer (ID No. CD-05)**
- **WB Thread Bonding-Hilden Bonder (ID No. ES-07)**
- **twelve thread bonding machines (ID Nos. W9, W10, W11, W12, W13, W15, W16, W17, W18, W19, W20 and W21) and associated (1.55 million Btu per hour heat input capacity) propane-fired ovens.**
- **Dye house operation.**
- **¹Two thread Bonders (ID No. ES-12) and water repellant fiber coating station (ID No. ES-13).**
- **^{1A}Dressing (ID No. ES-14)**

1. Subpart OOOO—National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles

¹ These are new sources as per Air Permit No. 01895T21. However, as per the applicability of this MACT subpart OOOO, these sources would be considered existing sources as per As per 40CFR 63.4282(e)

^{1A} This is a new sources as per Air Permit No. 01895T21. However, as per the applicability of this MACT subpart OOOO, this source would be considered existing source as per As per 40CFR 63.4282(e)

²All the above sources are subject to the National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles subpart OOOO 40 CFR 63.4280

A) DYEING/FINISHING OPERATIONS (63.4281(a)(3))

a. Initial Compliance Date

The compliance date for all these sources is May 29, 2006.

b. Emission limit

- i. For all dyeing and finishing operations the Permittee shall limit organic HAP emissions to the atmosphere to no more than 0.016 kg of organic HAP per kg of dyeing and finishing materials applied.

c. Initial compliance demonstration

The Permittee shall complete the compliance demonstration for the initial compliance period according to the following requirements:

The initial compliance period begins on May 29, 2006 and ends on May 31, 2007.

For dyeing and finishing operations, The Permittee shall use the emission rate without add-on controls option for any individual dyeing/finishing operation, for any group of dyeing/finishing operations in the affected source, or for dyeing/finishing operations as a group in the affected source. To demonstrate initial compliance using the emission rate without add-on controls option, the dyeing/finishing operation or group of operations must meet the applicable emission limit C. 1. b., above.

Use the procedures in this section on each regulated material in the condition it is in when it is received from its manufacturer or supplier and prior to any alteration. Water added in mixing at the affected source is not a regulated material and should not be included in the determination of the total mass of dyeing and finishing materials applied during the compliance period, using Equations 5 of this section.

- (1) Determine the mass fraction of organic HAP for each material. Determine the mass fraction of organic HAP for each dyeing and finishing material applied during the compliance period according to specifications below:

The Permittee may rely on information other than that generated by the test methods such as manufacturer's formulation data, if it represents each organic HAP that is present at 0.1 percent by mass or more for OSHA defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. Information from the supplier or manufacturer of the printing, dyeing, or finishing material is sufficient for determining the mass fraction of organic HAP.

- (2) Determine the mass of each material. Determine the mass (kg) of each dyeing and finishing material applied during the compliance period by measurement or usage records.
- (3) Calculate the mass of organic HAP emissions. The mass of organic HAP emissions is the combined mass of organic HAP contained in all dyeing and finishing materials applied during the compliance period minus the organic HAP in certain waste materials and wastewater streams. Calculate the mass of organic HAP emissions using Equation 4 below:

$$H_g = A - R_w - WW \quad (\text{Eq. 4})$$

Where:

H_e = Mass of organic HAP emissions during the compliance period, kg.

² Though some of the sources have control devices the Permittee chose to use only materials that comply with the requirements of the 'Emission Rate Without Add-On Controls,' option.

- A = Total mass of organic HAP in the dyeing and finishing materials applied during the compliance period, kg, as calculated in Equation 4A.
- R_w = Total mass of organic HAP in waste materials sent or designated for shipment to a hazardous waste treatment, storage, and disposal facility (TSDF) for treatment or disposal during the compliance period, kg, determined according to procedures outlined below. (You may assign a value of zero to R_w if you do not wish to use this allowance.)
- i) If you choose to account for the mass of organic HAP contained in waste materials sent or designated for shipment to a hazardous waste TSDF in Equation 4 of this section, then you must determine it according to paragraphs (A) through (D):
 - A) You may include in the determination only waste materials that are generated by dyeing/finishing operations in the affected source for which you use Equation 4 of this section and that will be treated or disposed of by a facility that is regulated as a TSDF under 40 CFR part 262, 264, 265, or 266. The TSDF may be either off-site or onsite. You may not include organic HAP contained in wastewater.
 - B) You must determine either the amount of the waste materials sent to a TSDF during the compliance period or the amount collected and stored during the compliance period designated for future transport to a TSDF. Do not include in your determination any waste materials sent to a TSDF during a compliance period if you have already included them in the amount collected and stored during that compliance period or a previous compliance period.
 - C) Determine the total mass of organic HAP contained in the waste materials specified in paragraph B) above.
 - D) You must document the methodology you use to determine the amount of waste materials and the total mass of organic HAP they contain, as outlined below. To the extent that waste manifests include this, they may be used as part of the documentation of the amount of waste materials and mass of organic HAP contained in them.
 - i) If you use an allowance in Equation 4 for organic HAP contained in waste materials sent to, or designated for shipment to, a treatment, storage, and disposal facility (TSDF), you must keep records of the information as specified below:
 - 1) The name and address of each TSDF to which you sent waste materials for which you used an allowance in Equation 1 or 4, a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility, and the date of each shipment.
 - 2) Identification of the dyeing/finishing operations producing waste materials included in each shipment and the compliance period(s) in which you used the allowance for these materials in Equation 4, respectively.
 - 3) The methodology used to determine the total mass of dyeing and finishing materials (as used in Equation 5) determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each compliance period; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.
- WW = Total mass of organic HAP in wastewater discharged to a POTW or receiving onsite secondary treatment during the compliance period, kg, determined according Equation 4A of this section. (You may assign a value of zero to WW if you do not wish to use this allowance.)
- (i) Calculate the kg organic HAP in the dyeing and finishing materials applied during the compliance period using Equation 4A below:

$$A = \sum_{i=1}^m (M_{c,i}) (W_{c,i}) \quad (\text{Eq. 4A})$$

Where:

A = Total mass of organic HAP in the dyeing and finishing materials applied during the compliance period, kg.

$M_{c,i}$ = Mass of dyeing or finishing material, i, applied during the compliance period, kg.

$W_{c,i}$ = Mass fraction of organic HAP in dyeing or finishing material, i, kg organic HAP per kg of material.

m = Number of dyeing and finishing materials applied during the compliance period.

- (4) Calculate the total mass of dyeing and finishing materials. Determine the total mass of dyeing and finishing materials applied, kg, which is the combined mass of all the dyeing and finishing materials applied during the compliance period, using Equation 5 below:

$$M_t = \sum_{i=1}^m (M_{c,i}) \quad (\text{Eq. 5})$$

Where:

M_t = Total mass of dyeing and finishing materials applied during the compliance period, kg.

$M_{c,i}$ = Mass of dyeing or finishing material, i, applied during the compliance period, kg.

m = Number of dyeing and finishing materials applied during the compliance period.

- (5) Calculate the organic HAP emission rate, kg organic HAP emitted per kg dyeing and finishing material applied, using Equation 6:

$$H_{yr} = \frac{H_e}{M_t} \quad (\text{Eq. 6})$$

Where:

H_{yr} = The organic HAP emission rate for the compliance period, kg of organic HAP emitted per kg of dyeing and finishing materials.

H_e = Total mass of organic HAP emissions during the compliance period, kg, as calculated by Equation 4.

M_t = Total mass of dyeing and finishing materials applied during the compliance period, kg, as calculated by Equation 5.

- (6) To demonstrate compliance the organic HAP emission rate (H_{yr}) for the initial compliance period must be less than or equal to the applicable emission limit in C. 1. b. i., above.

d. Records to maintain

The Permittee must collect and keep a record of the data and information specified below. Failure to collect and keep these records is a deviation from the applicable standard.

- (a) A copy of each notification and report that you submitted to comply with this subpart, and the documentation supporting each notification and report.
- (b) A current copy of information provided by materials suppliers or manufacturers, such as manufacturer's formulation data or test data used to determine the mass fraction of organic HAP for coating, printing, slashing, dyeing, finishing, thinning, and cleaning materials; and the mass fraction of solids for coating and printing materials. If you conducted testing to determine mass fraction of organic HAP of coating materials or the mass fraction of solids of coating materials, you must keep a copy of the complete test report. If you use information provided to you by the manufacturer or supplier of the material that was based on testing, you must keep the summary sheet of results provided to you by the manufacturer or supplier. You are not required to obtain the test report or other supporting documentation from the manufacturer or supplier.

- (c) For each compliance period, the records specified below for dyeing/finishing operations must be maintained:

A record of the dyeing/finishing operations on which you used each compliance option and the time periods (beginning and ending dates) you used each option. For each month, a record of all required calculations for the compliance option(s) you used, as specified in paragraphs (i) below:

- (i) For the emission rate without add-on controls option, the calculations for the total mass of organic HAP emissions for the dyeing and finishing materials applied each compliance period using Equations 4 and 4A and, if applicable, the calculations of the total mass of dyeing and finishing materials applied each compliance period using Equation 5; and the calculation of the organic HAP emission rate for each compliance period using Equation 6.
- (d) A record of the name and mass of each regulated material applied in the dyeing and finishing subcategory during each compliance period.
- (e) A record of the mass fraction of organic HAP for each regulated material applied during each compliance period.
- (f) A record of the mass fraction of coating and printing solids for each coating and printing material applied during each compliance period.
- (g) If you use an allowance in Equation 4 for organic HAP contained in waste materials sent to, or designated for shipment to, a treatment, storage, and disposal facility (TSDF), you must keep records of the information specified in following paragraphs (1) through (3):
- (1) The name and address of each TSDF to which you sent waste materials for which you used an allowance in Equation 4, a statement of which subparts under 40 CFR parts 262, 264, 265, and 266 apply to the facility, and the date of each shipment.
 - (2) Identification of the dyeing/finishing operations producing waste materials included in each shipment and the compliance period(s) in which you used the allowance for these materials in Equation 4.
 - (3) The methodology used in accordance with Sec. 63.4331(a)(3)(iii) or (b)(4)(ii) to determine the total amount of waste materials sent to or the amount collected, stored, and designated for transport to a TSDF each compliance period; and the methodology to determine the mass of organic HAP contained in these waste materials. This must include the sources for all data used in the determination, methods used to generate the data, frequency of testing or monitoring, and supporting calculations and documentation, including the waste manifest for each shipment.
- (h) If you use an allowance in Equation 4 for organic HAP contained in wastewater discharged to a POTW or treated onsite prior to discharge, you must keep records of the information specified in following paragraphs (1) and (2) below:
- (1) Documentation that the wastewater was either discharged to a POTW or onsite secondary wastewater treatment.
 - (2) Calculation of the allowance, WW, using the fraction of organic HAP applied in affected processes that is discharged to the wastewater determined from the most recent performance test and the mass of organic HAP in the dyeing and finishing materials applied during the compliance period, A, calculated in Equation 4.
- (i) You must keep records of the date, time, and duration of each deviation.

e. **Retention of records**

- (a) The Permittee shall maintain records (electronic spreadsheets or as a database) for a period of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Each record must be kept on site for at least 2 years after the date of each occurrence. The Permittee may keep the records off site for the remaining 3 years.

f. Initial compliance demonstration

The initial compliance period begins on May 29, 2006 and ends on June 30, 2006.

To demonstrate initial compliance the Permittee shall make calculations according to the specifications in Section 2.2 C. 1. c. (1), (2), (3), (4), (5) and (6) and provide supporting documentation to show that, during the initial compliance period, the mass fraction of organic HAP in each dyeing, and finishing material you applied did not exceed the applicable limit in 2.2 C. 1. b. i., above.

g. Initial compliance notification

The Permittee must submit the notification of initial compliance status no later than 30 calendar days following the end of the initial compliance period described in Section 2.2 C. 1. f., above. The notification must contain the following information:

- (1) Company name and address;
- (2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
- (3) Date of the report and beginning and ending dates of the reporting period. The reporting period is the initial compliance period described in Section 2.2 C. 1. f., above.
- (4) Identification of the compliance option or options used during the initial compliance period on each dyeing/finishing operation in each dyeing/finishing affected source.
- (5) Statement of whether or not the affected source achieved the emission limitations for the initial compliance period.
- (6) In case of a deviation, include the following information:
 - (i) A description, and statement of the cause of, the deviation.
 - (ii) If the Permittee failed to meet the applicable emission limit in 2.2 C. 1. b. i., above, include all the calculations you used to determine the weight percent organic HAP compounds in dyeing or finishing material to demonstrate your failure to meet the applicable emission limit. You do not need to submit information provided by the materials suppliers or manufacturers or test reports.
- (7) For each of the data items listed in paragraphs (i) through (iii) below that is required by the compliance option used to demonstrate compliance with the emission limit, include an example of how you determined the value, including calculations and supporting data. Supporting data can include a copy of the information provided by the supplier or manufacturer of the example regulated material or a summary of the results of testing conducted according as described in Section 2.2 C. 1. c. (1) above. You do not need to submit copies of any test reports.
 - (i) Mass fraction of organic HAP for all of the regulated materials as purchased used in dyeing/finishing operation.
 - (ii) Mass of dyeing and finishing materials used in the dyeing/finishing operation during the compliance period.
 - (iii) The amount of waste materials and the mass of organic HAP contained in the waste materials for which you are claiming an allowance in Equation 4.
 - (iv) The mass of organic HAP in the dyeing and finishing materials applied during the compliance period and the mass of organic HAP in wastewater discharged to a POTW or receiving onsite secondary treatment for which you are claiming an allowance in Equation 4.
- (8) The calculation of kg organic HAP per kg of coating and printing solids applied and of kg organic HAP per kg of dyeing and finishing material as purchased for the emission rate without add-on controls option for dyeing/finishing operations, provide the calculation of the total mass of organic HAP emissions; the calculation of the total mass of dyeing and finishing materials applied; and the calculation of the organic HAP emission rate, using Equations 4, 5, and 6, respectively.

h. Continuous Compliance

- (a) Each month following the initial compliance period described in 2.2 C. 1. f., is a compliance period consisting of that month and the preceding 11 months. The Permittee shall perform the calculations in Section 2.2 C. 1. c. (1), (2), (3), (4), (5) and (6) on a monthly basis.

- (b) If the organic HAP emission rate for any compliance period exceeded the applicable emission limit in 2.2 C. 1. b. i., above, this is a deviation from the emission limitations for that compliance period and must be reported with the following specification below:
 - (i) The beginning and ending dates of each compliance period during which the organic HAP emission rate exceeded the applicable emission limit in Table 1 to this subpart.
 - (ii) The calculations used to determine the organic HAP emission rate for the compliance period in which the deviation occurred. You must submit the calculations for Equations 4, 4A, 5, and for dyeing/finishing operations; and if applicable, the calculation used to determine mass of organic HAP in waste materials and if applicable, the mass of organic HAP in wastewater streams. You do not need to submit background data supporting these calculations (e.g., information provided by materials suppliers or manufacturers, or test reports).
 - (iii) A statement of the cause of each deviation.
- (c) As part of each semiannual compliance report required the Permittee shall identify any dyeing/finishing operation for which the emission rate without add-on controls option was used. If there were no deviations from the applicable emission limit in 2.2 C. 1. b. i., above, the Permittee must submit a statement that, the dyeing/finishing operations were in compliance with the emission limitations during the reporting period because the organic HAP emission rate for each compliance period was less than or equal to the applicable emission limit in 2.2 C. 1. b. i., above.

B) COATING/PRINTING OPERATIONS (63.4281(a)(1))

a. Applicability

These sources (ID Nos. ES-03, ES-07, ES-08, ES-12, ES-13, and ES-14) are subject to the applicable requirements of 40 CFR 63 Subpart OOOO as of May 29, 2006 as an existing coating/printing subcategory operation.

b. Emission Standards

The coating/printing subcategory operations will meet the applicable emission limit in Table 1 of 40 CFR Subpart OOOO by using only materials that comply with the requirements of the Emission Rate Without Add-On Controls option as defined in 63.4291(a)(2), 63.4330 and 63.4331.

c. Compliance and Performance Test Methods and Procedures

Organic HAP content supplier/manufacturer data (e.g. MSDS's) and solids content data must be acquired for all regulated materials used within the coating/printing subcategory per 63.4321(e)(1)(iv) and 63.4331(a).

d. Emission Monitoring

Monthly track/calculate that the MSDS's and usage data of all chemicals used in the coating/printing subcategory demonstrate the applicable emission limit of Table 1 of 40 CFR 63 Subpart OOOO is met.

e. Recordkeeping and Reporting Requirements

For each 12-month rolling average compliance period, coating/printing subcategory material usage and HAP and solids content records and calculations must be maintained in accordance with 63.4331(a) and 63.4332 to demonstrate that the applicable emission limit of Table 1 of 40 CFR 63 Subpart OOOO is met.

The Notification Compliance Status Report must be submitted by June 30, 2007 in accordance with 63.4310(c) and 63.4330.

A semi-annual compliance report must be submitted in accordance with 63.4311(a) and 63.4332(c).

C. Facility Wide Emission Sources

The above emission sources are subject to this multiple emission source limit:

Regulated Sources	Limits/Standards	Applicable Regulation
hazardous air pollutants	less than 10 tons per year of any individual HAP and less than 25 tons per year of a combination of HAPs	15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111

1. 15A NCAC 2Q .0317 for avoidance of 15A NCAC 2D .1111 LIMITATION TO AVOID BEING MAJOR FOR HAZARDOUS AIR POLLUTANTS

- a. In order to remain classified a minor source for hazardous air pollutants the facility wide emissions shall be less than:
 - i. 10 tons per year of each individual hazardous air pollutant, and
 - ii. 25 tons per year of all hazardous air pollutants combined.

The Permittee shall be deemed in noncompliance with this condition if the HAP emissions exceed this limit.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

- b. The Permittee shall maintain monthly HAPs emissions records as follows:
 - i. quantity of individual hazardous air pollutants (HAPs) in pounds used by the plant each month and for the 12-month period ending on that month,
 - ii. quantity of all hazardous air pollutants in pounds used by the plant each month and for the 12-month period ending on that month.
 - iii. Permittee shall calculate the emissions of HAPs from the boilers each month using the latest AP-42 factors.
 - iv. Permittee shall calculate the emissions of HCL and HF from the boiler (ID No. ES-01) each month using the latest AP-42 factors and a control efficiency of 74.2 % for emissions of HCL and HF from the boiler while the scrubbers are in operation.
- c. The Permittee shall maintain a record of purchase orders and invoices of materials containing HAPs.

The Permittee shall be deemed in noncompliance if these HAPs emissions are not monitored or records are not maintained.

Reporting [15A NCAC 2Q .0508(f)]

- d. The Permittee shall submit to the Regional Supervisor, Division of Air Quality, each quarter, a report summarizing emissions of hazardous air pollutants containing the following:
 - i. greatest quantity in pounds of an individual hazardous air pollutant used:
 - a. for each month during the quarter, and
 - b. for each 12-month period ending on each month during the quarter using a 12-month rolling average;
 - ii. pounds of all hazardous air pollutants used:
 - a. for each month during the quarter, and
 - b. for each 12-month period ending on each month during the quarter using a 12-month rolling average.

The Permittee shall be deemed in noncompliance if the HAP emissions exceed this limit.

2.3 TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT

A. All emission sources

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants (TAPs)	<u>State Only Requirement</u> toxics demonstration	15A NCAC 2Q .0705

STATE ENFORCEABLE ONLY

1. 15A NCAC 2Q .0705: EXISTING FACILITIES AND SIC CALLS for TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT

- a. As of July 2, 2007 emissions of toxic air pollutants have been demonstrated on a facility-wide basis (excluding those sources exempt under 15A NCAC 2Q .0702 "Exemptions") that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPER) listed in 15A NCAC 2Q .0711 - "Emission Rates Requiring a Permit" or the TAPs are in compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants."
- b. The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any TAP listed in 15A NCAC 2Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 2Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TPER listed in 15A NCAC 2Q .0711 without first obtaining an air permit to construct or operate.
- c. PRIOR to exceeding any of the TPERs listed in 15A NCAC 2Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Toxic Air Pollutants".
- d. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 2Q .0711.

The table below lists the TAPs for which the emission from the facility might exceed the TPER listed in 15A NCAC 2Q .0711 and the Permittee has demonstrated compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," by modeling.

Pollutants	Modeled rate	TPERs rate
Acetic Acid	2.47 lbs/hr	0.96 lbs/hr
Benzene	39.2 lbs/yr	8.2 lbs/yr
Formaldehyde	0.083 lbs/hr	0.04 lbs/hr
HCL	0.58 lbs/hr	0.18 lbs/hr
HF	0.296 lbs/hr	0.064 lbs/hr

- e. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 2Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

TPERs Limitations				
Pollutant (CAS Number)	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
ethyl acetate (141-78-6)			36	

methyl isobutyl ketone (108-10-1)		52		7.6
xylene (1330-20-7)		57		16.4
ammonia (7664-41-7)			0.68	
Acetaldehyde (75-07-0)				6.8
formaldehyde (50-00-0)				0.04

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]
f. None.

2.4 COMPLIANCE ASSURANCE MONITORING

A. multicyclone (ID No. CD-01)

The following table provides a summary of parameters monitored for the control device described above:

PM10	Continuous Assurance Monitoring 40 CFR 64.	15A NCAC 2D .0614
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1. 15A NCAC 2D .0614: Continuous Assurance Monitoring (40 CFR 64)

- a. The Permittee must ensure that PM10 emitted from Coal-fired boilers (ID No. ES-01) is controlled by the multicyclone (ID No. CD-01) by monitoring the following operating parameters:
 - i. pressure drop across the cyclones.
- b. The pressure drop range across the cyclone will range from 1.0 to 4.0 inches of water.

Testing

- c. None.

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

- d. **Pressure drop across the cyclones**

Indicator	Pressure Drop
Measurement Approach	Pressure drop across the cyclones are measured by magnehilic differential pressure gauges.
Indicator Range	An excursion is defined as a pressure drop reading across the multi-cyclones outside the range of 1.0 to 4.0 inches of water.
QIP Threshold	The QIP threshold is an excursion occurring at any time An excursion triggers an inspection, corrective action, and a reporting requirement.
Performance Criteria: Data Representativeness	Pressure taps are located at the cyclones inlet and outlet
Verification of Operational Status	Pressure drop within the Indicator Range indicates normal operation of the cyclones
QA/QC Practices and	The pressure gauge is calibrated monthly.

Criteria	
Monitoring Frequency	Pressure drop is continuously monitored while the cyclones are in operation.
Data Collection Procedure	Pressure drop is recorded electronically once per shift
Averaging Period	NA

Recordkeeping and Reporting

- e. The Permittee must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 64.9
 - i. records specified in 40 CFR 64 of all measurements of operating parameters including:
 - (a) control device and capture system operating parameter data and
 - (b) overall control efficiency determination using capture efficiency test and scrubber efficiency test, and
 - ii. records specified in 40 CFR 64 for each continuous parametric monitoring system operated by the Permittee.
- f. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. The compliance report must contain the following information:
 - i. Company name and address,
 - ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,
 - iii. the date of report and beginning and ending dates of the reporting period,
 - iv. a statement that there were no excursion outside of the allowable operating parameter limits during the reporting period (as applicable), and that no continuous parametric monitoring system (CPMS) was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
 - (a) the total operating time of the source during the reporting period,
 - (b) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken and
 - (c) information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other daily calibration checks,

B. plate impingment scrubbers (ID Nos. CD-02 and CD-04)

The following table provides a summary of parameters monitored for the control device described above:

sulfur dioxide	Continuous Assurance Monitoring 40 CFR 64.	15A NCAC 2D .0614
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1. 15A NCAC 2D .0614: Continuous Assurance Monitoring (40 CFR 64)

- a. The permittee shall ensure that sulfur dioxide emitted from Coal-fired boiler (ID No. ES-01) is controlled by either of the plate impingment scrubber (ID No. CD-02 or ID No. CD-04) by monitoring the following operating parameters:
 - i. pressure drop across the scrubbers,
 - ii. liquor flow rate, and
 - iii. liquor pH.

The pressure drop range across the scrubbers will range from 2.0 to 6.4 inches of water.
The minimum liquor flow rate is 110 gallons per minute (GPM).
The minimum pH of the liquor is 7.0.

Testing

- b. None.

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

c. Pressure drop across the scrubber, liquor flow rate and liquor pH.

Indicator	Pressure drop across the scrubbers	Liquor flow rate	Liquor pH
Measurement Approach	Pressure drop across the cyclones are measured by magnehilic differential pressure gauges.	Liquor flow rate across the scrubbers are measured by a flow meter	pH of the scrubber liquid is measured by a pH meter
Indicator Range	An excursion is defined as a pressure drop reading across the scrubber outside the range of 2.0 to 6.4 inches of water	An excursion is defined as a flow rate reading less than 110 GPM.	An excursion is defined as a pH reading less than 7.0 of the liquor.
QIP Threshold	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.
Performance Criteria: Data Representativeness	Pressure taps are located at the scrubbers inlet and outlet	The flow meters are located at the mouth of the scrubbers	The pH meters are located at the exhaust of the scrubbers
Verification of Operational Status	Pressure drop within the Indicator Range indicates normal operation of the scrubbers	Flow rate above the Indicator Range indicates normal operation of the scrubbers	pH of the liquid at or above the Indicator Range indicates normal operation of the scrubbers
QA/QC Practices and Criteria	The pressure gauge is calibrated monthly.	The flow meters are calibrated monthly	The pH meter is calibrated
Monitoring Frequency	Pressure drop is continuously monitored while the scrubbers are in operation.	Flow rate is continuously monitored while scrubbers are in operation.	pH is continuously monitored while scrubbers are in operation.
Data Collection Procedure	Pressure drop is recorded electronically once per shift	Flow rate is recorded electronically once per shift.	The pH of the liquid is recorded electronically once per shift.
Averaging Period	NA	NA	NA

Recordkeeping and Reporting

- d. The Permittee must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 64.9:
- i. records specified in 40 CFR 64 of all measurements of operating parameters including:
 - (a) control device and capture system operating parameter data and
 - (b) overall control efficiency determination using capture efficiency test and scrubber efficiency test, and
 - ii. records specified in 40 CFR 64 for each continuous parametric monitoring system operated by the Permittee.
- e. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. The compliance report must contain the following information:
- i. Company name and address,
 - ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,

- iii. the date of report and beginning and ending dates of the reporting period,
- iv. a statement that there were no excursion outside of the allowable operating parameter limits during the reporting period (as applicable), and that no continuous parametric monitoring system (CPMS) was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
 - (a) the total operating time of the source during the reporting period,
 - (b) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken and
 - (c) information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other daily calibration checks,

C. catalytic oxidizer (ID No. CD-05)

The following table provides a summary of parameters monitored for the control device described above:

volatile organic compound	Continuous Assurance Monitoring 40 CFR 64.	15A NCAC 2D .0614
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1. 15A NCAC 2D .0614: Continuous Assurance Monitoring (40 CFR 64)

- a. The permittee shall ensure that volatile organic compounds emitted from thread bonding operation (ID No. ES-03) are controlled by the catalytic oxidizer (ID No. CD-05) by monitoring the following operating parameters:
 - i. flow rate to oxidizer;
 - ii. combustion temperature;
 - iii. temperature rise across catalyst bed; and
 - iv. pressure drop across catalyst bed

The maximum operating flow for the unit is 9,000 scfm.

The maximum combustion temperature is 1200 degrees F and a minimum is 400 degrees F.

The temperature rise across catalyst bed should be a maximum of 110 degrees F.

The pressure drop across the catalyst bed should be between 2.0 and 8.0 inches of water.

Testing

- b. None

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

- c. Flow rate to oxidizer, combustion temperature, temperature rise across catalyst bed and pressure drop across catalyst bed.

Indicator	Pressure Drop Across Catalyst Bed	Flow rate to Oxidizer	Temperature Rise Across Catalyst Bed	Combustion Temperature
Measurement Approach	Pressure drop across the oxidizer is measured by magnehilic differential pressure gauge.	Flow rate of air into the oxidizer is measured by a flow meter.	Temperatures rise across the catalyst bed is measured by thermocouples.	Temperatures at the catalyst bed is measured by thermocouple
Indicator Range	An excursion is defined as a pressure drop less than 2 inches of water or more than 8 inches of water.	An excursion is defined as a flow measurement in excess of 9,000 scfm.	An excursion is defined as a temperature reading of more than 110 degrees F.	An excursion is defined as a temperature reading less than 400 degrees F or more than 1200 degrees F.
QIP Threshold	The QIP threshold is an excursion	The QIP threshold is an	The QIP threshold is an excursion	The QIP threshold is an excursion

Indicator	Pressure Drop Across Catalyst Bed	Flow rate to Oxidizer	Temperature Rise Across Catalyst Bed	Combustion Temperature
	occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.
Performance Criteria: Data Representativeness	Pressure taps are located at the oxidizer inlet and outlet	The flow meter is located at the mouth of the oxidizer	the thermocouples are located at the inlet and out of the catalyst bed	The thermocouple is located at the combustion chamber
Verification of Operational Status	Pressure drop within the Indicator Range indicates normal operation of the oxidizer.	Flow rate at the Indicator Range indicates normal operation of the oxidizer.	Temperature reading of less than 110 degrees F indicates normal operation of the oxidizer.	Temperature reading of more than 400 degrees F or less than 1200 degrees F indicates normal operation of the oxidizer.
QA/QC Practices and Criteria	The pressure gauge is calibrated monthly.	The flow meters are calibrated monthly	The thermocouples are calibrated monthly.	The thermocouple is calibrated monthly.
Monitoring Frequency	Pressure drop is continuously monitored while the oxidizer is in operation.	Flow rate is continuously monitored while oxidizer is in operation.	Temperature is continuously monitored while oxidizer is in operation.	Temperature is continuously monitored while oxidizer is in operation..
Monitoring Frequency			temperature rise across catalyst bed will be recorded every fifteen minutes as per Part 64.3 (b) (4) (ii))	
Data Collection Procedure	Pressure drop is recorded electronically once per shift	Flow rate is recorded electronically once per shift.	Temperature is recorded electronically once per shift	Temperature is recorded electronically once per shift
Averaging Period	NA	NA	NA	NA

Recordkeeping and Reporting

- d. The Permittee must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 64.9:
 - i. records specified in 40 CFR 64 of all measurements of operating parameters including:
 - (a) control device and capture system operating parameter data and
 - (b) overall control efficiency determination using capture efficiency test and oxidizer destruction efficiency test, and
 - ii. records specified in 40 CFR 64 for each continuous parametric monitoring system operated by the Permittee.

- e. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be

- postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. The compliance report must contain the following information:
- i. Company name and address,
 - ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,
 - iii. the date of report and beginning and ending dates of the reporting period,
 - iv. a statement that there were no excursion outside of the allowable operating parameter limits during the reporting period (as applicable), and that no continuous parametric monitoring system (CPMS) was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
 - (a) the total operating time of the source during the reporting period,
 - (b) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken and
 - (c) information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other daily calibration checks,

D. catalytic oxidizer (ID No. CD-06)

The following table provides a summary of parameters monitored for the control device described above:

volatile organic compound	Continuous Assurance Monitoring	15A NCAC 2D .0614
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1. 15A NCAC 2D .0614: Continuous Assurance Monitoring (40 CFR 64)

- a. When required the permittee shall ensure that volatile organic compounds emitted from the twelve of the thread bonding machines (ID No. ES-08) are controlled by the catalytic oxidizer (ID No. CD-06) by monitoring the following operating parameters:
 - i. flow rate to oxidizer;
 - ii. combustion temperature;
 - iii. temperature rise across catalyst bed; and
 - iv. pressure drop across catalyst bed

The maximum operating flow for the unit is 5,250 scfm.
 The maximum combustion temperature is 1200 degrees F and the minimum is 400 degrees F.
 The temperature rise across catalyst bed should be a maximum of 130 degrees F.
 The pressure drop across the catalyst bed should be between 2.0 and 8.0 inches of water.

Testing

- b. None.

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

- c. Flow rate to oxidizer, combustion temperature, temperature rise across catalyst bed and pressure drop across catalyst bed.

Indicator	Pressure Drop Across Catalyst Bed	Flow rate to Oxidizer	Temperature Rise Across Catalyst Bed	Combustion Temperature
Measurement Approach	Pressure drop across the oxidizer is measured by magnehilic differential pressure gauge.	Flow rate of air into the oxidizer is measured by a flow meter.	Temperatures rise across the catalyst bed is measured by thermocouples.	Temperatures at the catalyst bed is measured by thermocouple
Indicator Range	An excursion is defined as a pressure drop less than 2	An excursion is defined as a flow measurement in	An excursion is defined as a temperature reading	An excursion is defined as a temperature reading

Indicator	Pressure Drop Across Catalyst Bed	Flow rate to Oxidizer	Temperature Rise Across Catalyst Bed	Combustion Temperature
	inches of water or more than 8 inches of water.	excess of 5,250 scfm.	of more than 130 degrees	less than 400 degrees F or more than 1200 degrees F.
QIP Threshold	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.	The QIP threshold is an excursion occurring at any time. An excursion triggers an inspection, corrective action, and a reporting requirement.
Performance Criteria: Data Representativeness	Pressure taps are located at the oxidizer inlet and outlet	The flow meter is located at the mouth of the oxidizer	the thermocouples are located at the inlet and out of the catalyst bed	The thermocouple is located at the combustion chamber
Verification of Operational Status	Pressure drop within the Indicator Range indicates normal operation of the oxidizer.	Flow rate at the Indicator Range indicates normal operation of the oxidizer.	Temperature reading of less than 130 degrees F indicates normal operation of the oxidizer.	Temperature reading of more than 400 degrees F or less than 1200 degrees F indicates normal operation of the oxidizer.
QA/QC Practices and Criteria	The pressure gauge is calibrated monthly.	The flow meters are calibrated monthly	The thermocouples are calibrated monthly.	The thermocouple is calibrated monthly.
Monitoring Frequency	Pressure drop is continuously monitored while the oxidizer is in operation.	Flow rate is continuously monitored while oxidizer is in operation.	Temperature is continuously monitored while oxidizer is in operation.	Temperature is continuously monitored while oxidizer is in operation..
Monitoring Frequency			temperature rise across catalyst bed will be recorded every fifteen minutes as per Part 64.3 (b) (4) (ii))	
Data Collection Procedure	Pressure drop is recorded electronically once per shift	Flow rate is recorded electronically once per shift.	Temperature is recorded electronically once per shift	Temperature is recorded electronically once per shift
Averaging Period	NA	NA	NA	NA

Recordkeeping and Reporting

- d. The Permittee must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 64.9:
 - i. records of all measurements of operating parameters including:
 - (a) control device and capture system operating parameter data and
 - (b) overall control efficiency determination using capture efficiency test and oxidizer destruction efficiency test, and

- ii. records for each continuous parametric monitoring system operated by the Permittee.
- e. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. The compliance report must contain the following information:
 - i. Company name and address,
 - ii. a statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report,
 - iii. the date of report and beginning and ending dates of the reporting period,
 - iv. a statement that there were no excursion outside of the allowable operating parameter limits during the reporting period (as applicable), and that no continuous parametric monitoring system (CPMS) was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. Or for each exceedance of an allowable operating parameter that occurs, the compliance report must contain:
 - (a) the total operating time of the source during the reporting period,
 - (b) information on the number, duration, and cause of exceedances (including unknown cause), if applicable, and the corrective action taken and
 - (c) information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other daily calibration checks,

SECTION 3 - GENERAL CONDITIONS (version 2.22.1)

This section describes terms and conditions applicable to this Title V facility.

- A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]
 - 1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
 - 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
 - 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
 - 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
 - 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
 - 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.
- B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.
- C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 2Q .0507(e) and 2Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NO_x budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

E. **Duty to Comply** [15A NCAC 2Q .0508(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 2Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.

3. Minor Permit Modifications [15A NCAC 2Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.

4. Significant Permit Modifications [15A NCAC 2Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.

5. Reopening for Cause [15A NCAC 2Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 2Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.*)

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
 - a. Pursuant to 15A NCAC 2D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;

- nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
- ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 2Q .0508(e) and 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit

expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 2Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 2Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 2Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 2Q .0508(f) and 2Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification

shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 2Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 2Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 2Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 2Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

W. **Annual Fee Payment** [15A NCAC 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 2Q .0107 and 2Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .0507(d)(3)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 2Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 2Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) -**
FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 2Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 2D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 2D .0200]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 2D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. General Emissions Testing and Reporting Requirements [15A NCAC 2Q .0508(i)(16)]

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:

1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
 - a. a description of the training and air testing experience of the person directing the test;
 - b. a certification of the test results by sampling team leader and facility representative;
 - c. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
 - d. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
 - e. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
 - f. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
 - g. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

KK. Reopening for Cause [15A NCAC 2Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 2Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f). "Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

- NN.
1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
 2. For modifications made pursuant to 15A NCAC 2Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
 3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound