



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

Beverly Eaves Perdue
Governor

Sheila C. Holman
Director

Dee Freeman
Secretary

October ??, 2010

Mr. John Eapen
Vice President, Environment, Health and Safety
American & Efird, Inc.
Post Office Box 507
Mount Holly, NC 28120

Dear Mr. Eapen:

**SUBJECT: Air Quality Permit No. 06691T16
Facility ID: 3600224
American & Efird, Inc.
Mount Holly, Gaston County
Fee Class: Title V**

In accordance with your completed Air Quality Permit Application for a significant modification of a Title V permit received September 11, 2009, we are forwarding herewith Air Quality Permit No. **06691T16** to American & Efird, Inc., 20 and 601 American Street, Mount Holly, 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
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: www.ncair.org

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North Carolina
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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 October ??, 2008 until July 31, 2013, 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 Mr. Brian Bland at (919) 715-6247.

Sincerely yours,

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

Enclosure

c: Michael Landis, Supervisor, Mooresville Regional Office
Central Files
Gregg Worley, EPA Region 4

**ATTACHMENT to Air Quality Permit No. 06691T16
American & Efird, Inc. - Plants 5 and 15**

ATTACHMENT 1 - Permit Change Summary Table

The following table represents the changes to the current Title V permit as proposed to complete this permit modification:

Page(s)	Section	Description of Change(s)
1	Cover Page	-Updated permit revision number and permit issuance date.
3	Pre-Section 1	-Remove introductory text
3 - 33	All, Header	-Updated permit revision number.
3	Section 1	-Added "2D .1100 Case-by-Case MACT" designation to boilers ES15-1, ES15-3 and ES15-4
5	Section 2.1.A, Table	-Added 15A NCAC 2D .1109 to list of applicable regulations
7	Section 2.1 A 5	-Add Section to include 112(j) MACT Hammer requirements applicable to the affected boilers.
24 - 33	Section 3	-Updated General Conditions

**ATTACHMENT to Air Quality Permit No. 06691T16
American & Efird, Inc. - Plants 5 and 15**

Attachment 2: Insignificant Activities

Emission Source ID No.	Emission Source Description	Insignificant Activity Regulation
IES-3	one natural gas-fired boiler located at Plant 5 (0.4 million Btu per hour heat input)	15A NCAC 2Q .0503(8)
IES-4	above ground storage tank for acetic acid	15A NCAC 2Q .0503(8)
IES-5	above ground storage tank for sulfuric acid	15A NCAC 2Q .0503(8)
IES-6	above ground storage tank for gasoline	15A NCAC 2Q .0503(8)
IES-7	above ground storage tank for No. 2 fuel oil	15A NCAC 2Q .0503(8)
IES-8	above ground storage tank for No. 6 fuel oil	15A NCAC 2Q .0503(8)
IES-9	above ground storage tank for hydrogen peroxide	15A NCAC 2Q .0503(8)
IES-10	above ground storage tank for diesel fuel	15A NCAC 2Q .0503(8)
IES-11	above ground storage tank for sodium hydro sulfite	15A NCAC 2Q .0503(8)
IES-12	above ground storage tank for sodium hydroxide	15A NCAC 2Q .0503(8)
IES-13	one 'drug room' located at Plant 15	15A NCAC 2Q .0503(8)
IES-14	one pre-lube winding station located at Plant 15	15A NCAC 2Q .0503(8)
IES-15	One thread coating operation	15A NCAC 2Q .0503(8)
IES-16	One thread waxing machine No. 1	15A NCAC 2Q .0503(8)
IES-17	One thread waxing machine No. 2	15A NCAC 2Q .0503(8)
I-RD15	Research and development activities at Plant 15	15A NCAC 2Q .0503(8)
I-RD5	Research and development activities at Plant 5	15A NCAC 2Q .0503(8)

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



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
06691T16	06691T15	October ??, 2010	July 31, 2013

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: American & Efird Inc. Dyeing & Finishing Plant
(Plant 15) and Filament Plant (Plant 5)

Facility ID: 3600224

Facility Site Location: 20 American Street and 601 American Street
City, County, State, Zip: Mount Holly, Gaston County, NC, 28120

Mailing Address: Post Office Box 507
City, State, Zip: Mount Holly, NC 28120

Application Number: 3600224.09A
Complete Application Date: September 11, 2009

Primary SIC Code: 2284
Division of Air Quality, Mooresville Regional Office
Regional Office Address: 919 North Main Street
Mooresville, NC 28115

Permit issued this the ??th day of October, 2010

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

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ATTACHMENT

List of Acronyms

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 and appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
<i>Plant No. 15</i>			
ES 15-4 NSPS 2D .1100 Case-by-Case MACT	One natural gas/No. 2 fuel oil-fired boiler (14.7 million Btu per hour heat input capacity)	N/A	N/A
ES 15-1 and ES 15-3, NSPS 2D .1100 Case-by-Case MACT	Two natural gas/No. 2 fuel oil-fired boilers (33.475 million Btu per hour heat input capacity each)	N/A	N/A
ES 15-5 ¹ MACT	Wastewater pre-treatment plant	N/A	N/A
<i>Plant No. 5</i>			
ES-1 and ES-4 MACT	Two nylon thread bonding processes and associated natural gas-fired curing ovens (2.6 million Btu per hour heat input capacity each)	CD-1	One natural gas-fired thermal oxidizer (5.0 million Btu per hour heat input capacity)
ES-5, ES-6, ES-7, ES-8, ES-9 and ES-2 NSPS MACT	<u>Primary Operating Scenario (POS)</u> Six nylon thread bonding processes and associated natural gas-fired curing ovens (3.4 million Btu per hour heat input capacity each)	CD-1	One natural gas-fired thermal oxidizer (5.0 million Btu per hour heat input capacity)
ES-6, ES-7, ES-8 and ES-9 NSPS MACT	<u>Alternate Operating Scenario (AOS)</u> Four polyester thread bonding processes and associated natural gas-fired curing ovens (3.4 million Btu per hour heat input capacity each)	N/A	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-3 NSPS MACT	<p><u>Primary Operating Scenario (POS)</u> One nylon thread bonding process and associated natural gas fired curing oven (3.4 million Btu per hour heat input capacity)</p> <p><u>Alternate Operating Scenario (AOS)</u> One polyester thread bonding process and one associated natural gas fired curing oven (3.4 million Btu per hour heat input capacity)</p>	CD-1 N/A	One natural gas-fired thermal oxidizer (5.0 million Btu per hour heat input capacity) N/A
ES-10 NSPS MACT	One nylon thread bonding process and associated natural gas fired curing oven (3.4 million Btu per hour heat input capacity)	CD-1	One natural gas-fired thermal oxidizer (5.0 million Btu per hour heat input capacity)
ES-11 NSPS MACT	<p><u>Primary Operating Scenario (POS)</u> One nylon thread bonding process and associated natural gas-fired curing oven (3.4 million Btu per hour heat input capacity)</p> <p><u>Alternate Operating Scenario (AOS)</u> One polyester thread bonding process and one associated natural gas fired curing oven (3.4 million Btu per hour heat input capacity)</p>	CD-1 N/A	One natural gas-fired thermal oxidizer (5.0 million Btu per hour heat input capacity) N/A

¹This source currently has no applicable requirements.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. Three natural gas/No. 2 fuel oil fired boilers (ES 15-1, ES 15-3, and ES 15-4)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM	0.35 pounds per million Btu (ID Nos. ES 15-1, ES-3, and ES 15-4)	15A NCAC 2D .0503
Sulfur dioxide	2.3 pounds per million Btu (ID Nos. ES 15-1, ES-3, and ES 15-4; while natural gas firing)	15A NCAC 2D .0516
	fuel oil firing: 0.5 percent sulfur content fuel oil (ID Nos. ES 15-1, ES-3, and ES 15-4)	15A NCAC 2D .0524, 40 CFR Part 60 Subpart Dc
Visible emissions	20% opacity (ID Nos. ES 15-4; while firing any fuel) (ID Nos. ES 15-1 and ES 15-3; while firing natural gas)	15A NCAC 2D .0521
	20% opacity (ES 15-1 and ES 15-3; while firing fuel oil):	15A NCAC 2D .0524, 40 CFR Part 60 Subpart Dc
Nitrogen oxides	Permit Shield for Nonapplicable Requirements) - See Section 2.3-A. (ID Nos. ES 15-1, ES 15-3, and ES 15-4)	15A NCAC 2Q .0512(a)(1)(B) for 15A NCAC 2D .1400
Odors	Odorous Emissions; State-enforceable only (See Section 2.2-C. – Multiple Emission Sources)	15A NCAC 2D .1806
HAPs	Best Combustion Practices	15A NCAC 2D .1109

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

- a. Emissions of particulate matter from the combustion of No. 2 fuel oil or natural gas, that are discharged from these sources (ID Nos. ES 15-1, ES 15-3, and ES 15-4) into the atmosphere shall not exceed **0.35 pounds per million Btu heat input**. [15A NCAC 2D .0503(a)]

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

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

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

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ES 15-1, ES 15-3, and ES 15-4**) 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 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. No monitoring/recordkeeping is required for sulfur dioxide emissions from natural gas/No. 2 fuel oil for these sources.

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

- a. Visible emissions from this source (**ID No. ES-15-4; when firing any fuel**), and from these sources (**ID Nos. ES 15-1 and ES 15-3; while firing natural gas**) 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 (c)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1-A.3.a. (**ID Nos. ES 15-1, ES 15-3 and ES 15-4**) 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/No. 2 fuel oil in these sources.

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

- a. 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 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 boilers (**ID Nos. ES 15-1, ES 15-3 and ES 15-4**) shall not exceed 0.5 percent by weight.
Only if > 30 million Btu per hour and firing coal, oil, or wood
- c. Visible emissions from these sources (**ID Nos. ES 15-1 and ES 15-3**) while firing fuel oil 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.

Testing

- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and (8) and General Condition JJ. If the results of this test are above any limit given in Section 2.1-A.4.b. or c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- e. Sulfur dioxide emissions from these boilers (**ID Nos. ES 15-1, ES 15-3, and ES 15-4**) shall be monitored as follows:

- i. **Distillate Oil** - Fuel supplier certification shall be used to demonstrate compliance as described under 40 CFR § 60.46c(e).

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if sulfur dioxide emissions are not monitored as described above.

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

- f. 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 for each boiler (**ID Nos. ES 15-1, ES 15-3, and ES 15-4**). These records shall be generated by fuel meters installed on each boiler.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

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

- g. 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 fuel oil fired, by January 30 of each calendar year for the preceding six-month period between July and December and by July 30 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.

5. 15A NCAC 2D .1109; CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. The Permittee shall use best combustion practices when operating the affected boilers (**ID Nos. ES 15-1, ES 15-3 and ES-15-4**). The initial compliance date for this work practice standard and the associated monitoring, recordkeeping, and reporting requirements is **October ??, 2013**. These conditions need not be included on the annual compliance certification until after the initial compliance date.

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

- b. To assure compliance, the Permittee shall perform an annual boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:

- i. Inspect the burner, and clean or replace any components of the burner as necessary;
- ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
- iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected boilers are not inspected and maintained as required above.

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

- c. The results of inspection and maintenance 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 of each recorded action;
- ii. The results of each inspection; and,
- iii. The results of any maintenance performed on the boilers.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records are not maintained.

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

- d. No reporting is required for hazardous air pollutants from the firing of No. 2 fuel oil or natural gas in these boilers.

B. Thread coating operation consisting of eleven thread bonding processes:

- **Two nylon thread bonding machines 1 and 4 (ID Nos. ES-1 and ES-4) and associated natural gas-fired curing ovens (2.6 million Btu per hour heat input capacity each);**
- **Three nylon thread bonding machines 2, 5, and 10 (ID Nos. ES-2, ES-5, and ES-10) and associated natural gas-fired curing ovens (3.4 million Btu per hour heat input capacity each);**
- **Six nylon/polyester thread bonding machines 3, 6 through 9, and 11 (ID Nos. ES-3, ES-6 through ES-9, and ES-11) and associated natural gas-fired curing ovens (3.4 million Btu per hour heat input capacity each);**

All eleven thread bonding processes are enclosed by a permanent total enclosure and controlled by one natural gas-fired thermal oxidizer (5 million Btu per hour heat input, ID No. CD-01) while processing nylon

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	$E=4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour (ID Nos. ES-1 through ES-11)	15A NCAC 2D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input (ID Nos. ES-1 through ES-11)	15A NCAC 2D .0516
Visible emissions	20 percent opacity (ID Nos. ES-1 through ES-11)	15A NCAC 2D .0521
Volatile organic compounds	reduce emissions by at least 90 percent (while processing nylon thread) (ID Nos. ES-2, ES-3 and ES-5 through ES-11)	15A NCAC 2D .0524 (40 CFR 60 Subpart VVV)
Volatile organic compounds	VOC content of coating equal or less than 9 % w (while processing polyester thread) (ID Nos. ES-3, ES-6 through ES-9, and ES-11)	15A NCA 2Q.0317 Avoidance Conditions for 15A NCAC 2D .0524 (40 CFR 60 Subpart VVV)
Volatile organic compounds	Permit Shield for Nonapplicable Requirements - See Section 2.3-B. (ID Nos. ES-1 and ES-4)	15A NCAC 2Q .0512(a)(1)(B)
Volatile organic compounds	less than 100 tons per year <i>combined</i> (ID Nos. ES-1 through ES-11)	15A NCA 2Q.0317 Avoidance Conditions for 15A NCAC 2D .0902
Volatile organic compounds	Compliance assurance monitoring (CAM) - See Section 2.1-A.6. and Section 2.2-B	15A NCAC 2Q .0317 Avoidance Conditions for 15A NCAC 2D .0614(b)(1)(E) and .0614(b)(1)(A)
Volatile organic compounds	Permit Shield for Nonapplicable Requirements - See Section 2.3-C. (ID Nos. ES-3, ES-6 through ES-9 and ES-11)	15A NCAC 2Q .0512(a)(1)(B) for 15A NCAC 2D .0951
Volatile organic compounds	Permit Shield for Nonapplicable Requirements - See Section 2.3-D. (ID Nos. ES-1 through ES-11)	15A NCAC 2Q .0512(a)(1)(B) for 15A NCAC 2D .0955
Volatile organic compounds	Work Practice Standards (See Section 2.2-A. – Multiple Emission Sources) (ID Nos. ES-1 through ES-11)	15A NCAC 2D .0958
Hazardous air pollutants	Maximum Achievable Control Technology (See Section 2.2-B. – Multiple Emission Sources) (ID Nos. ES-1 through ES-11)	15A NCAC 2D .1111 (40 CFR 63, Subpart OOOO)
Odors	Odorous Emissions; State-enforceable only (See Section 2.2-C. – Multiple Emission Sources)	15A NCAC 2D .1806

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic air pollutants	TAP assessment of facility wide sources due with permit application to comply with last applicable MACT (i.e., Subpart OOOO), excluding the Boiler MACT (Subpart DDDDD - Vacated); State Only Requirement (See Section 2.2-E. – Multiple Emission Sources)	15A NCAC 2Q .0705
Toxic air pollutants	Control of Toxic Air Pollutants – emission rates requiring a permit; State Enforceable Only (See Section 2.2-D. – Multiple Emission Sources)	15A NCAC 2Q .0711

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

- a. Emissions of particulate matter from these sources 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 2D .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-B.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 such that the process rates “P” in tons per hour, as specified by the formula contained above can be derived, 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.

2. 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]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 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/Reporting [15A NCAC 2Q .0508(f) and 15A NCAC 2D .2601]

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

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

- a. Visible emissions from these sources (**ID Nos. ES-1 through ES-11**) 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1-B.3.a. (**ID Nos. ES-1 through ES-11**) 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 or reporting is required for visible emissions from these sources.

4. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. 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 Part 60 Subpart VVV, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524]

- b. The Permittee shall reduce VOC emissions to the atmosphere from the coating operations (**ID Nos. ES-2, ES-3 and ES-5 through ES-11**) by at least 90 percent ("emission reduction standard") while processing nylon threads (*POS*). [40 CFR 60.742(b)(1)]

Testing

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1-B.4.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

NSPS Compliance Provisions [40 CFR 60.743]

- d. To demonstrate compliance with the emission reduction standard for coating operations specified in 60.742(b)(1), the owner or operator of this affected facility has chosen the following compliance option:
 - i. Gaseous emissions test for coating operations not using carbon adsorption beds with individual exhausts. This method is applicable when the emissions from any affected coating operation are controlled by a control device other than a fixed-bed carbon adsorption system with individual exhaust stacks for each adsorber vessel. The owner or operator using this method shall comply with the following procedures:
 - (A) Construct the vapor capture system and control device so that all gaseous volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in Sections 60.745(b) through (g). [40 CFR 60.743(a)(1)(i)]
 - (B) Determine capture efficiency from the coating operation by capturing, venting, and measuring all VOC emissions from the coating operation. During a performance test, the owner or operator of an affected coating operation located in an area with other sources of VOC emissions shall isolate the coating operation emissions from all other sources of VOC by one of the following methods:
 - (1) Build a temporary enclosure, as defined in Section 60.741(a) and conforming to the requirements of Section 60.743(b)(1), around the affected coating operation. The temporary enclosure must be constructed and ventilated (through stacks suitable for testing) so that it has minimal impact on the performance of the capture system; [40 CFR 60.743(a)(1)(ii)(A)] or
 - (2) Shut down all other sources of VOC and continue to exhaust fugitive emissions from the affected coating operation through any building ventilation system and other room exhausts such as those on drying ovens. All such ventilation air must be vented through stacks suitable for testing because the VOC content in each must be determined. [40 CFR 60.743(a)(1)(ii)(B)]

- (C) Operate the emission control device with all emission sources (**ID Nos. ES-1 through ES-11**) connected and operating. [40 CFR 60.743(a)(1)(iii)]
- (D) Determine the control efficiency (E) of the control device by Equation 1 in Section 60.743(a)(1)(iv). [40 CFR 60.743(a)(1)(iv)]
- (E) Determine the efficiency (F) of the vapor capture system by Equation 2 in Section 60.743(a)(1)(v). [40 CFR 60.743(a)(1)(v)]
- (F) For each affected coating operation subject to Section 60.742(b)(1) (emission reduction standard for coating operations), compliance is demonstrated if the product of (E) x (F) is equal to or greater than 0.90. [40 CFR 60.743(a)(1)(vi)]

Monitoring [15A NCAC 2D .0524 (40 CFR 60 Section 60.744)]

- e. **NSPS Monitoring** - The following monitoring shall be performed:
 - i. Each owner or operator of an affected facility shall install and calibrate all monitoring devices required under the provisions of this section according to the manufacturer's specifications, prior to the initial performance tests in locations such that the representative values of the monitored parameters will be obtained. The parameters to be monitored shall be continuously measured and recorded during each performance test. [40 CFR 60 Section 60.744(a)]
 - ii. Each owner or operator of an affected facility controlled by a thermal oxidizer and demonstrating compliance by the test methods described in Section 60.743(a)(1), (2), (b), or (c) (which include control device efficiency determinations) shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a monitoring device that continuously indicates and records the combustion temperature of the thermal oxidizer. The monitoring device shall have an accuracy within +/- 1 percent of the temperature being measured in Celsius degrees. [40 CFR 60 Section 60.744(e)]
 - iii. Each owner or operator of an affected facility who demonstrates compliance by the test methods described in Section 60.743(a)(1) or (2) (which include vapor capture system efficiency determinations) or Section 60.743(a)(4) (short-term liquid material balance) shall submit a monitoring plan for the vapor capture system to the Administrator as required under Section 60.7(a)(2) of the General Provisions. The plan shall identify the parameter to be monitored as an indicator of vapor capture system performance (e.g. the amperage to the exhaust fans or duct flow rates) and the method for monitoring the chosen parameter. The owner or operator shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a monitoring device that continuously indicates and records the chosen parameter. [40 CFR 60 Section 60.744(g)]
 - iv. Each owner or operator of an affected facility shall record time periods of mixing or coating operations when the emission control device is malfunctioning or not in use. [40 CFR 60 Section 60.744(i)]
 - v. Each owner or operator of an affected facility shall record time periods of mixing or coating operations when each monitoring device is malfunctioning or not in use. [40 CFR 60 Section 60.744(j)]

Recordkeeping/Reporting [15A NCAC 2Q .0508(f) and 15A NCAC 2D .0524 (40 CFR 60 Section 60.745 and 60.747)]

- 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. All instances of deviations from the requirements of this permit must be clearly identified.
- g. The Permittee shall perform the following **NSPS reporting and recordkeeping requirements**:
 - i. For each affected facility subject to the requirements of Section 60.742(b) and (c), the owner or operator shall submit the performance test data and results to the Administrator as specified in Section 60.8(a) of this part. In addition, the average values of the monitored parameters measured at least every 15 minutes and averaged over the period of the performance tests shall be submitted with the results of all performance tests. [40 CFR 60 Section 60.747(a)]
 - ii. Each owner or operator of an affected facility demonstrating compliance by the methods described in Section 60.743(a)(1), (2), (4), (b), or (c) shall **maintain records and submit quarterly reports to the Administrator** documenting the following:
 - (A) Section 60.747(d)(4): For those affected facilities monitoring thermal oxidizer combustion gas temperature, all 3-hour periods (during actual coating operations) during which the average

combustion temperature the device is more than 28 Celsius degrees below the average combustion temperature of the device during the most recent performance test that demonstrated compliance.

- (B) Section 60.747(d)(6): For each affected facility monitoring a total enclosure pursuant to Section 60.744(h) or vapor capture system pursuant to Section 60.744 (g), all 3-hour periods (during actual coating operations) during which the average total enclosure or vapor capture system monitor readings vary by 5 percent or more from the average value measured during the most recent performance test that demonstrated compliance.
- (C) Section 60.747(d)(7): Each owner or operator of an affected coating operation not required to submit reports under paragraphs (d)(4) and (d)(6) of this section because no reportable periods have occurred shall submit semiannual statements clarifying this fact. [40 CFR 60 Section 60.747(d)]
- iii. Each owner or operator of an affected coating operation, either by itself or with associated coating mix preparation equipment, shall submit the following with the reports required under paragraphs (d) and (e) of this Section:
 - (A) (Section 60.747(f)(1)): All periods during actual mixing or coating operations when a required monitoring device (if any) was malfunctioning or not operating.
 - (B) (Section 60.747(f)(2)): All periods during actual mixing or coating operations when the control device was malfunctioning or not operating. [40 CFR 60 Section 60.747(f)]
- iv. The reports required under paragraphs (b), (c), (d), and (e) of this section shall be postmarked within 30 days after the end of the reporting period. [40 CFR 60 Section 60.747(g)]

**5. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS**

- a. In order to avoid applicability of this regulation for the emission sources (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**) while processing polyester threads (*AOS*), the Permittee shall not exceed the limit of 9 percent by weight of the volatile fraction for VOC content of the coating as applied [15A NCAC 2D .0524 (40 CFR 60 Subpart VVV)].

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

- b. 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 2Q .0317, if the production records are not maintained or the types of materials and finishes are not monitored.

**6. 15A NCA 2Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING [2D .0614(b)(1)(E)] and
15A NCAC 2D .0902: VOLATILE ORGANIC COMPOUNDS (VOC) REASONABLY AVAILABLE
CONTROL TECHNOLOGY (RACT) APPLICABILITY**

- a. In order to avoid applicability of this regulation, the eleven thread bonding machines (**ID Nos. ES-1 through ES-11**) shall discharge into the atmosphere less than 100 tons of VOCs per consecutive 12-month period. [15A NCAC 2D .0902]

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Less than 100 tons per consecutive twelve month period for thread bonding machines 1 through 11 (ID Nos. ES-1 through ES-11)	15A NCAC 2Q .0317

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limits given in Section 2.1-B.6.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902.

- c. Under the provisions of NCGS 143-215.108, the Permittee shall conduct a periodic emissions performance test to establish the proper operating temperature, capture system efficiency, and add-on control device destruction or removal efficiency. The testing shall be conducted in accordance with a testing protocol approved by the DAQ to demonstrate compliance with the emission limit in Section 2.1-B.6.a. above. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ.
- d. Periodic testing of the oxidizer shall be conducted once every 5 years. If the results of this test are above the limit given in Section 2.1-B.6.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 and 15A NCAC 2D .0614.
- e. Upon receipt of an approved test that demonstrates different operating parameters or efficiencies, the Permittee must request that the parameters be changed administratively within 60 days of approved test results.

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

- f. In order to ensure compliance with the avoidance limit above, VOC emissions from the thread bonding processes (**ID Nos. ES-1 through ES-11**) shall be controlled by a thermal oxidizer (**ID No. CD-1**). The Permittee shall record and maintain records of the hours of operation of the oxidizer.
- g. To ensure proper operation of the thermal oxidizer (oxidizer), the Permittee shall monitor the chamber temperature of the oxidizer continuously. The Permittee shall maintain a 3-hour block average chamber temperature at or above **1,462** degrees Fahrenheit for the oxidizer (**ID No. CD-1**).
- h. Each calendar month, the Permittee shall calculate the VOC emissions for the previous month and the previous 12-month period to ensure compliance with Section 2.1-B.6.a. above. Monthly VOC emissions shall be calculated by using the following formula for each thread bonding machine:

$$E_{\text{VOC}} = A [(1-F) + (F) (1-E)] + B$$

where, E_{VOC} is the emissions of VOC in pounds per month from each thread bonding machine

A is the total amount of VOC used in each thread bonding machine found by multiplying the amount of each type of VOC-containing material consumed during the month by the VOC content of the material

B is the amount of VOC used for cleaning each machine

F is the capture efficiency [100% per June 20, 2006 approved test results]

E is the control efficiency [98.9% per June 20, 2006 approved test results]

- i. When the oxidizer is operated at a temperature below the minimum temperature specified in Section 2.1-B.6.g. above or if the temperature is not monitored, the oxidizer shall be deemed “not in operation” and the VOC emissions shall be determined as specified per condition 2.1-B.6.h.(ii.) below;
- ii. When the oxidizer is not in operation or “deemed not in operation”, the VOC emissions shall be determined based on an uncontrolled emissions rate, assuming 0% control efficiency; and
- iii. Consecutive 12-month rolling VOC emissions, in tons, shall be calculated by summing the monthly emissions of each thread bonding machine as determined above, for the previous 12-month period. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 if the monthly amounts of VOC containing materials or the monthly VOC emissions are not monitored, calculated and/or if the VOC emissions exceed the above limit.
- i. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 if the VOC emissions are not recorded and/or if the VOC emissions exceed the limit above.
- j. To assure compliance, 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 is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance program shall include:
 - i. monthly external inspection of the structural integrity of the oxidizer;
 - ii. annual (for each 12 month period following the initial inspection) internal inspection of the oxidizer noting the structural integrity, including inspection of the inlet/outlet valves for leakage;
 - iii. annual (for each 12 month period following the initial inspection) inspection of the burner; and
 - iv. annual (for each 12 month period following the initial inspection) internal inspection of the heat

transfer media.

The oxidizer shall be deemed not in operation and the VOC emissions shall be determined as specified per condition 2.1-A.6.h.(ii.) above, if the oxidizer is not inspected and maintained.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 if the thermal oxidizer is not inspected and maintained.

- k. The results of inspection and maintenance 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 inspection;
 - iii. the results of any maintenance performed on the thermal oxidizer; and
 - iv. any variance from manufacturer’s recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 if these records are not maintained.
- l. Calculations and the total amount of VOC emissions from the thread bonding processes (**ID Nos. ES-1 through ES-11**) shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality, upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0902 if the VOC emissions exceed the limit in Specific Condition 2.1-B.6.a. above.
- m. The total enclosure shall meet the following criteria, as specified in EPA’s Method 204 of 40 CFR 51:
 - i. VOC sources shall be at least four equivalent opening diameters from natural draft openings;
 - ii. Maximum openings in the room shall be less than 5 percent of total enclosure surface area;
 - iii. Minimum indraft air velocity of 200 feet per minute is required with the direction of air through natural draft openings into the enclosure;
 - iv. All access doors and windows shall be closed during routine operation; and
 - v. All exhaust and enclosure ventilation points must be directed to a control device (thermal oxidizer, ID No. CD-1).
- n. The Permittee shall continuously monitor the tower fan speed from the thread bonding machines (**ID Nos. ES-1 through ES-11**) located within the permanent total enclosure. Based on stack test data (June 20, 2006), the minimum fan speed (rpm) to satisfy the above requirements are provided in the following table:

Machine ID No.	Average Machine Fan Speed (rpm)
ES-1	785.7
ES-2	804.0
ES-3	864.7
ES-4	723.3
ES-5	735.3
ES-6	731.0
ES-7	782.3
ES-8	792.7
ES-9	795.7
ES-10	788.7
ES-11	820.7

The fan speed will be measured and recorded continuously. Fan speed readings below the minimum rpm that occur when personnel and material handling doors in the PTE are opened and closed must be noted in a logbook.

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

- o. 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. The report shall contain the following:

- i. The monthly VOC emissions for each of the previous seventeen (17) months and the total VOC emissions for each of the twelve month periods over the previous 17 months;
- ii. A summary of the monitoring and recordkeeping requirements for the permanent total enclosure;
- iii. A summary report of the inspection and maintenance performed on the oxidizer;
- iv. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on the thermal oxidizer; and
- v. All instances of deviations from the requirements of this permit must be clearly identified.

7. ALTERNATIVE OPERATING SCENARIOS [15A NCAC 2Q .0508(j)]

The Permittee, contemporaneously with making a change from one alternate operating scenario to another, shall record in a logbook (written or electronic format) the scenario under which it is operating. [15A NCAC 2Q .0508(j)]

C. Sources with no applicable requirements including:

Wastewater pre-treatment plant (ID No. ES 15-5)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous air pollutants	See Section 2.2 B. (ID No. ES 15-5)	15A NCAC 2D .1111 (40 CFR 63 Subpart OOOO)

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

A. Thread coating operation consisting of eleven thread bonding processes:

- **Five nylon thread bonding machines 1, 2, 4, 5 and 10 (ID Nos. ES-1, ES-2, ES-4, ES-5 and ES-10); and**
- **Six nylon/polyester thread bonding machines 3, 6 through 9, and 11 (ID Nos. ES-3, ES-6 through ES-9, and ES-11)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	work practice standards	15A NCAC 2D .0958

1. 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:
- 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,
 - 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,
 - not fill cleaning machines above the fill line,
 - 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. 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.
- 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.

**B. 15A NCAC 2D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
40 CFR Part 63 Subpart OOOO “NATIONAL EMISSIONS STANDARD FOR
HAZARDOUS AIR POLLUTANTS: PRINTING, COATING, AND DYEING OF
FABRICS AND OTHER TEXTILES”**

Thread coating operation consisting of eleven thread bonding processes:

- **Five nylon thread bonding machines 1, 2, 4, 5 and 10 (ID Nos. ES-1, ES-2, ES-4, ES-5 and ES-10);**
- **Six nylon/polyester thread bonding machines 3, 6 through 9, and 11 (ID Nos. ES-3, ES-6 through ES-9, and ES-11);**
- **One wastewater pre-treatment plant (ID No. ES-15-5); and**
- **Other fugitive and point emission sources²**

APPLICABILITY

1. The thread coating operations (**ID Nos. ES-1 through ES-11**) shall comply with all requirements of 15A NCAC 2D .1111 “Maximum Achievable Control Technology” and 40 CFR Part 63 Subpart OOOO “National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles”[40 CFR § 63.4280].

DEFINITIONS [40 CFR § 63.4371]

2. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR § 63.4371 shall apply.

REGULATED MATERIALS [40 CFR § 63.4282]

3. This Subpart requires the Permittee to limit organic hazardous air pollutant (HAP) emissions. Organic HAP shall have the meaning as defined in 40 CFR § 63.4371 and 40 CFR § 63.4282(a).

² The Permittee has indicated the following emission points, as affected existing sources, for 40 CFR 63 Subpart OOOO, through an initial notification dated 5/24/04: (1) glacing subcategory mix kitchen, size application and drying operation – all fugitive, (2) dyeing & finishing subcategory drug room, and pre-treatment plant (dyeing and drying performed under pressure) – all fugitive, (3) coating subcategory mix room, coating application, curing and cleaning – fugitive and point source with thermal oxidizing.

40 CFR Part 63 Subpart A “GENERAL PROVISIONS”

4. The Permittee shall comply with the requirements of 40 CFR § 63 Subpart A “General Provisions” according to the applicability of Subpart A to such sources, as identified in Table 3 of 40 CFR Part 63, Subpart OOOO.

SUMMARY OF EMISSION LIMITS

5. For thread bonding processes (**ID Nos. ES-1 through ES-11**), the Permittee shall demonstrate continuous compliance with all applicable requirements of 15A NCAC 2D .1111 "Maximum Achievable Control Technology" and 40 CFR Part 63 Subpart OOOO "National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles". Table 1 to 40 CFR § 63 Subpart OOOO provides the emission limits for new or reconstructed and existing affected sources in the Printing, Coating and Dye of Fabrics and Other Textiles Source Category.
 - a. For emission sources (**ID Nos. ES-1 through ES-11**), the Permittee has chosen the options of reducing organic HAP emissions to the atmosphere by achieving at least a 97 percent organic HAP overall control efficiency while processing nylon thread; and
 - b. For emission sources (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**), the Permittee has chosen the option of limiting organic HAP emissions to the atmosphere to no more than 0.12 kg of organic HAP per kg of solids applied while processing polyester thread [40 CFR § 63.4290].
 - c. For emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread, the Permittee shall demonstrate that, based on the organic HAP emission capture and add-on control efficiencies achieved, the organic HAP overall control efficiency is greater than or equal to 97 percent. The Permittee shall also demonstrate that all capture systems and control devices for the web coating operations for emission sources (**ID Nos. ES-1 through ES-11**), meet the operating limits required in 40 CFR § 63.4292 and the work practice standards required in 40 CFR § 63.4293. The Permittee shall meet all the requirements of 40 CFR § 63.4350 through 40 CFR § 63.4352 and 40 CFR § 63.4360 through 40 CFR § 63.4364 to demonstrate compliance with the applicable emission limits, operating limits, and work practice standards for this option [40 CFR § 63.4291(a)(4)].
 - d. For emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread:
 - i. the Permittee shall be in compliance with the minimum 97 percent organic HAP overall control efficiency requirement or comply with the startup, shutdown, and malfunction plan at all times.
 - ii. the Permittee shall be in compliance with the operating limits of emission capture systems and control devices for these sources as required by 40 CFR § 63.4292 for all averaging times.
 - iii. the Permittee shall be in compliance with the work practice standards in 40 CFR § 63.4293 at all times.[40 CFR 63.4300(a)(3)]
 - e. For emission sources (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**) while processing polyester thread, the Permittee shall demonstrate that the organic HAP content, as purchased, of each coating material applied in the web coating operations is less than or equal to 0.12 kg of organic HAP per kg of solids applied, and that each thinning and cleaning material as purchased contains no organic HAP (as defined in § 63.4371). The Permittee shall meet the requirements of 40 CFR § 63.4320, 63.4321, and 63.4322 to demonstrate compliance with the applicable emission limit for this option [40 CFR § 63.4291(a)(1)].
 - f. For emission sources (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**) while processing polyester thread, the Permittee shall be in compliance at all times, with the limit of 0.12 kg of organic HAP per kg of solids applied for organic HAP content, as purchased, for each coating material applied in the web coating operations of these sources [40 CFR § 63.4300(a)(1)]
- Testing** [15A NCAC 2D .1111]
 - g. The Permittee shall comply with the general requirements for performance tests in accordance with 40 CFR § 63.4360.

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

- h. For controlled emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread, the Permittee shall meet the following operating limits, as specified in Table 2 of this Subpart. These operating limits apply to the emission capture and control systems on the web coating operations. The Permittee shall establish the operating limits during the performance test according to the procedures in 40 CFR § 63.4363. The Permittee shall meet the operating limits at all times after they have been established.
 - i. For thermal oxidizer (**ID No. CD-1**), the average temperature in any 3-hour block period shall not fall below the temperature limit established according to 40 CFR § 63.4363(a).
 - ii. For emission capture system for sources (**ID Nos. ES-1 through ES-11**), the Permittee shall submit monitoring plan to the Administrator that identifies operating parameters to be monitored according to 40 CFR § 63.4364(e).

[40 CFR § 63.4292(b)]
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if these operating limits are not complied with at all times.
- i. For emission sources (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**) while processing polyester thread, the Permittee shall demonstrate continuous compliance with the limit of 0.12 kg of organic HAP per kg of solids applied, for organic HAP content, as purchased, for each coating material applied in the web coating operations in these sources, in accordance with 40 CFR § 63.4322.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if continuous compliance with this limit is not demonstrated or continuous compliance demonstration exceeds this limit.
- j. For emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread, the Permittee shall demonstrate the continuous compliance with the minimum 97 percent organic HAP overall control efficiency requirement in accordance with 40 CFR § 63.4352.
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if continuous compliance with this limit is not demonstrated or continuous compliance demonstration exceeds this limit.
- k. For operating limits specified in Section 2.2-B.5.h. above for emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread, the Permittee shall demonstrate continuous compliance, as follows:
 - i. For thermal oxidizer, by collecting the temperature data according to 40 CFR § 63.4364(c); reducing the data to 3-hour block averages; and maintaining the 3-hour block average temperature at or above the temperature limit.
 - ii. For emission capture systems for sources (**ID Nos. ES-1 through ES-11**), the Permittee shall conduct monitoring according to the plan specified in 40 CFR § 63.4364(e)(3).

[40 CFR § 63.4292(b)]
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if the continuous compliance with this limit is not demonstrated or any continuous compliance demonstration exceeds this limit.
- l. For emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread, the Permittee shall develop and implement a work practice plan to minimize organic HAP emissions from the storage, mixing, and conveying of regulated materials used in, and waste materials generated by, the coating operations for this option; or the Permittee shall meet an alternative standard as provided in paragraph (c) of Section 63.4293. The plan shall specify practices and procedures to ensure that, at a minimum, the elements specified in paragraphs (b)(1) through (5) of Section 63.4293 are implemented [40 CFR § 63.4293(b)].
The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if the Permittee does not develop and implement a work practice plan for emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread.
- m. The Permittee shall always operate and maintain the emission sources (**ID Nos. ES-1 through ES-11**) and associated control device (**ID No. CD-1**) in accordance with 40 CFR § 63.6(e)(1)(i).
[40 CFR § 63.4300(b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if the Permittee does not operate and maintain these emission sources and control device in accordance with 40 CFR § 63.6(e)(1)(i).

- n. For emission capture system for sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread and add-on control device (**ID No. CD-1**), the Permittee shall develop and implement a written startup, shutdown, and malfunction plan according to the provisions in 40 CFR § 63.6(e)(3). The plan shall address the startup, shutdown, and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The plan shall also address any web coating/printing or dyeing/finishing operation equipment such as conveyors that move the substrate among enclosures that may cause increased emissions or that would affect capture efficiency if the process equipment malfunctions [40 CFR § 63.4300(c)].

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if the Permittee does not develop and implement a written startup, shutdown, and malfunction plan for emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread.

- o. The Permittee shall comply with the requirements for continuous parametric monitoring system (CPMS) installation, operation, and maintenance for add-on control device (**ID No CD-1**) and capture systems for emission sources (**ID Nos. ES-1 through ES-11**) while processing nylon thread in accordance with 40 CFR § 63.4364. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111, if the Permittee does not comply with the requirements of 40 CFR § 63.4364 for this control device and these emission sources while processing nylon thread.

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

- p. The Permittee shall collect and keep a record of all data and information, as applicable in 40 CFR § 63.4312.
- q. The records shall be in a form suitable and readily available for expeditious review, according to 40 CFR § 63.10(b)(1). Where appropriate, the records may be maintained as electronic spreadsheets or as a database.
- r. As specified in 40 CFR § 63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- s. The Permittee shall keep each record on site for at least two (2) years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR § 63.10(b)(1). The Permittee may keep the records off site for the remaining three (3) years.

[40 CFR § 63.4312 and 40 CFR § 63.4313]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records in Section 2.2-B.5.p. above are not maintained or the requirements of Sections 2.2-B.5.r. through 2.2-B.5.s. above, are not complied with.

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

- t. The Permittee shall submit semiannual compliance reports for emission sources (**ID Nos. ES-1 through ES-11**) according to the requirements of paragraphs (a)(1) through (a)(8) of 40 CFR § 63.4311 [40 CFR § 63.4311(a)].
- u. The Permittee shall submit the startup, shutdown or malfunction reports, as applicable, as specified in 40 CFR § 63.4311(c), if the emissions sources (**ID Nos. ES-1 through ES-11**) and add-on control device (**ID No. CD-1**) have startup, shutdown or malfunction during the semiannual period [40 CFR § 63.4311(c)].
- v. 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.

C. All emission sources

Table 2.2 A The above emission sources are subject to this multiple emission source limit:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Odors	odorous emissions must be controlled; State-enforceable only	15A NCAC 2D .1806

STATE-ONLY REQUIREMENT: ODOR REQUIREMENTS

1. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

- a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

D. Facility-wide emission sources

STATE-ONLY REQUIREMENT

1. 15A NCAC 2Q .0711: PERMIT REQUIREMENTS FOR TOXIC AIR POLLUTANTS

- a. Regulatory Requirements

Pursuant to 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit," for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711.

- i. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.
- ii. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Toxic Air Pollutants."
- iii. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Table 2.2 D: Toxic Permit Emission Rates

Pollutant (CAS Number)	TPER Limitations			
	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute systemic toxicants (lb/hr)	Acute irritants (lb/hr)
Aziridine (151-56-4)		0.13		
Benzene (71-43-2)	8.1			
Benzo(a)pyrene (50-32-8)	2.2			
Formaldehyde (50-0-0)				0.04
n-Hexane (110-54-3)		23		
Toluene (108-88-3)		98		14.4

STATE ENFORCEABLE ONLY

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

- a. As of 5/26/2006 and 1/22/2008 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" as described above in Section 2.2-D. of this permit.
- 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.
- e. The TPER table (Table 2.2 D) listed in Section 2.2-D. above, 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.

2.3- Permit Shield for Nonapplicable Requirements

The Permittee is shielded from the following nonapplicable requirements [15A NCAC 2Q .0512(a)(1)(B)].

- A. 15A NCAC 2D .1400, Reasonable Available Control Technology (RACT) for nitrogen oxides (NO_x), is not applicable to this facility because the potential NO_x emissions are less than 100 tpy due to the removal of: boilers ID Nos. B2 and ES 15-2; and the capability of burning No. 6 fuel oil, per facility's request dated February 7, 2008.
- B. 15A NCAC 2D .0524, 40 CFR Part 60 Subpart VVV, is not applicable to two (2) - nylon thread bonding processes (**ID Nos. ES-1 and ES-4**) because the lines pre-date the NSPS regulation.
- C. 15A NCAC 2D .0951, RACT for Polyester Thread Bonding Manufacturing, is not applicable to six (6) – polyester thread bonding processes (**ID Nos. ES-3, ES-6 through ES-9, and ES-11**) provided the facility remains below the RACT Avoidance limit of less than 100 tpy for VOC emissions as specified in Specific Condition 2.1-B.6.
- D. 15A NCAC 2D .0955, RACT for Nylon Thread Bonding Manufacturing, is not applicable to eleven (11) – nylon thread bonding processes (**ID Nos. ES-1 through ES-11**) provided the facility remains below the RACT Avoidance limit of less than 100 tpy for VOC emissions as specified in Specific Condition 2.1-B.6.

SECTION 3 - GENERAL CONDITIONS (v. 3.2)

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 NOx 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

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

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.

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.

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.

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)(4)]

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. Specific Permit Modifications [15A NCAC 2Q.0501 and .0523]

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
NESHAP	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
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound