

INITIAL TITLE V AIR PERMIT APPLICATION REVIEW

APPLICANT: Shurtape Technologies, Inc.	SITE LOCATION: Hickory	COUNTY: Catawba	
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APPLICATION NUMBER: 1800206A5.A	EXISTING PERMIT NUMBER: 02218R22	NEW PERMIT NUMBER: 02218T23	

I Introduction

The U.S. Environmental Protection Agency (EPA) has given final approval to North Carolina’s Title V operating permits program effective on October 1, 2001. This EPA approval triggered the requirements for Title V facilities to submit permit applications to the Division of Air Quality. Title V facilities are required to obtain an operating permit which addresses all applicable regulations under the State Implementation Plan, Federal Implementation Plan, and other provisions of the Clean Air Act (CAA). The Title V Operating Permit will define all of the facility’s obligations under the CAA.

This Initial Title V Air Permit Application Review intends to convey all pertinent emissions data, rules, policies, and engineering assumptions used to construct the Title V operating permit. The primary source of information used to construct the permit is the above referenced air permit application.

II Background Information

The Title V Operating Permit replaces the existing Air Quality Construction and Operation Permit No. 02218R22, issued on June 18, 2003, and currently scheduled to expire on March 31, 2005.

Pursuant to 15A NCAC 2Q .0506, Shurtape Technologies, Inc. submitted its initial Title V application to the Division of Air Quality on August 12, 1996. The application was considered complete for processing on November 12, 1996. The draft permit was noticed to the public pursuant to 15A NCAC 2Q .0521 on XX, XX, 2003.

Shurtape Technologies, Inc. is considered as a Title V major source since the potential emissions of each of the following pollutants exceed 100 tons per year:

- volatile organic compounds - 1460 tons/year
- nitrogen oxides - 104 tons/year
- carbon monoxide - 117 tons/year.

In addition, total potential emissions of hazardous air pollutants, principally toluene (at 1160 tons/year), exceed 25 tons per year.

Shurtape Technologies, Inc. is a 250-ton per year category source as defined in the PSD regulations. Potential VOC emissions are greater than the 250 tons per year threshold.

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III. Facility Description

Shurtape Technologies, Inc. owns and operates a pressure sensitive tape manufacturing facility in Hickory, NC. Shurtape operates two plants - the Highland Plant (Plant 36) and Hickory Plant (Plant 33) - at the Hickory site. Because the plants are under common ownership, on contiguous and adjacent property, and operated under the same SIC code, the facility is considered one site for permitting purposes

The Hickory Plant (Plant 33) is currently permitted to operate five boilers, nine coating lines, raw material handling and processing equipment, and multiple storage/mixing tanks. The Highland Plant (Plant 36) is permitted to operate one boiler, one coating line, raw material handling and processing equipment, two NSPS storage tanks, and multiple water-based storage/mixing tanks.

Shurtape Technologies, Inc. produces pressure sensitive tape by application of an adhesive resin to a substrate, primarily paper, on coating lines using a continuous roll (web) of material. The web is dried in an oven by evaporating the resin solvent (toluene) or the water based coatings. The overall process includes the above as well as a number of intermediate processes. The first step in manufacturing the tape is preparation of the adhesive. Toluene, rubber, and premixed resin containing toluene are the main raw materials on four lines, while water-based compounds are used on five lines at Hickory and the new line at Highland. These materials are stored and mixed in tanks. Heat for the drying ovens is provide by direct fired natural gas in all of the coater ovens except one which is indirectly heated with hot oil. Standby fuel for natural gas combustion sources is propane. Support and manufacturing operations include a rubber calendaring and conveying system, adhesive mixers, adhesive and solvent storage tanks, saturant coaters, release coaters, primer coaters, process heat boilers, tape slitters, and various air emission control devices. The maximum hours of operation for the facility is 8,760 hours per year.

IV. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. The most recent facility inspection was performed Spring 2003. No issues of noncompliance were indicated.

The applicant has certified that the facility will be in compliance with all applicable requirements. The applicant has also certified that the facility will be in compliance with any applicable requirements taking effect during the term of the permit and will meet such requirements on a timely basis.

V. Summary of Emission Sources and Control Devices

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
Hickory Plant Rubber Grinding and Conveying System			
ES-33-15-02	Rubber grinding and conveying system (9,000 pounds per hour maximum capacity) equipped with a simple process cyclone (33-0-10) 38 inches in diameter installed in series with all bagfilters	33-0-11 33-BH2 and 33-AF2 33-BH3 and 33-AF3 33-BH4 and 33-AF4	Bagfilter with 1500 square feet of filter surface area Bagfilter with 131 square feet of filter surface area in series with a Cartridge filter with 33 square feet of filter surface area Bagfilter with 131 square feet of filter surface area in series with a Cartridge filter with 33 square feet of filter surface area Bagfilter with 131 square feet of filter surface area in series with a Cartridge filter with 33 square feet of
Hickory Plant Adhesive Storage Tanks and Ground Water Remediation			
ES-33-1-01 through ES-33-1-07 and ES-33-1-10 through ES-33-1-13	Eleven (11) solvent-based Adhesive Mixers equipped with water cooled jacket	33-35-10	No. 1 Triple bed carbon adsorption system consisting of approximately 11,400 pounds of activated carbon in each bed (33-35-10) with three exhaust stacks, each with a stack height of 40 feet, including a hydrocarbon analyzer calibrated for toluene, installed within each exhaust stack, a pre-filter (with fabric type filters and 21 mesh type filters); and one cooling tower (with a rated capacity of 600 tons).
ES-33-1-16	Solvent-based 80-gallon Mixer equipped with water cooled jacket		
ES-33-2-20 and ES-33-2-23	Two adhesive storage tanks - capacity 500 gallons each		
ES-33-2-27 through ES-33-2-33	Seven (7) adhesive storage tanks - capacity 1500 gallons each		

ES-33-2-25	Solvent storage tank - capacity 500 gallons		
ES-33-2-19 and ES-33-2-34 through ES-33-2-39	Seven (7) adhesive storage tanks - capacity 3750 gallons each		
ES-33-2-41 and ES-33-2-42	Two adhesive storage tanks - capacity 2000 gallons each		
ES-33-GR	Groundwater remediation system		
Hickory Plant Raw Material Storage			
ES-33-2-47 and ES-33-2-48	Two resin storage tanks - capacity 30,000 gallons each	N/A	None
Hickory Plant Coating Lines			
ES-33-01-01 ES-33-01-02	Coating Line No. 1, (2,100 pounds per hours capacity), consisting of a water based coating application station (ID No. 33-01-02) and a 17.5 million Btu/hr natural gas/propane fired drying oven	N/A	None
ES-33-02-01 ES-33-02-02	Coating Line No. 2 (600 pounds per hour capacity) consisting of a water based coating application station (ID No. 33-02-02) and a 6.5 million Btu/hr	N/A	None
ES-33-3-01 ES-33-3-03	Coating Line No. 3 (2,250 lb/hr maximum capacity) consisting of a coating application station (ID No. 33-3-03) and a 8.5 million Btu/hr maximum	33-35-10	No. 1 Triple bed carbon adsorption system consisting of approximately 11,400 pounds of activated carbon in each bed (33-35-10) with three
ES-33-3-02	No. 3 oven dry end hood	N/A	None
ES-33-04-01 ES-33-04-02	Coating Line No. 4 (2,500 lb/hr maximum capacity) consisting of a water based coating application station (ID No. 33-04-02) and a 11.5	N/A	None
ES-33-5-01 ES-33-5-03	Coating Line No. 5 (2,250 lb/hr maximum capacity) consisting of a coating application station (ID No. 33-5-03) and a 12.5 million Btu/hr maximum heat input natural gas/propane-fired oven (ID No. 33-5-01)	N/A	No. 1 Triple bed carbon adsorption system consisting of approximately 11,400 pounds of activated carbon in each bed (33-35-10) with three exhaust stacks, each with a stack height of 40 feet, including a hydrocarbon analyzer calibrated for toluene, installed within each exhaust stack, a pre-filter (with fabric type filters and 21 mesh type filters); and one cooling tower (with a rated capacity of 600 tons).
ES-33-5-02	No. 5 oven dry end hood	N/A	None

ES-33-6-01 ES-33-6-02	Coating Line No. 6 (6,100 lb/hr maximum capacity) consisting of a coating application station (ID No. 33-6-02) and a 15 million Btu/hr maximum heat input natural gas/propane fired adhesive drying oven (ID No. 33-6-01)	33-6-10	No. 2 Triple bed carbon adsorption system (47,685 scfm combined total inlet air flow capacity of three beds, 837 ft ³ actual carbon volume per bed, ID No. 33-6-10) with three exhaust stacks, each with a stack height of 50 feet, including a hydrocarbon analyzer calibrated for toluene, installed within each exhaust stack, a pre-filter (with 27 fabric type filters and 27 mesh type filters); and two cooling towers (with a rated capacity of 400 tons each).
ES-33-6-03	Coating Line No. 6 (6,100 lb/hr	N/A	None
ES-33-07-01 ES-33-07-02	Coating Line No. 7 (6,200 lb/hr maximum capacity) consisting of two water based coating application stations (ID No. 33-07-02) and two natural gas/propane fired drying	N/A	None
ES-33-8-02 NSPS	Coating Line No. 8 hot oil heated adhesive drying oven (7,650 lb/hr capacity)	33-8-10 or 33-8-12	No. 3 Nitrogen inerted solvent recovery system equipped with one (1) cooling tower (with a rated capacity of 50 tons) OR No. 4 Double bed carbon adsorption system consisting of approximately 16,700 pounds of activated carbon in each bed with a single exhaust stack, with a stack height of 55 feet, including a hydrocarbon analyzer calibrated for toluene, installed within the exhaust stack, a pre-filter (with 9 fabric type filters and 9 mesh type filters); and one cooling tower (with a rated capacity of 100 tons each).
ES-33-8-04 ES-33-8-05 NSPS	Coating Line No. 8 (7,650 lb/hr capacity) consisting of a coating application station (ID No. 33-8-04)	33-8-12	No. 4 Double bed carbon adsorption system consisting of approximately 16,700 pounds of activated carbon in
ES-33-09-01 ES-33-09-02 NSPS	Coating Line No. 9 (6,200 lb/hr maximum capacity) consisting of two water based coating application stations (ID No. 33-09-02) and two natural gas/propane fired drying ovens with a total heat input of 12.5 million Btu/hr maximum heat input (ID No. 33-09-01)	N/A	None

ES-33-15-01	Process (decant) water stripper	N/A	No. 4 Double bed carbon adsorption system consisting of approximately 16,700 pounds of activated carbon in each bed with a single exhaust stack, with a stack height of 55 feet, including a hydrocarbon analyzer calibrated for toluene, installed within the exhaust stack, a pre-filter (with 9 fabric type filters and 9 mesh type filters); and one cooling tower (with a rated capacity of 100 tons each).
ES-33-0-01 NSPS	Pilot coater No. 1 (used for Research and Development) ^a	N/A	No. 4 Double bed carbon adsorption system consisting of approximately 16,700 pounds of activated carbon in each bed with a single exhaust stack, with a stack height of 55 feet, including a hydrocarbon analyzer calibrated for toluene, installed within the exhaust stack, a pre-filter (with 9 fabric type filters and 9 mesh type filters); and one cooling tower (with a rated capacity of 100 tons each).
ES-33-PC-2 NSPS	Pilot coater No. 2 (used for Research and Development)	N/A	None
Hickory Plant Parts Washers			
ES-33-2-49 through ES-33-2-51	Three Mixing Area Parts Cleaners	N/A	None
Boilers			
ES-33-BLR-2	Boiler No. 2 - Natural gas/propane fired boiler (26.41 million Btu/hr maximum heat input)	N/A	None
ES-33-BLR-B3	Boiler No. 3 - Natural gas/propane fired boiler (7.1 million Btu/hr maximum heat input)	N/A	None
ES-33-BLR-B4	Boiler No. 4 - Natural gas/propane-fired (8.37 million Btu/hour maximum heat input)	N/A	None
ES-33-BLR-B5 NSPS	Boiler No. 5 - Natural gas/propane-fired (25.1 million Btu/hour maximum heat input)	N/A	None
ES-36-BLR-1 NSPS	Boiler - Natural gas/propane/No. 2 fuel oil-fired (10.475 million Btu/hour maximum heat input)	N/A	None
Highland Plant Tanks			
ES-36-POST-1 NSPS	Process Oil Tank - 12,955 gallon capacity	N/A	None

ES-36-MRT-1 NSPS	Molten Resin Tank - 30,000 gallon capacity	N/A	None
Highland Plant Coating Line			
ES-36-CL-1, ES-36-CL-2, and ES-36-CL-3, ES-36-DO-1, ES-36-DO-2, and ES-36-DO-3 NSPS	Coating Line consisting of three coating/printing stations (ES-36-CL1, ES-36-CL2 and ES-36-CL3) and three drying ovens (ES-36-DO1(14.286 million Btu/hour maximum heat input), ES-36-DO2 (2.047 million Btu/hour maximum heat input), and ES-36-DO3 (0.794 million Btu/hour maximum heat input)) ^b	36-RTO-1	Regenerative Thermal Oxidizer with single rotary valve - Natural gas/propane-fired (2.4 million Btu/hour maximum heat input)
ES-36-CL-7, ES-36-CL-8, and ES-36-CL-10	Three (3) Corona treaters	N/A	None
Highland Plant Adhesive Raw Materials Operations			
ES-36-RH-1, and ES-36-RH-2, ES-36-TH-1, and ES-36-TH-2	Two Raw Materials Hoppers and two throat hoppers	36-BH-1, 36-BH-2 and 36-BH-3	Two Bag filters with 119 square feet of filter surface area (36-BH-1 and 36-BH-2) and One bag filter with a 58.5 square feet of filter surface area (36-BH-3)
ES-36-RH-3, ES-36-RH-4, ES-36-RH-5, and ES-36-RH-6 ES-36-TH-3, ES-36-TH-4, 36-TH-5 and ES-36-TH-6	Four Raw Materials Hoppers and four throat hoppers	36-BH-4	One Bag filter with 58.5 square feet of filter surface area
ES-36-MS-1	Raw Material Silo	36-BH-5 36-BH-6	Bag filter with 104 square feet of filter surface area Bag filter with 119 square feet of filter surface area
ES-36-BM-1	Bulk Flake Resin Melter	N/A	None

^a. The pilot coater (33-0-01) may be vented directly to the atmosphere when using water-based (non-toluene) coatings.

^b. The Highland Plant Coating Line may be vented directly to the atmosphere when utilizing water-based coatings or when the drying ovens are in the cooling mode.

VI. Emission Source-by-Source Evaluation

A. Hickory Plant Rubber Grinding and Conveying System (ID Nos. ES-33-15-02)

1. Description
Raw rubber and additives are ground and transferred to adhesive mixing tanks.
2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the rubber grinding and conveying system. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	40 percent opacity	15A NCAC 2D .0521(c)
odors	Odorous emissions must be controlled - Section VII. A Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

a. 2D .0515 “Particulate Emissions from Miscellaneous Industrial Process”

i) Regulation Analysis

Emissions of particulate matter that are discharged into the atmosphere shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)].

$$E = 4.10 \times P^{0.67} \quad \text{for units with process weight rate less than 30 tons per hour}$$

Where E = allowable emission rate in pounds per hour calculated to three significant figures

P = process weight rate in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight. In no case shall the following emission limitations be exceeded:

The maximum design capacity of the rubber grinding system is 4.5 tons per hour, is used to calculate the maximum allowable emission rate of 11.2 lb/hours. The after control emission rate is 1.2 lb/hr. Compliance with the allowable emission limit for the maximum process rate is demonstrated.

ii) Monitoring/Recordkeeping Requirements

Particulate matter emissions from the rubber grinding and conveying system shall be controlled by four bagfilters and three cartridge filters. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. As a minimum, the inspection and maintenance program shall include:

- (1) monthly **external** inspection of the bagfilters, cartridge filters, and ductwork, and
- (2) semi-annual **internal** inspection of the bagfilters and cartridge filters to ensure structural integrity .

The results of inspection and maintenance for the bagfilters and cartridge filters shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:

- (1) date and time of actions recorded;
- (2) the results of each inspection;
- (3) the results of any maintenance performed on the bagfilters and cartridge filters;
- (4) any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

iii) Reporting Requirements

The Permittee shall submit the results of any maintenance performed on the control devices within 30 days of a written request by the DAQ.

The Permittee shall submit a summary report of monitoring and recordkeeping activities. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. All instances of deviations from the requirements of this permit must be clearly identified.

b. 2D .0521: Control of Visible Emissions

i) Regulatory Analysis

This source is subject to 2D .0521(c). Per this regulation, visible emissions from these sources shall not be more than 40 percent opacity each when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

ii) Monitoring/Recordkeeping Requirements

The permittee shall observe all emission points from the source monthly for

any visible emissions above normal. The Permittee will establish normal visible emissions within 30 days of the permit effective date and thereafter will record monthly observations.

iii) Reporting

Reporting requirements include a summary report of the records by January 30 and July 30 for the respective semi-annual periods.

B. Hickory Plant Adhesive Storage Tanks and Groundwater Remediation (ES-33-1-01 through ES-33-1-07, ES-33-1-10 through ES-33-1-13, ES-33-1-16, ES-33-2-20, ES-33-2-23, ES-33-2-27 through ES-33-2-33, ES-33-2-25, ES-33-2-19, ES-33-2-34 through ES-33-2-39, ES-33-2-41, ES-33-2-42) and Ground water remediation system (ES-33-GR)

1. Description

Solvents, resins, rubber, and additives are mixed then pumped into storage tanks.

2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the adhesive mixers and associated storage tanks. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	VOC emissions from Lines 3, 5, 6 and 8, the four recovery systems, toluene mixing areas and toluene storage tanks must be less than 1160 tons per consecutive 12-month period - Section VII C. Facility	15A NCAC 2D .0530
volatile organic compounds	Work Practice Standards - Section VII.D. Facility Wide Affected Emission Sources	15A NCAC 2D .0958
odors	Odorous emissions must be controlled - Section VII. A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

C. Hickory Plant Raw Material Storage (ES-33-2-47, ES-33-2-48)

1. Description

Resins and water based materials are mixed then pumped into storage tanks.

2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the emission sources described above. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	VOC emissions from Lines 3, 5, 6 and 8, the four recovery systems, toluene mixing areas and toluene storage tanks must be less than 1160 tons per consecutive 12-month period -Section VII C Facility	15A NCAC 2D .0530
volatile organic compounds	Work Practice Standards - Section VII D Facility Wide Affected Emission Sources	15A NCAC 2D .0958
odors	Odorous emissions must be controlled - Section VII. A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

D. Hickory Plant Coating Lines (ES-33-01-01, ES-33-01-02, ES-33-02-01, ES-33-02-02, ES-33-3-01, ES-33-3-02, ES-33-3-03, ES-33-04-01, ES-33-04-02, ES-33-5-01, ES-33-5-02, ES-33-5-03, ES-33-6-01, ES-33-6-02, ES-33-6-03, ES-33-6-04, ES-33-07-01, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-8-05, ES-33-09-01, ES-33-09-02, ES-33-15-01, ES-33-0-01, ES-33-PC-2)

1. Description

The coating lines consist of a "wet end" that encompasses the adhesive application to a continuous web. The web then enters a drying oven for curing of the adhesive. Upon exit of the drying oven the web enters a "dry end" where the web is re-rolled.

2. An Overview of Applicable Regulatory Requirements

The following table provides a summary of limits and/or standards for the emission sources described above. A review of the information in the application was performed to ensure that the appropriate limits and associated calculations used to show compliance were correct

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516(a)
visible emissions	40 percent opacity	15A NCAC 2D .0521(c)
visible emissions	20 percent opacity	15A NCAC 2D .0521(d)

volatile organic compounds	Volatile organic compounds as applied in coatings shall be less than 45 Mg/year for each coater, calculated each month for the previous twelve (12) months. Affected facilities: ! Pilot coater No. 1 (ID No. ES-33-0-01) ! Pilot coater No. 2 (ID No. ES-33-PC2) ! Coating line No. 9 (ID No. ES-33-09-01)	15A NCAC 2D .0524 (40 CFR 60.440, Subpart RR -Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (60.440--60.447))
volatile organic compounds	Coating line no. 8 (ID Nos. ES-33-8-02, ES-33-8-04, and ES-33-8-05): 0.20 kg VOC/kg solids applied; or 90 percent VOC reduction/month; or the percent overall VOC emission reduction specified in 40 CFR 60.443(b)	15A NCAC 2D .0524 (40 CFR 60.440, Subpart RR -Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (60.440--60.447))
volatile organic compounds	VOC emissions from Lines 3, 5, 6 and 8, the four recovery systems, toluene mixing areas and toluene storage tanks must be less than 1160 tons per consecutive 12-month period - Section VII.C. Facility	15A NCAC 2D .0530
toxic air pollutants	Permit limits for toxic air pollutants shall not be exceeded - Section VII. E Facility Wide Affected Emission Sources State-enforceable only .	15A NCAC 2D .1100
odors	Odorous emissions must be controlled - Section VII. A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

Other regulations considered for emissions from the Hickory Plant coating lines:

15ANCAC 2D .0503: Particulates from Fuel Burning Indirect Heat Exchangers. Drying ovens are direct fired units and are not considered indirect heat exchangers as defined in 15A NCAC 2D .0503(a)(2).

a. 15A NCAC 2D .0515: Particulate Emissions from Miscellaneous Industrial Processes

i) Regulatory Analysis

Emissions of particulate matter from the Hickory Plant coating lines that are discharged into the atmosphere shall not exceed an allowable emission rate as calculated by the following equation: [

$$E = 4.10 \times P^{0.67} \quad \text{for units with process weight rate less than 30 tons per hour}$$

Where E = allowable emission rate in pounds per hour calculated to three significant figures

P = process weight rate in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight. In no case shall the following emission limitations be exceeded:

<u>Source</u>	<u>Pollutant</u>	<u>Process Weight Rate</u>	<u>Emission Limit</u>	<u>Potential Emissions</u>
Line No. 1 natural gas/propane fired saturant coater utilizing non-VOC based coatings (ID No. ES-33-01-01)	Particulate matter	1.05 tons/hour	4.2 lbs/hour	0.2 lbs/hour
Line No. 2 natural gas/propane fired saturant coater (ID No. ES-	Particulate matter	0.3 tons/hour	1.8 lbs/hour	0.07 lbs/hour
Line No. 3 natural gas/propane fired adhesive drying oven (ID	Particulate matter	1.12 tons/hour	4.4 lbs/hour	0.09 lbs/hour
No. 3 oven dry end hood (ID No. ES-33-3-02)	Particulate matter	1.12 tons/hour	4.4 lbs/hour	Not provided
Line No. 4 natural gas/propane fired saturant coater utilizing non-VOC based coatings (ID No. ES-33-4-01)	Particulate matter	1.25 tons/hour	4.8 lbs/hour	0.14 lbs/hour
Line No. 5 natural gas/propane fired adhesive drying oven (ID No. ES-33-5-01)	Particulate matter	1.12 tons/hour	4.4 lbs/hour	0.13 lbs/hour
No. 5 oven dry end hood (ID No. ES-33-5-02)	Particulate matter	1.12 tons/hour	4.4 lbs/hour	Not provided
Line No. 6 natural gas/propane fired adhesive drying oven (ID No. ES-33-6-01)	Particulate matter	3.05 tons/hour	8.7 lbs/hour	0.23 lbs/hour
Line No. 6 oven entry hood (ID No. ES-33-6-02)	Particulate matter	3.05 tons/hour	8.7 lbs/hour	Not provided
Line No. 7 natural gas/propane fired saturant coater utilizing non-VOC based coatings (ID No. ES-33-7-01)	Particulate matter	3.1 tons/hour	8.8 lbs/hour	0.3 lbs/hour
Line No. 8 adhesive drying oven (hot oil heated) (ID No. ES-33-8-	Particulate matter	3.82 tons/hour	10.1 lbs/hour	Not provided
Line No. 8 oven entry hood (ID No. ES-33-8-04)	Particulate matter	3.82 tons/hour	10.1 lbs/hour	Not provided

Line No. 8 oven exit hood (ID No. ES-33-8-05)	Particulate matter	3.82 tons/hour	10.1 lbs/hour	Not provided
Line No. 9 natural gas/propane fired saturant coater utilizing non-VOC based coatings (ID No. ES-33-9-01)	Particulate matter	3.1 tons/hour	8.8 lbs/hour	0.05 lbs/hour
Pilot coater No. 1 (ID No. ES-33-0-01)	Particulate matter	0.05 tons/hour	0.6 lbs/hour	Not provided
Pilot coater No. 2 (ID No. ES-33-PC-2)	Particulate matter	0.01 tons/hour	0.2 lbs/hour	Not provided

ii) Monitoring/Record keeping/Reporting

There are no testing, monitoring, recordkeeping, and reporting requirements proposed since the potential emission of particulate matter from the combustion of natural gas/propane is less than the emission limit.

b. 2D .0516: Sulfur Dioxide Emissions from Combustion Sources

i) Regulatory Analysis

Emissions of sulfur dioxide from the coating line drying ovens 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.

The sulfur dioxide produced from the permitted fuels is a small fraction of that allowed by the regulation. Compliance is easily achieved.

ii) Monitoring/Record keeping/Reporting

There are no testing, monitoring, record keeping, or reporting requirements because the potential emissions of sulfur dioxide from the combustion of natural gas and propane is significantly less than the emission limit.

c. 2D .0521 “Control of Visible Emissions”

i.) Regulation Analysis

ES-33-01-01, ES-33-01-02, ES-33-02-01, ES-33-02-02, ES-33-3-01, ES-33-3-02, ES-33-3-03, ES-33-04-01, ES-33-04-02, ES-33-5-01, ES-33-5-02, ES-33-5-03 -were installed before July 1, 1971 and therefore is subject to 2D .0521(c). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. Compliance is demonstrated with this regulation because the latest inspection report did not cite any opacity exceedances.

ES-33-6-01, ES-33-6-02, ES-33-6-03, ES-33-6-04, ES-33-07-01, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-8-05, ES-33-09-01, ES-33-09-02, ES-33-15-01, ES-33-0-01, ES-33-PC-were installed after July 1, 1971 and therefore is subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. Compliance is demonstrated with this regulation because the latest inspection report did not cite any opacity exceedances.

ii.) Monitoring/Recording/Recordkeeping Requirements

There are no testing, monitoring, recordkeeping, and reporting requirements because the visible emissions from these types of emission sources are non-existent or very low visible emissions.

d. 15A NCAC 2D .0524: New Source Performance Standards (also see Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (60.440--60.447))

i.) Regulatory Analysis

For the pilot coaters (ID Nos. 33-0-01 and 33-PC2) and the saturant coater (ID No. 33-09-01), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60.440, Subpart RR, including Subpart A "General Provisions."

To comply with this permit and to avoid applicability of 40 CFR 60.442(a) of New Source Performance Standard Subpart RR, as requested by the Permittee, volatile organic compounds as applied in coatings to the coaters (ID Nos. 33-0-01, 33-09-01 and 33-PC2) shall be less than 45 Mg/year for each coater, calculated each month for the previous twelve (12) months.

ii) Monitoring/Record keeping

To assure that the VOC content of coatings applied is less than 45 Mg/year the Permittee shall maintain records as specified below:

- (1) Maintain a calendar month record of all coatings used and the manufacturer's formulation data used for the determination of the VOC content on the coating;
- (2) Maintain a calendar month record of the amount of solvent applied in the coating.

iii) Reporting

The Permittee shall submit a summary report of monitoring and recordkeeping activities that documents compliance with paragraph ii. above. Semi annual compliance reports must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31. Each compliance report must be postmarked or delivered no later than July 30 or January 30, whichever date is the first date following the end of the semiannual reporting period. All instances of deviations from the requirements of this permit must be clearly identified.

e. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (also see Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (60.440--60.447))

i) Regulatory Analysis

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standards 15A NCAC 2D .0524 “New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart RR, including Subpart A “General Provisions.” [15A NCAC 2D .0524]

- 1) Standards [40CFR 60.442]- On and after the date on which the performance test required by 60.8 has been completed each owner or operator shall:
 - a) cause the discharge into the atmosphere from an affected facility not more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or
 - b) demonstrate for each affected facility a 90 percent overall VOC emission reduction as calculated over a calendar month; or
 - c) the percent overall VOC emission reduction specified in 60.443 (b) as calculated over a calendar month.

ii). Compliance [40 CFR 60.443]-

To determine compliance with 60.442 the owner or operator of the affected facility shall calculate a weighted average of the mass of solvent used per mass of coating solids applied for a one calendar month period according to the following procedures:

- 1) Determine the weight fraction of organics and the weight fraction of solids of each coating applied by using Reference Method 24 or by the coating manufacturer’s formulations data.
- 2) Compute the weighted average by the equation found in 60.443(a)(2).
- 3) For each affected facility where the value of G is less than or equal to

0.20 kg VOC per kg of coating solids applied, the affected facility is in compliance with 60.442(a)(1). If G is greater than 0.20 kg VOC per kg of coating solids applied, compliance must be documented with 60.442(a)(2).

- 4) To determine compliance with 60.442(a)(2), the owner or operator shall calculate the required overall VOC emission reduction according to the equation found in 60.443(b).

If Rq less than or equal to 90 percent, then the required overall VOC emission reduction is Rq. If Rq is greater than 90 percent, then the required overall VOC emission reduction is 90 percent.

- 5) Where compliance with the emission limits specified in 60.442(a)(2), is achieved through the use of a solvent recovery system, the owner or operator shall determine the overall VOC emission reduction for a one calendar month period by the equation found in 60.443(c).

If the R value is equal or greater than the Rq value specified in paragraph (iv) of this section, then compliance with 60.442(a)(2) is demonstrated.

- 6) After the initial performance test required for all affected facilities under 60.8, compliance with VOC emission limitation and percentage reduction requirements under 60.442 is based on the average emission reduction for one calendar month. A separate compliance calculation is completed at the end of each calendar month after the initial performance test, and a new calendar month's average VOC emission reduction is calculated to show compliance with the standard.

iii) Performance Tests – [40 CFR 60.444]

The performance test for affected facilities complying with 60.442 without the use of add-on controls shall be identical to the procedures specified in 60.443(a).

The performance test for affected facilities controlled by a solvent recovery device shall be conducted as follows:

- (1) The performance test shall be a one calendar month test and the average of three runs as specified in 60.8(f).
- (2) The weighted average mass of VOC per mass of coating solids applied for a one calendar month period shall be determined as specified in 60.443(a) (1) and (2).
- (3) Calculate the required percent overall VOC emission reduction as specified in 60.443(b).
- (4) Inventory VOC usage and VOC recovery for a one calendar

month period.

- (5) Determine the percent overall VOC emission reduction as specified in 60.443(c).

For each affected facility where the value of R is greater than or equal to the value of R_q calculated in 60.443(b), compliance with 60.442(a)(2) is demonstrated. Where the value of R is not greater than or equal to the value of R_q calculated in 60.443(b), the Permittee shall be deemed in non-compliance with 15A NCAC 2D.0524.

iv.) Monitoring and Record Keeping – [40 CFR 60.445]

The owner or operator of an affected facility subject to this subpart shall maintain a calendar month record of all coatings used and the results of the reference test method specified in 40 CFR 60.446(a) or the manufacturer's formulation data used for determining the VOC content of those coatings.

The owner or operator of an affected facility controlled by a solvent recovery device shall maintain a calendar month record of the amount of solvent applied in the coating at each affected facility.

The owner or operator of an affected facility controlled by a solvent recovery device shall install, calibrate, maintain, and operator a monitoring device for indicating the cumulative amount of solvent recovered by the device of a calendar month period. The monitoring device shall be accurate within $\pm 2\%$. The owner or operator shall maintain a calendar month record of the amount of solvent recovered by the device.

Should the Permittee fail to perform all the requirements found above, the Permittee shall be deemed in non compliance with 15A NCAC 2D .0524

v.) Test Methods and Procedures – [40 CFR 60.446]

The VOC content per unit of coating solids applied and compliance with 60.442(a)(1) shall be determined by either Reference Method 24 and the equation specified in 60.443 or by the manufacturer's formulation data. In the event of any inconsistency between Reference Method 24 and manufacturer's formulation data, the Reference Method 24 test will govern. The administrator may require an owner or operator to perform Reference Method 24 tests during such months as he deems appropriate. For Reference Method 24, the coating sample must be a one-liter sample taken into a one-liter container at a point where the sample will be representative of the coating applied to the web substrate.

If the owner or operator can demonstrate to the Administrator's satisfaction that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks the Administrator will approve testing of representative stacks on a case-by-case basis.

Should the Permittee fail to perform all the requirements found above, the Permittee shall be deemed in non-compliance with 15A NCAC 2D .0524.

vi.) Reporting – [40 CFR 60.447]

For all affected facilities subject to compliance with 40 CFR 60.442, the performance test data and results from the performance test shall be submitted to the administrator as specified in 40 CFR 60.8(a) of the General Provisions (40 CFR 60, Subpart A).

Following the initial performance test, the owner or operator of each affected facility shall submit quarterly reports to the Administrator of exceedances of the VOC emission limits specified in 40 CFR 60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the Administrator semi-annually as specified in vii below.

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

The Permittee shall submit a summary report of the monitoring and recordkeeping activities by January 30 or 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.

E. Hickory Plant Parts Washers (ES-33-2-49 through ES-33-2-51)

1. Description

There are three parts washers located within the Hickory Plant that are used to clean miscellaneous parts.

2. Applicable Regulatory Requirements

The following provides a summary of limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	Work Practice Standards - Section VII D. Facility Wide Affected Emission Sources	15A NCAC 2D .0958
odors	Odorous emissions must be controlled - Section VII. A Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

F. Boilers (ES-33-BLR2, ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-36-BLR-1)

1. Description

These boilers provide process heat through indirect heat transfer while burning natural gas and propane (36-BLR-1 also fires No. 2 fuel oil). All of these boilers were established after July 1, 1971 and is thus are subject to a 20 percent opacity standard

2. Applicable Regulatory Requirements

The following provides a summary of limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	0.41 lb/million Btu (ID No. ES-33-BLR-B2) 0.375 lb/million Btu (ID No. ES-33-BLR-B3) 0.41 lb/million Btu (ID No. ES-33-BLR-B4) 0.354 lb/million Btu (ID No. ES-33-BLR-B5) 0.343 lb/million Btu (ID No. ES-36-BLR-1)	15A NCAC 2D .0503(c)
sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516(a)
visible emissions	20 percent opacity	15A NCAC 2D .0521(d)
sulfur dioxide	0.5 lbs per million Btu heat input or sulfur in fuel limit of 0.5 weight percent sulfur. Affected facility: Highland Plant Boiler (ID No. ES-36-BLR-1)	15A NCAC 2D .0524 (40 CFR 60.40c, Subpart Dc -Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (60.40c--60.48c))
NA	Record monthly fuel usage	15A NCAC 2D .0524 (40 CFR 60.40c, Subpart Dc
odors	Odorous emissions must be controlled - Section VII. A Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

a. 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"

i.) Regulatory Analysis

These boilers are subject to 2D .0503 since natural gas can be burned for the primary purpose of producing heat by indirect heat transfer. The allowable emission rate is a function of maximum, plant-wide, indirect-fired heat exchanger heat input from non-wood fuels and is calculated by the following equation:

$$E = 1.09 Q^{(-.2594)}$$

where, E = allowable particulate emission rate in pounds per million Btu,
and

Q = maximum heat input rate in million Btu per hour

These limits are as follows:

0.41 lb/million Btu (**ID No. ES-33-BLR-B2**)

0.375 lb/million Btu (**ID No. ES-33-BLR-B3**)

0.41 lb/million Btu (**ID No. ES-33-BLR-B4**)

0.354 lb/million Btu (**ID No. ES-33-BLR-B5**)

0.343 lb/million Btu (**ID No. ES-36-BLR-1**)

The applicant estimates the particulate matter emissions to be less than 0.01 pounds per million Btu. This estimation is based on the DAQ spreadsheet which utilizes an AP-42 (5th edition) emission factor and a natural gas fuel heat content of 1,000 Btu per ft³.

Particulate emissions are uncontrolled. Compliance is demonstrated

b. 2D .0516 “Sulfur Dioxide Emissions from Combustion Sources”

i.) Regulation Analysis

This boiler is a source of combustion which discharges through a stack and therefore is subject to 2D .0516(a). Allowable emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input.

The applicant estimates the sulfur dioxide emissions from natural gas to be less than 1.0 pounds per million Btu. The emission estimation is based on the DAQ spreadsheet which uses an AP-42 (5th edition) emission factor of 0.60 lb SO₂ per million ft³ burned. Therefore, compliance is demonstrated with this regulation since the worst case estimated emissions are less than the allowable.

ii.) Monitoring/Recordkeeping/Reporting Requirements

There are no testing, monitoring, recordkeeping, and reporting requirements because the potential emissions of sulfur dioxide from the combustion of natural gas and propane is less than the emission limit.

c. 2D .0521 “Control of Visible Emissions”

i.) Regulation Analysis

These boilers were installed after July 1, 1971 and therefore are subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. Compliance is demonstrated with this regulation because the latest

inspection report did not cite any opacity exceedances.

ii.) Monitoring/Recording/Recordkeeping Requirements

There are no testing, monitoring, recordkeeping, and reporting requirements because the visible emissions from the boilers are insignificant.

d. 2D .0524: NSPS 40 CFR PART 60 SUBPART Dc

i.) Regulatory Requirements

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standards 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]

The maximum sulfur content of any fuel oil received and burned in the boiler (**ES-36-BLR-B1**) shall not exceed 0.5 percent by weight.

ii.) Monitoring

Sulfur dioxide emissions shall be monitored as follows for **ES-36-BLR-B1**:

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

iii.) Record keeping

In addition to any other recordkeeping required by 40 CFR § 60.46c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amount of each fuel fired in each boiler (**ES-33-BLR-B5 and ES-36-BLR-1**) during each month.

iv.) Reporting

In addition to any other reporting required by 40 CFR § 60.46c or notification requirements of 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, submitted within 30 days after each calendar year quarter, due by January 30, April 30, July 30 and October 30 of each calendar year for the preceding three-month period as follows:
 - (A) Distillate Oil- Fuel supplier certification shall include the following information:

1. the name of the fuel 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 41c; and
 3. a certified statement signed by the owner or operator of an affected facility that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.
- ii. All instances of deviations from the requirements of this permit must be clearly identified.

The Permittee shall submit a summary report of monthly fuel usage 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.

G. Highland Plant Tanks (ES-36-POST-1, ES-36-MRT-1)

1. Description

The resin tanks are heated to allow resin to flow into the slot dye adhesive coater. The tanks are equipped with thermocouples to monitor temperature.
2. Applicable Regulatory Requirements

The following provides a summary of limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct.

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	Storage tank design and operating parameters. Affected facilities Process oil tank (ID No. ES-36-POST-1) Resin tank (ID No. ES-36-MRT-1)	15A NCAC 2D .0524 (40 CFR 60.110b, Subpart Kb -Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (60.110b--60.117b)
volatile organic compounds	Emissions of volatile organic compounds from the Highland Plant coating line and Highland Plant Tanks must be less than 40 tons per consecutive 12-month period. - Section VII B Facility Wide Affected Emission Sources	15A NCAC 2D .0530
volatile organic compounds	Work Practice Standards - Section VII D Facility Wide Affected Emission Sources	15A NCAC 2D .0958

odors	Odorous emissions must be controlled - Section VII A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806
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a.) 2D .0524 “New Source Performance Standards”

i.) Regulatory Analysis

Since the tanks have a capacity greater than 75m³ and less than 151m³ with a true vapor pressure less than 15kPa, these tanks are exempt from all provision of the subpart with the exception of 60.116(a) and (b). The tanks are also exempt from the general provision of Part 60, subpart A.

ii.) Monitoring Requirements

N/A

iii.) Recordkeeping Requirements

The permittee shall keep, for the life of the tank, readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

iv.) Reporting Requirements

N/A

H. Highland Plant Coating Line (ES-36-CL-1, ES-36-CL-2, ES-36-CL-3, ES-36-DO-1, ES-36-DO-2, ES-36-DO-3, ES-36-CL-7, ES-36-CL-8 and ES-36-CL10)

1. Description

The coating lines consist of a "wet end" that encompasses the adhesive application to a continuous web. The web then enters a drying oven for curing of the adhesive. Upon exit of the drying oven the web enters a "dry end" where the web is re-rolled.

2. Applicable Regulatory Requirements

The following provides a summary of limits and/or standards for the emission source(s) described above. A review of the information in the application was performed to ensure the appropriate limits and associated calculations used to show compliance were correct..

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515

sulfur dioxide	2.3 pounds per million Btu heat input Affected facilities: ! No. 1 Drying/Cooling Oven (ID No. ES-36-DO-1) ! No. 2 Drying/Cooling Oven (ID No. ES-36-DO-2) ! No. 3 Drying Oven (ID No. ES-36-DO-3)	15A NCAC 2D .0516(a)
visible emissions	20 percent opacity	15A NCAC 2D .0521(d)
volatile organic compounds	Demonstrate for emission units of Highland Plant coating line, by one of the following: a. 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month b. a 90 percent overall VOC emission reduction as calculated over a calendar month or c. the percent overall VOC emission reduction specified in 40 CFR 60.443(b) as calculated over a calendar month. Affected facility includes Highland Plant coating line which consists of: ! Three coating/printing stations (ID No. ES-36-CL-1, ES-36-CL-2 and ES-36-CL3) and ! Three drying/cooling ovens (ID No. ES-36-DO-1, ES-36-	15A NCAC 2D .0524 (40 CFR 60.440, Subpart RR -Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (60.440--60.447))
volatile organic compounds	Emissions of volatile organic compounds from the Highland Plant coating line and Highland Plant Tanks must be less than 40 tons per consecutive 12-month period. - Section VII.B Facility Wide Affected Emission Sources	15A NCAC 2D .0530
toxic air pollutants	Permit limits for toxic air pollutants shall not be exceeded - Section VII. E Facility Wide Affected Emission Sources State-enforceable only.	15A NCAC 2D .1100
hazardous air pollutants	Maximum Achievable Control Technology Affected source: ! Coating/printing station (ID No. ES-36-CL3)	15A NCAC 2D .1111 (40 CFR 63.820 – Subpart KK: National Emission Standards for the Printing and Publishing Industry (63.820–63.831))
odors	Odorous emissions must be controlled - Section VII. A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

a. 2D.0515 “Particulates from Miscellaneous Industrial Processes

(i) Regulation Analysis

The allowable particulate emission limit is calculated by the

following equation:

$$E=4.10P^{0.67}$$

Where E = allowable emission rate for particulate matter in pounds per hour, and

P = process weight in tons per hour

The maximum design capacity of the coating line is used to calculate the maximum allowable emission rate of 8.5 lbs/hr. Total potential are 0.145 lb/hr (0.64 tons/yr). Compliance with the allowable emission limit for the maximum process rate is demonstrated.

(ii) Monitoring/Recording/Recordkeeping Requirements

There are no testing, monitoring, recordkeeping, and reporting requirements recommended because the potential emissions of particulate matter from these sources are much less than the emission limit.

b. 2D .0516: Sulfur Dioxide Emissions from Combustion Sources

i) Regulatory Analysis

Emissions of sulfur dioxide from the coating line drying ovens 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.

The sulfur dioxide produced from the permitted fuels is a small fraction of that allowed by the regulation. Compliance is easily achieved.

ii) Monitoring/Record keeping/Reporting

There are no testing, monitoring, record keeping, or reporting requirements because the potential emissions of sulfur dioxide from the combustion of natural gas and propane is significantly less than the emission limit

c. 2D .0521 “Control of Visible Emissions”

i.) Regulation Analysis

This coating line was installed after July 1, 1971 and therefore is subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. Compliance is demonstrated with this regulation because the latest inspection report did not cite any opacity issues.

ii.) Monitoring/Requirements/Reporting

No monitoring, record keeping, or reporting is required for visible emissions from the emission points in the Highland Plant coating line

d. 2D.0524 “New Source Performance Standards:

i) Regulatory Requirements

The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standards 15A NCAC 2D .0524 “New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart RR, including Subpart A “General Provisions.” [15A NCAC 2D .0524]

ii) Standards [40CFR 60.442]- On and after the date on which the performance test required by 60.8 has been completed each owner or operator shall:

- (1) cause the discharge into the atmosphere from an affected facility not more than 0.20 kg VOC/kg of coating solids applied as calculated on a weighted average basis for one calendar month; or
- (2) demonstrate for each affected facility a 90 percent overall VOC emission reduction as calculated over a calendar month; or
- (3) the percent overall VOC emission reduction specified in 60.443 (b) as calculated over a calendar month.

iii) Compliance [40 CFR 60.443]- To determine compliance with 60.442 the owner or operator of the affected facility shall calculate a weighted average of the mass of solvent used per mass of coating solids applied for a one calendar month period according to the following procedures:

- 1) Determine the weight fraction of organics and the weight fraction of solids of each coating applied by using Reference Method 24 or by the coating

manufacturer's formulations data.

- 2) Compute the weighted average by the equation found in 60.443(a)(2).
- 3) For each affected facility where the value of G is less than or equal to 0.20 kg VOC per kg of coating solids applied, the affected facility is in compliance with 60.442(a)(1). If G is greater than 0.20 kg VOC per kg of coating solids applied, compliance must be documented with 60.442(a)(2).
- 4) To determine compliance with 60.442(a)(2), the owner or operator shall calculate the required overall VOC emission reduction according to the equation found in 60.443(b).

If Rq less than or equal to 90 percent, then the required overall VOC emission reduction is Rq. If Rq is greater than 90 percent, then the required overall VOC emission reduction is 90 percent.

- 5) Where compliance with the emission limits specified in 60.442(a)(2), is achieved through the use of a solvent destruction device, the owner or operator shall determine calendar monthly compliance by comparing the monthly required overall VOC emission reduction specified in paragraph (b)(1) of this section to the overall VOC emission reduction demonstrated in the most recent performance test which complied with 60.442(a)(2). If the monthly required overall VOC emission reduction is less than or equal to the overall VOC reduction of the most recent performance test, the affected facility is in compliance with 60.442(a)(2).
- 6) Where compliance with 60.442(a)(2) is achieved through the use of a solvent destruction device, the owner or operator shall continuously record the destruction device combustion temperature during coating operations for thermal incineration destruction devices. For thermal incineration destruction devices the owner or operator shall record all 3-hour periods (during actual coating operations) during which the average temperature of the device is more than 28C (50F) below the average temperature of the device during the most recent performance test complying with 60.442(a)(2).
- 7) After the initial performance test required for all affected facilities under 60.8, compliance with VOC emission limitation and percentage reduction requirements under 60.442 is based on the average emission reduction for one calendar month. A separate compliance test is completed at the end of each calendar month after the initial performance test, and a new calendar month's average VOC emission reduction is calculated to show compliance with the standard.

iv.) Performance Tests – [40 CFR 60.444]

1. The performance test for affected facilities complying with 60.442 without the use of add-on controls shall be identical to the procedures

specified in 60.443(a).

2. The performance test for affected facilities controlled by a solvent destruction device shall be conducted as follows:
 - i. The performance of the solvent destruction device shall be determined by averaging the results of three test runs as specified in 60.8(f).
 - ii. Determine for each affected facility prior to each test run the weighted average mass of VOC per mass of coating solids applied being used at the facility. The weighted average shall be determined as specified in 60.443(a). In this application the quantities of W_{oi} , W_{si} , and M_{ci} shall be determined for the time period of each test run and not a calendar month as specified in 60.441.
 - iii. Calculate the required percent overall VOC emission reduction as specified in 60.443(b).
 - iv. Determine the percent overall VOC emission reduction of the solvent destruction device by the following equation in 60.444(c)(4).
 - v. The owner or operator of the affected facility shall construct the overall VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 60.446(b).
 - vi. The owner or operator of an affected facility shall construct a temporary total enclosure around the coating line applicator and flashoff area during the performance test for the purpose of capturing fugitive VOC emission. If a permanent total enclosure exists in the affected facility prior to the performance test and the Administrator is satisfied that the enclosure is totally capturing fugitive VOC emissions, then no additional total enclosure will be required for the performance test.
3. For each affected facility where the value of R is greater than or equal to the value of R_q calculated in 60.443(b), compliance with 60.442(a)(2) is demonstrated. Where the value of R is not greater than or equal to the value of R_q calculated in 60.443(b), the Permittee shall be deemed in non-compliance with 15A NCAC 2D.0524.

v.) Monitoring and Record Keeping – [40 CFR 60.445]

The owner or operator of an affected facility subject to this subpart shall maintain a calendar month record of all coatings used and the results of the reference test method specified in 40 CFR 60.446(a) or the manufacturer's formulation data used for determining the VOC content of those coatings.

If the owner or operator elects to document compliance with the options listed in 40 CFR 60.442(a)(2), the owner or operator of an affected facility controlled by a thermal incineration solvent destruction device shall install, calibrate, maintain, and operate a monitoring device which continuously indicates and records the temperature of the solvent destruction device's exhaust gases. The monitoring device shall have an accuracy of the greater than ± 0.75 percent of the temperature being measured express in degrees Celsius of ± 2.5 C. This monitoring and recordkeeping is not required for adhering to the compliance option listed in 40 CFR 60.442(a)(1).

If the owner or operator elects to document compliance with the options listed in 40 CFR 60.442(a)(2), the owner or operator of an affected facility controlled by a solvent destruction device which uses a hood or enclosure to capture fugitive VOC emissions shall install, calibrate, maintain, and operate a monitoring device which continuously indicates that the hood or enclosure is operating. No continuous monitor shall be required if the owner or operator can demonstrate that the hood or enclosure system is interlocked with the affected facility's oven recirculation air system.

Should the Permittee fail to perform all the requirements found above, the Permittee shall be deemed in non compliance with 15A NCAC 2D .0524

vi.) Test Methods and Procedures – [40 CFR 60.446]

The VOC content per unit of coating solids applied and compliance with 60.442(a)(1) shall be determined by either Reference Method 24 and the equation specified in 60.443 or by the manufacturer's formulation data. In the event of any inconsistency between Reference Method 24 and manufacturer's formulation data, the Reference Method 24 test will govern. The administrator may require an owner or operator to perform Reference Method 24 tests during such months as he deems appropriate. For Reference Method 24, the coating sample must be a one-liter sample taken into a one-liter container at a point where the sample will be representative of the coating applied to the web substrate.

If the owner or operator elects to document compliance with the options listed in 40 CFR 60.442(a)(2), Reference Method 25 shall be used to determine the VOC concentration, in parts per million by volume, of each effluent gas stream entering and exiting the solvent destruction device or its equivalent, and each effluent gas stream emitted directly to the atmosphere. Reference Methods 1,2,3 and 4 shall be used to determine the sampling location, volumetric flowrate, molecular weight, and moisture of all sampled gas streams. For Reference Method 25, the sampling time for each of the three runs must be at least 1 hour. The minimum sampling volume must be

0.003 dscm except that shorter sampling times or smaller volumes, when necessitated by process variable or other factors, may be approved by the Administrator. This testing is not required for adhering to the compliance option listed in 40 CFR 60.442(a)(1).

If the owner or operator can demonstrate to the Administrator's satisfaction that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks the Administrator will approve testing of representative stacks on a case-by-case basis.

Should the Permittee fail to perform all the requirements found above, the Permittee shall be deemed in non-compliance with 15A NCAC 2D .0524.

vii.) **Reporting** – [40 CFR 60.447]

For all affected facilities subject to compliance with 40 CFR 60.442, the performance test data and results from the performance test shall be submitted to the administrator as specified in 40 CFR 60.8(a) of the General Provisions (40 CFR 60, Subpart A).

Following the initial performance test, the owner or operator of each affected facility shall submit quarterly reports to the Administrator of exceedances of the VOC emission limits specified in 40 CFR 60.442. If no such exceedances occur during a particular quarter, a report stating this shall be submitted to the Administrator semi-annually as specified in viii below.

If the owner or operator elects to document compliance with the options listed in 40 CFR 60.442(a)(2), the owner or operator of an affected facility shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the incinerator temperature drops as defined in 40 CFR 60.443(e). If no such periods occur, the owner or operator shall state this in the report. This reporting is not required for adhering to the compliance option listed in 40 CFR 60.442(a)(1).

viii.) **Reporting** – [40 CFR 60.447]

The Permittee shall submit a summary report of the monitoring and recordkeeping activities by January 30 or 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.

e. 2D.111 "Maximum Achievable Control Technology

i.) **Regulation Analysis**

The coating line is not subject to 40 CFR Part 63 since the sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using product and

packaging rotogravure print work stations in each month do not exceed five weight-percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month.

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

The owner or operator, choosing to exclude from an affected source a product and packaging rotogravure or wide-web flexographic press which meets the limits and criteria above, shall maintain the records specified below for five years and submit them to the DAQ upon request:

- (1) the total mass of each material applied each month on the press, including all inboard and outboard stations, and
- (2) the total mass of each material applied each month on the press by product and packaging rotogravure or wide web flexographic printing operations.

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

No reporting is required for this source.

I Highland Plant Adhesive Raw Materials Operations (ES-36-RH-1, ES-36-RH-2, ES-36-TH-1, ES-36-TH-2, ES-36-RH-3, ES-36-RH-4, ES-36-RH-5, ES-36-RH-6, ES-36-TH-3, ES-36-TH-4, ES-36-TH-5, ES-36-TH-6, ES-36-MS-1, ES-36-BM-1)

The following table provides a summary of limits and/or standards for the adhesive raw materials operations.

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10P^{0.67}$ where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
visible emissions	20 percent opacity	15A NCAC 2D .0521(d)
odors	Odorous emissions must be controlled - Section VII. A. Facility Wide Affected Emission Sources; State-enforceable only	15A NCAC 2D .1806

a. 2D.0515 “Particulates from Miscellaneous Industrial Processes

i). Regulation Analysis

The allowable particulate emission limit is calculated by the following equation:

$$E=4.10P^{0.67}$$

Where E= allowable emission rate for particulate matter in pounds per hour, and

P = process weight in tons per hour

The maximum design capacity of the raw material operations is 2.50 tons/hr, is used to calculate the maximum allowable emission rate of 7.58 lbs/hr. Total potential are 0.016 lb/hr. Compliance with the allowable emission limit for the maximum process rate is demonstrated.

(ii) Monitoring/Recordkeeping Requirements

Particulate matter emissions from the adhesive raw materials operations shall be controlled by the following: **ID Nos. 36-BH-1, 36-BH-2, 36-BH-3, 36-BH-4, 36-BH-5, and 36-BH-6**

To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. As a minimum, the inspection and maintenance program shall include:

- (1) monthly **external** inspection of the bagfilter and ductwork, and
- (2) semi-annual **internal** inspection of the bagfilter to ensure structural integrity .

The results of inspection and maintenance for the bagfilters shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:

- i. date and time of actions recorded;
- ii. the results of each inspection;
- iii. the results of any maintenance performed on the baghouse;
- iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

(iii) Reporting

The Permittee shall submit the results of any maintenance performed on the bag filters (**ID Nos. 36-BH-1, 36-BH-2, 36-BH-3, 36-BH-4, 36-BH-5, and 36-BH-6**) within 30 days of a written request by the DAQ.

The Permittee shall submit a summary report of monitoring and record keeping 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.

b. 2D .0521 "Control of Visible Emissions"

i.) Regulation Analysis

This raw material operations were installed after July 1, 1971 and therefore are subject to 2D .0521(d). Per this regulation, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute period averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. Compliance is demonstrated with this regulation because the latest inspection report did not cite any opacity issues.

ii.) Monitoring Requirements

The Permittee shall observe all emission points from the source monthly for any visible emissions above normal. The Permittee will establish normal visible emissions within 30 days of the permit affective date and thereafter will record monthly observations.

iii.) Recordkeeping Requirements

The Permittee shall record the results of the observations and test, along with any corrective actions taken to reduce visible emissions.

iv.) Reporting Requirements

Reporting requirements include a summary report of the records by January 30 and July 30 for the respective semi-annual periods.

VII. Multiple Emission Source Limits

A. Facility-wide affected sources

The following table provides a summary of limits and standards applicable facility wide

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

STATE-ENFORCEABLE ONLY

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

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.

No unusual odors were noted in or around the facility during the last inspection, indicating compliance with this regulation.

B. Highland Plant Tanks (ES-36-IT, ES-36-WBST-1 through ES-36-WBST3, ES-36-POST-1, ES-36-MRT-1) and

Highland Plant Coating Line (ES-36-CL-1, ES-36-CL-2, ES-36-CL-3, ES-36-DO-1, ES-36-DO-2, ES-36-DO-3)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	Emissions of volatile organic compounds from the Highland Plant coating line must be less than 40 tons per	15A NCAC 2D .0530

1. 2D .0530 “Prevention of Significant Deterioration”

a) Regulation Analysis

To comply with the permit and avoid the applicability of 15A NCAC 2D .0530, “Prevention of Significant Deterioration”, as requested by the Permittee, volatile organic compound emissions from the above sources shall be less than 40 tons per consecutive twelve (12) month period.

b) Monitoring/Recordkeeping Requirements

To ensure enforceability of this limit, VOC emissions shall be calculated from these sources at the end of each month. VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC content of the material and for the coating line applying the control efficiency of the RTO. This calculation and the total amount of VOC emissions must be recorded in an emissions log. In addition, the Permittee must make available to officials of the Division of Air Quality, upon request, copies of the monthly emissions log. The Permittee must keep each entry in the monthly emissions log and all required records on file for a minimum of three years. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained

c) Reporting Requirements

For compliance purposes, within 30 days after each calendar year quarter, the monthly VOC emissions for the previous 12 months and the consecutive 12 month sum for each of the three months during the quarter shall be reported to the Regional Supervisor, Division of Air Quality.

C. Hickory Plant Adhesive Storage Tanks and Groundwater Remediation (ES-33-1-01 through ES-33-1-07, ES-33-1-10 through ES-33-1-13, ES-33-1-16, ES-33-2-20, ES-33-2-23, ES-33-2-27 through ES-33-2-33, ES-33-2-25, ES-33-2-19, ES-33-2-34 through ES-33-2-39, ES-33-2-41 and ES-33-2-42, ES-33-GR), Hickory Plant Raw Material Storage (ES-33-2-47, ES-33-2-48, ES-33-2-43, ES-33-2-44, ES-33-2-45, ES-33-2-46), Hickory Plant Coating Lines (ES-33-3-01, ES-33-3-02, ES-33-3-03, ES-33-5-01, ES-33-5-02, ES-33-5-03, ES-33-6-01, ES-33-6-02, ES-33-6-03, ES-33-6-04, ES-33-8-02, ES-33-8-04, ES-33-8-05)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
volatile organic compounds	VOC emissions from Lines 3, 5, 6 and 8, the four recovery systems, toluene mixing areas and toluene storage tanks	15A NCAC 2D .0530

1. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. **Regulatory Requirement**
To comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, VOC (toluene) emissions from the sources listed above must be less than 1160.0 tons per consecutive 12-month period.
- b. **Monitoring/Record keeping**
To ensure compliance with the emission limit specified in paragraph a. above, the permittee shall conduct the following monitoring and recordkeeping:
 - i. the facility shall perform a VOC mass balance of its solvent coating lines, recovery systems and storage/mixing systems as follows: monthly mass balances from the storage tanks + monthly mass balance from the mixing room inventory + monthly mass balance from solvent recovery and return to storage.
- c. **Reporting**
Within thirty (30) days after each calendar year quarter, the Permittee shall submit in writing to the Regional Supervisor, Division of Air Quality, the following VOC (toluene) emissions report:
 - i. the total facility wide VOC (toluene) emissions for each 12-month period ending in the previous quarter. The VOC (toluene) emissions shall be determined from the monitoring/recordkeeping specified in paragraph c. above.
 - ii. The permittee shall be in noncompliance with 15A NCAC 2D .0530 if VOC (toluene) emissions exceed 1160 tons per year for any 12-month period.

D. Hickory Plant Adhesive Storage Tanks and Groundwater Remediation (ES-33-1-01 through ES-33-1-07, ES-33-1-10 through ES-33-1-13, ES-33-1-16, ES-33-2-20, ES-33-2-23, ES-33-2-27 through ES-33-2-33, ES-33-2-25, ES-33-2-19, ES-33-2-34 through ES-33-2-39, ES-33-2-41, ES-33-2-42, and ES-33-GR), Hickory Plant Raw Material Storage (ES-33-2-47, ES-33-2-48, ES-33IT), Hickory Plant Parts Washers (ES-33-2-49 through ES-33-2-51), Highland Plant Tanks (ES-36-IT, ES-36-WBST-1 through ES-36-WBST3, ES-36-POST-1, ES-36-MRT-1)

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

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 and 2D .0902, for all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions, and whose emissions of VOC are greater than 15 pounds per day; the Permittee shall:

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

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

- c. To ensure 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 listed above that utilize volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0958.

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

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

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

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

- e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities 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.

E. Hickory Plant Raw Material Storage (ES-33IT), Hickory Plant Coating Line Water Based Coaters and All

Ovens (ES-33-01-01, ES-33-01-02, ES-33-02-01, ES-33-02-02, ES-33-3-01, ES-33-04-01, ES-33-04-02, ES-33-5-01, ES-33-6-01, ES-33-6-03, ES-33-6-04, ES-33-07-01, ES-33-07-02, ES-33-09-01, ES-33-09-02, ES-33-15-01, ES-33-0-01, ES-33-PC-2), Highland Plant Tanks (ES-36-IT, ES-36-WBST-1 through ES-36-WBST3, ES-36-POST-1, ES-36-MRT-1), Highland Plant Coating Line (ES-36-CL-1, ES-36-CL-2, ES-36-CL-3, ES-36-DO-1, ES-36-DO-2, ES-36-DO-3)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
toxic air pollutants	Permit limits for toxic air pollutants shall not be exceeded. State-enforceable only.	15A NCAC 2D .1100

1. 15 A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANTS (STATE ONLY REQUIREMENT)

- a. Pursuant to 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Source(s)	Toxic Air Pollutant(s)	Emission Limit(s)
All facility-wide (Plants 33 and 36) process emission sources	acetaldehyde	66.1 lbs/hr
	acetic acid	9.1 lbs/hr
	acrylonitrile	195 lbs/yr
	ammonia	6.6 lbs/hr
	aziridine	2.89 lbs/day
	1,3-butadiene	221 lbs/yr
	formaldehyde	0.37 lbs/hr
	styrene	26.0 lbs/hr
	arsenic	0.3 lbs/yr
	cadmium	7.2 lbs/yr

The Permittee shall calculate the actual maximum hourly emissions, actual maximum daily and actual maximum annual emissions from all water-based coating process lines from the facility (Plant 33 and Plant 36) within 30 days after each calendar month. The Permittee shall submit these maximum actual emission rates during the previous quarter to the Regional Supervisor, DAQ.

VIII. MACT Applicability and Requirements

Based on a review of the facility’s current operations and emission sources, the facility will be subject to the

“Paper and Other Web Coating” (POWC) NESHAP existing source MACT standards. The POWC standard was promulgated on Dec. 4, 2002 with a compliance date of Dec. 4, 2005.

There may be other NESHAP or MACTs that will be applicable to the facility. Shurtape is required to determine applicability and provide notification after EPA promulgates these standards.

IX. Permit Shield (including non-applicable requirements)

In accordance with 2Q .0512 the permit will contain a provision stating that compliance with the terms, conditions, and limitations of the Title V permit shall be deemed in compliance with applicable requirements specifically identified in the permit, as of the date of permit issuance. If the permit does not expressly state that a permit shield exists then it shall be presumed not to provide such a shield.

X. Other Applicable Requirements

NA

XI. General Conditions

The General Conditions section of the Title V Operating Permits lists additional applicable rule requirements that the permittee must adhere to, as with any other permit condition. These requirements in general are common to all Title V facilities. The general conditions include provisions such as annual fee payment, permit renewal and expiration, transfer of ownership or operation, property rights, submission of documents, inspections and entry procedures, reopen for cause, and severability.

XII. Insignificant Activities

The insignificant activities listed in the application have been reviewed and verified. Those sources which qualify as insignificant under regulation 2Q .0503(8) will be attached to the cover letter of the permit. See attached list of insignificant activities at the end of this review.

XIII. Public Notice

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list, Tennessee, South Carolina, EPA, and Western North Carolina local program.

XIV. Recommendations

The initial Title V application for Shurtape Technologies, Inc. has been reviewed by the DAQ to determine compliance with all procedures and requirements under 15A NCAC 2Q .0500 and 40 CFR Part 70. The DAQ has made a preliminary determination that the facility is complying or will achieve compliance as specified in the draft permit with all applicable requirements. Therefore, the DAQ is proposing to issue the Title V Operating Permit upon completion of the public comment period and the EPA review.

Insignificant Activities under 15A NCAC 2Q .0503(8)

Emission Source Description	Insignificant Regulation	Basis for Exemption
Maintenance Parts Washer (ID No. 33-MSPW1)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Boiler No. 6 - Natural gas-fired (0.4 million Btu/hour maximum heat input (ID No. ES-33-BLR-B7)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Storage Tank for No. 2 fuel oil, 3000 gallon capacity (ID No. ES-36-TK-Oil)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
3,000 gallons TSA/IPA tank	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
1100 gallon process oil storage tank	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Two research and development printers six inches and twelve inches width	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Two resin storage tanks - capacity 3700 gallons each, ES-33-2-43 and ES-33-2-44	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Two toluene storage tanks - capacity 10,000 gallons each, ES-33-2-45 and ES-33-2-46	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Process Oil Storage Tank - 10,000 gallon capacity, ES-33TG016(55)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Two petroleum-based Liquid Storage Tanks - 4,700 gallon capacity each, ES-33ST-1 and ES-33ST-2	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Three Petroleum-based Liquid Storage Tanks - 80 gallon capacity each, ES-33-Sat#1, ES-33-Sat#7, and ES-33-Sat#9	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Maintenance Parts Washer (ID No. 27-MSPW1)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
125 gallon water based storage tank (ID No. 27-WB1)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Maintenance Parts Washer (ID No. 36-MSPW1)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Propane fired-Emergency Generator (ID No. 26.8 hp)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.

One mixing tanks, 570 gallons capacity (ID No.33-MT-21)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Plant 33 Interior Tanks (ES-33IT)- Forty-two (42) interior water-based holding, storage, and mixing tanks-(140,020 gallons total capacity)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Plant 36 Interior Tanks (ES-36-IT)- Twenty-six (26) water-based holding, mixing and flush tanks (12,000 gallon total capacity)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.
Three water-based storage tanks- 12,431 gallons capacity each (ES-36-WBST-1 – ES-36-WBST3)	15A NCAC 2Q .0503(8)	Potential emissions do not exceed 5 tons per year of criteria pollutants or 1,000 pounds per year of any HAPS.