NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review with Attachment 1

Issue Date: xx/xx/2023

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800184
Inspector's Name: Jim Vanwormer
Date of Last Inspection: 06/01/2022
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Sonoco Hickory, Inc. - Hickory Plant

Facility Address:
Sonoco Hickory, Inc. - Hickory Plant
1246 Main Avenue SE
Hickory, NC 28602

SIC: 2673 / Bags: Plastics, Laminated And Coated
NAICS: 326111 / Plastics Bag Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02Q .0307, .0501(b)(2), 02Q .0504, and 02Q .0521
NSPS: N/A
NESHAP: N/A
PSD: N/A
PSD Avoidance: N/A
NC Toxics: N/A
112(r): N/A
Other: N/A

Contact Data

Facility Contact	Authorized Contact	Technical Contact
James Hall Plant Engineer (843) 817-2589 1246 Main Avenue SE Hickory, NC 28602	Leslie Bauer Plant Manager (828) 328-2466 PO Box 2029 Hickory, NC 28603	James Hall Plant Engineer (843) 817-2589 1246 Main Avenue SE Hickory, NC 28602

Application Data

Application Number: 1800184.22A
Date Received: 05/18/2022
Application Type: Modification
Application Schedule: TV-Sign-501(b)(2) Part II

Existing Permit Data
Existing Permit Number: 04691/T32
Existing Permit Issue Date: 01/07/2022
Existing Permit Expiration Date: 12/31/2026

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	---	1.05	276.19	0.8900	---	---	--- [---]
2020	---	1.01	295.30	0.9900	---	0.0150	0.0150 [Glycol Ethers, Unlisted - Spec]
2019	---	0.7700	254.00	0.6400	---	0.0284	0.0280 [Glycol Ethers, Unlisted - Spec]
2018	---	0.6300	361.46	0.5300	---	0.0172	0.0117 [Glycol Ethers, Unlisted - Spec]
2017	0.0100	0.2100	296.52	0.1800	---	0.0348	0.0345 [Glycol Ethers, Unlisted - Spec]

Review Engineer: Gautam Patnaik

Review Engineer's Signature: **Date:** xx/xx/2023

Comments / Recommendations:
Issue: 04691T33
Permit Issue Date: xx/xx/2023
Permit Expiration Date: 12/31/2026

I. Facility Description.

The facility provides custom printing of plastic film using flexographic printing presses.

Flexographic printing presses use flexible photopolymer printing plates to imprint images across a wide range of surfaces, for large volume requirements. Generally, ink is introduced to rollers which pick up the ink. These rollers then transfer the ink to flexible plates wrapped around cylinders. These cylinders then lay the graphic onto label papers as it passes through the presses at a high speed. This process is mainly used for labels and packaging.

II. Purpose of Applications

Application No. 1800184.21A for Air Quality Permit No. 04691T31 permitted a new regenerative thermal dual chamber oxidizer (RTO-1) to replace the catalytic oxidizer (CD1) to control volatile organic compounds (VOC) emissions from a flexographic press (Press 15) and the Press 15 ink room (Room-15).

Changing the control device from the catalytic oxidizer (CD1) to the regenerative thermal dual chamber oxidizer (RTO-1) involved the requirement for a new performance test, the establishment of proper operating temperatures, destruction efficiency, and any other variables deemed necessary, including testing protocol approved by the DAQ as specified in Section 2.3 A. 1. cc. i. of the modified permit. Also, the other changes as per “Regenerative Thermal Oxidizer Requirements” in Section 2.3 A. 1. cc, ii., through vii., of the modified permit were major changes and required a “Permit Shield” per General Condition Section R of the permit.

The testing requirements had different time schedules and permitting actions as specified in Section 2.3 A. 1. cc. ii. and iii., of the modified permit. However, the testing requirements listed above did not contravene the existing requirements for the current catalytic oxidizer (CD1). The previous application was processed as a significant modification under 15A NCAC 02Q .0501(b)(2) which stated that a construction and operation permit following the procedures set forth in 15A NCAC 02Q .0504 should be filed within 12 months after commencing operation of the modified sources.

This requirement to file a Title V Air Quality Permit application is stated in the permit (See Section 2.4., of the modified permit).

III. Regulatory Review

Application No. 1800184.22A is being processed as a TV-Sign-501(b)(2) Part II modification. When a facility files an application in accordance with 15A NCAC 02Q .0504 and requests a two-step modification, the owner or operator of a new or modified facility subject to the requirements of this Section chooses to obtain a construction and operation permit before the modified sources at the facility are required to obtain a Title V permit. If the procedures in 15A NCAC 02Q .0300 are followed, the Permittee shall have 12 months from the date of beginning operation of the modified facility or source to file an amended application following the procedures in this Section. The second application submittal is required to go through a 30-day public notice and 45 EPA review period.

The current permit source table footnote referring to the above control device will be removed since this application will be subject to "public participation" and review by EPA, thus, effectively shielding this control device.

Section "2.4 - Filing a Title V Application and Notification Requirement" will also be removed.

No sources or control devices are being added or modified in this second step of the permitting process.

III. Table of changes:

The following changes were made to the Air Permit No. 04691T32:

Pages	Section	Description of Changes
Cover letter		Change of designation of responsible official
Cover letter		Change of address of responsible official
Cover letter		Change of EPA contact
Cover letter		"NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION"
Page 1	Permit	Renewal due date
Page 3	Permit	Remove foot note from source table
Page 18	2.4	Removed
Page 19	SECTION 3	INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)
20 through 28	General Conditions	Updated "General Conditions"

Attachment 1 – Review from Step 1 of this two-step process:

NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: April 23, 2021

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800184
Inspector's Name: Jim Vanwormer
Date of Last Inspection: 03/02/2020
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Sonoco Hickory, Inc. - Hickory Plant

Facility Address:
Sonoco Hickory, Inc. - Hickory Plant
1246 Main Avenue SE
Hickory, NC 28602

SIC: 2673 / Bags: Plastics, Laminated And Coated
NAICS: 326111 / Plastics Bag Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0515, .0516, .0521, .1806, .0958, .1100, .1111, .0530, 02Q .0501(b)(2), and.0504
NSPS: NA
NESHAP: MACT Subpart KK
PSD: PAL
PSD Avoidance: NA
NC Toxics: 15A NCAC 02D .1100.
112(r): NA
Other: (NCGS) 143-215.107(a)(5) (House Bill 952)

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Justin Seidel Plant Engineer (828) 449-2296 PO Box 2029 Hickory, NC 28603	Ron Milz Division Vice President, Manufacturing (828) 339-6633 PO Box 2029 Hickory, NC 28603	Justin Seidel Plant Engineer (828) 449-2296 PO Box 2029 Hickory, NC 28603

Application Data

Application Number: 1800184.21A
Date Received: 01/04/2021
Application Type: Modification
Application Schedule: TV-Sign-501(b)(2) Part I

Existing Permit Data
Existing Permit Number: 04691/T30
Existing Permit Issue Date: 09/19/2019
Existing Permit Expiration Date: 11/30/2020

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	---	0.7700	254.00	0.6400	---	0.0284	0.0280 [Glycol Ethers, Unlisted - Spec]
2018	---	0.6300	361.46	0.5300	---	0.0172	0.0117 [Glycol Ethers, Unlisted - Spec]
2017	0.0100	0.2100	296.52	0.1800	---	0.0348	0.0345 [Glycol Ethers, Unlisted - Spec]
2016	0.0100	0.2300	292.63	0.1900	---	0.0964	0.0959 [Glycol Ethers, Unlisted - Spec]
2015	0.0200	0.3300	327.73	0.2800	0.0200	0.0810	0.0807 [Glycol Ethers, Unlisted - Spec]

Review Engineer: Gautam Patnaik

Review Engineer's Signature: **Date:** April 21, 2021

Comments / Recommendations:
Issue: 04691/T31
Permit Issue Date: April 231, 2021
Permit Expiration Date: March 31, 2026

I. Facility Description.

The facility provides custom printing of plastic film using flexographic printing presses.

Flexographic printing presses use flexible photopolymer printing plates to imprint images across a wide range of surfaces, for large volume requirements. Generally, ink is introduced to rollers which pick up the ink. These rollers then transfer the ink to flexible plates wrapped around cylinders. These cylinders then lay the graphic onto label papers as it passes through the presses at a high speed. This process is mainly used for labels and packaging

II. Purpose of Application

The current catalytic oxidizer (CD1) is used to control volatile organic compounds (VOC) emissions from a flexographic press (Press 15) and the Press 15 ink room (Room-15). A new regenerative thermal dual chamber oxidizer (RTO-1) will be constructed to replace the catalytic oxidizer. Exhaust from the above sources will be conveyed to the new RTO.

The above sources (Press 15 and Room-15) are equipped with a permanent total enclosure with 100% capture efficiency and there will be no changes to this enclosure. Manufacturer’s data for the new RTO indicates a destruction efficiency of 98% of VOCs. However, for the purpose of this application, a conservative destruction efficiency of 96% was assumed, which is consistent with the destruction efficiency for the catalytic oxidizer.

Since the destruction efficiency for the proposed RTO is assumed to equal the destruction efficiency for the catalytic oxidizer, there is no change in emissions as a result of the replacement of the catalytic oxidizer with the RTO. In addition, there are no other proposed changes to the emission sources operated at the facility.

The estimated uncontrolled emissions from Press 15 and Room 15 were based on VOC emissions data from Sonoco's Forest City facility. Emissions were based on 12 months of production and raw material usage for the press and is comparable to the expected production at the Hickory facility. Hourly actual emissions were scaled up to operate for 8,760 hours per year to estimate potential emissions from the press from 12 months (Feb 2017 through Jan 2018) as per the spread sheet provided.

The emissions presented in Table 1 below are the same as the emissions provided in the 2018 air permit application (# 1800184.18A). The applicant justified “there is no change in the types and quantities of ink products used and the information from the 2018 application is still valid.”

The table below summarizes the actual and potential emissions of VOCs from Press 15, Room 15 and the facility-wide emissions with a control efficiency of 96%. Note - the combustion emissions associated with the operation of the oxidizer are not considered here.

Table 1: VOC Emission Summary

Emission Source	Actual Controlled Emissions		Uncontrolled Potential Emissions		Controlled Potential Emissions	
	lb/hr	ton/year	lb/hr	ton/year	lb/hr	ton/year
Press 15 & Room 15	4.01	7.53	100.22	438.95	4.01	17.56
Other Permitted Emission Sources	--	302.65	--	<482.70	--	<401
Facility-wide Total	--	310.18	--	<921.65	--	<401

The proposed RTO (RETOX RTO system) consists of a reinforced, insulated dual chamber that is filled with a low pressure drop ceramic heat exchanger media. The process gas flow is automatically controlled by a zero-leakage poppet valve mechanism which changes the direction of the gas flow at regular intervals via integral programmable logic control (PLC) system. Almost 95% heat recovery at full flow is achieved as a result of the regenerative heat transfer. The VOC laden process air enters a porous bed filled with a high temperature, low pressure drop, turbulent flow ceramic heat transfer media.

An external burner is used only for a rapid initial cold startup, typically 80 minutes. Only one fan is needed for normal RTO operation. Due to the abundant oxygen content of the process gas, complete combustion readily occurs when the ignition point is reached in the RTO oxidizer (typically 1500-1600ºF). Process hydrocarbons are converted to carbon dioxide and water vapor. With a sufficient concentration of VOCs in the incoming process gas, the exothermic reaction of the VOCs combustion will be enough so that the destruction of VOC's will be self-sustaining with no auxiliary heat energy required from the fuel source.

The RTO can handle a flow rate of 25,000 standard cubic feet per minute (SCFM) process volume with a maximum VOC loading of 350 lbs/hr and will be capable of handling uncontrolled emissions of 100.22 lbs/hr of VOC from Press 15 and Room 15.

III. Regulatory Summary

Emissions from sources Press 15, Room 15 are subject to the following regulations:

i. 15A NCAC 2D .0515: “Particulates from Miscellaneous Industrial Processes.”

Emissions of particulate matter from the presses are expected to be minimal to non-existent. Some minuscule amount of PM might be generated from fuel combustion in the natural gas fired dryers and the oxidizer. The facility is currently required to keep production records for the existing presses and make them available upon request to verify compliance. Thus, compliance is expected from the above sources by the switch of control device.

No reporting is required for emissions of particulate emissions from these sources to demonstrate compliance.

ii. 15A NCAC 02D .0516: "Sulfur Dioxide Emissions from Combustion Sources."

The combustion of natural gas in the dryer and the oxidizer triggers this regulation. The fuel used is a clean fuel and the emissions of sulfur dioxide will be very small ensuring compliance with this regulation. No testing, monitoring, record keeping, and reporting are required to demonstrate compliance from these sources.

iii. 15A NCAC 02D .0521: "Control of Visible Emissions."

Visible emissions from the Press 15, Room 15 shall not be more than 20 percent opacity when averaged over a six-minute period. However, visible emissions from the sources will be very small and continued compliance is expected. No testing, monitoring, record keeping, and reporting are required to demonstrate compliance from these sources.

State Only Requirement

vi. 15A NCAC 02D .1806: "Control and Prohibition of Odorous Emissions."

This regulation applies to operations that create odors as a result of their operations. The facility appears to have had no compliance issues with respect to this regulation. Continued compliance is expected with this rule.

vii. 15A. NCAC 02D .0958: "Work Practices for Sources of Volatile Organic Compounds."

Pursuant to 15A NCAC 02D .0902(e), this rule no longer applies state-wide. Pursuant to 02D .0902(f) and (g), this rule effectively applies only in non-attainment or maintenance areas for ozone. The condition was removed from the permit during the last permit application (1800184.18A).

State-Enforceable Only

viii. 15A NCAC 02D .1100: "Control of Toxic Air Pollutants."

The applicant did a TAP emissions analysis for this application and compared the facility-wide emissions after the modification with the toxic air pollutants emission rates (TPERs) in 02Q .0711. Only one TAP, ethyl acetate, is expected to be emitted greater than its respective TPER.

Air dispersion modeling for ethyl acetate was conducted for the initial permit application associated with the laminator dated March 20, 2008 and indicated compliance with the allowable ambient limit in NCAC 2D .1100. This pollutant is not associated with emissions from the presses. There are no emissions of ethyl acetate associated with this project.

The Permit contains the following emission limits for ethyl acetate. No changes are necessary to the existing permit conditions.

Emission Source ID No.	Emission Source description	Toxic Air Pollutant	Emission limit (pounds per hour)
Laminator-14	Laminator	Ethyl Acetate	59.5

Emission Source ID No.	Emission Source description	Toxic Air Pollutant	Emission limit (pounds per hour)
Laminator-6	Solventless Laminator	(141-78-6)	37.6

ix. 15A NCAC 02D .0530: "Prevention of Significant Deterioration" - Actuals Plantwide Applicability Limitations (PAL):

The current permit contains an Actuals Plantwide Applicability Limitation (PAL) for VOC emissions in the amount of 401 tons per year. The PAL allows the facility to make modifications and add new sources without having to address PSD applicability for each project, as long as the PAL limits are not exceeded. The permit however will need to be revised to address the required monitoring to ensure compliance with the PAL.

The flexographic press (Press 15) and Press 15 ink room (Room-15) are part of the PAL limit.

The applicant claims that the enclosures around the press and ink room will capture 100% of emissions. This claim was verified during the source testing conducted in July 2018 and approved by the AQAB on March 18, 2019.

However, with a change in the control device for the above sources, the regenerative thermal oxidizer (RTO-1) shall conduct a performance test to establish the appropriate mass emission rates from all affected sources controlled by thermal oxidizer (ID No. RTO-1).

To make the requirements of a Regenerative Thermal Oxidizer consistent with other recent permits issued by DAQ the sample language for Regenerative Thermal Oxidizer from the Enviva Pellets - Sampson, LLC, Air Quality Permit No. 10386R05 (PSD Avoidance language starting from page 18) was used and modified to fit the requirements for this facility.

Regenerative Thermal Oxidizer Requirements

Notifications

The applicant shall notify the DAQ of the actual completion date of the construction of the regenerative thermal oxidizer (ID No. RTO-1) postmarked within 15 days (See Section 2.3 A. 1. cc. i., of the modified permit) after such date.

Regenerative Thermal Oxidizer Initial Performance Testing

The applicant shall demonstrate compliance with PAL limits in Section 2.3 A. 1. a., of the permit by conducting an initial performance test on the 65-inch wide-web flexographic press with ten printing stations, the two direct natural gas-fired dryers (0.8 million Btu per hour maximum heat input capacity each, ID No. Press-15), and Press 15 ink room (ID No. Room-15) by utilizing EPA reference methods and testing protocols approved by the DAQ.

The protocols to the DAQ shall be submitted at least 45 days prior to compliance testing. The applicant is responsible for ensuring, within practicable limits, that the equipment or processes being tested are operated at or near the maximum normal production rate and to the extent possible, testing shall be conducted under the maximum normal operating conditions.

The regenerative thermal oxidizer (RTO-1) is comprised of fireboxes, with each firebox containing temperature probes. During the initial compliance test, the applicant shall establish the minimum average firebox temperature for each of the fireboxes comprising the regenerative thermal oxidizer.

The minimum average firebox temperature for each firebox shall be based upon the average temperature of the probes over the span of the test runs. Documentation for the minimum average firebox temperature for each firebox shall be submitted to the DAQ as part of the initial compliance test report.

The initial testing shall be completed within 180 days of commencement of operations of the regenerative thermal oxidizer (RTO-1), unless an alternate date is approved in advance by DAQ.

(See Section 2.3 A. 1. cc., of the modified permit).

Regenerative Thermal Oxidizer Periodic Performance Tests

The applicant shall demonstrate compliance with the PAL limits in Section 2.3 A. 1. a., above, by conducting periodic performance tests on the flexographic press (ID No. Press-15) and Press 15 ink room (ID No. Room-15). Periodic testing shall be conducted in accordance with the following.

VOC emissions from the emission sources to be tested during the periodic performance tests shall be conducted with approved DAQ protocols. The applicant shall conduct periodic performance tests once every **60** months.

The applicant may re-establish any parametric operating value during periodic testing. Compliance with previously approved parametric operating values is not required during periodic required testing or other tests undertaken to re-establish parametric operating values by the applicant.

The applicant shall comply with applicable emission standards at all times, including during periods of testing.

(See Section 2.3 A. 1. dd., of the modified permit).

Regenerative Thermal Oxidizer Monitoring and Recordkeeping

Applicant shall calculate the facility-wide emissions of VOC emissions monthly emissions from the Press 15 and associated ink room VOC Emissions (VOCtot15) by the following equations and emission factors:

i. During periods when the capture efficiency (CE) is equal to 100%, the applicant shall calculate VOC emissions per month at the end of each month by multiplying the total amount of each type of VOC-containing material consumed by Press 15 and the associated ink room (ID Nos. Press-15

and Room-15) during the month by the VOC content of the material multiplied by the factor one minus the destruction efficiency (DE)/100. [Note – the destruction efficiency of RTO-1 to be calculated during Initial Performance Testing and Periodic Performance Tests as per Section 2.3 A. 1. cc., and dd., of the modified permit);

ii. During periods when CE is equal to 0%, the Permittee shall calculate VOC emissions per month at the end of each month by multiplying the total amount of each type of VOC-containing material consumed by Press 15 and the associated ink room (ID Nos. Press-15 and Room-15) during the month by the VOC content of the material;

iii. The total VOC emissions (VOCtot15) from Press 15 and the associated ink room (ID Nos. Press-15 and Room-15) shall be the sum of the emissions determined by i. and ii., above;

iv. The total VOC emissions (VOCtot15) from Press 15 and the associated ink room (ID Nos. Press-15 and Room-15 to be added monthly to the facility wide VOC emissions Equation m in section 2.3 A. 1. m., of the permit; and

v. The monthly emissions shall be recorded in a logbook.

(See Section 2.3 A. 1. ee., of the modified permit).

Regenerative Thermal Oxidizer other requirements

The applicant shall install, calibrate, operate, maintain, and inspect a continuous temperature monitoring, and recording system, in accordance with manufacturer's recommendations for the regenerative thermal oxidizer (ID No. RTO-1) to monitor the temperature in the combustion chamber to ensure the average combustion temperature does not drop below the temperature range established during the performance tests.

To ensure compliance and effective operation of the RTO (ID No. RTO-1), the applicant shall:

- maintain a 3-hour rolling average firebox temperature for each of the two fireboxes comprising the RTO (ID No. RTO-1) at or above the minimum average temperatures established during the most recent performance testing,
- maintain records of the 3-hour rolling average temperatures for each firebox,
- shall develop and maintain a written malfunction plan for the temperature monitoring and recording system and shall be submitted to the DAQ for approval,
- perform periodic inspection and maintenance for the oxidizers as recommended by the manufacturer, and
- at a minimum perform an annual internal inspection of the primary heat exchanger and associated inlet/outlet valves of the control device.

At all times, including periods of startup, shutdown, and malfunction, the applicant to the extent practicable, maintain and operate all emission sources including associated control devices in a manner consistent with good air pollution control practice for minimizing emissions.

(See Section 2.3 A. 1. ff., of the modified permit).

Regenerative Thermal Oxidizer Reporting

The applicant shall submit a semi-annual summary report of monitoring and recordkeeping activities given in Section 2.3 A. 1. ee., through ff., of the modified permit

The report shall contain the monthly facility-wide VOC emissions for the previous 17 months, report should indicate all instances of the average minimum regenerative thermal oxidizer and the regenerative thermal oxidizer combustion chamber temperature falling below the temperature range established during the performance tests and all instances of deviations from the requirements of this permit must be clearly identified.

(See Section 2.1 A. 1. gg., of the modified permit).

Note –

The requirements for Catalytic oxidizer (Section 2.3 A. 1. h., of the permit) left in the current permit monitoring, recordkeeping, and reporting requirements since this control device will be used till the new control device (RTO-1) is constructed and operational.

Once this new control device is operational all the requirements pertaining to the Catalytic oxidizer can be removed by an administrative amendment.

IV. NSPS, NESHAPS/MACT, Attainment Status, 12(r), Air Toxics (NCGS) 143-215.107(a)(5) (House Bill 952), CAM, and Compliance Status

NSPS

This facility is not subject to any NSPS regulations.

NESHAP/MACT

The facility is a minor source of any HAPs emissions and is subject to 40 CFR PART 63, Subpart KK: "National Emission Standards for the Printing and Publishing Industry." This rule applies to major and area sources of MACT. For this facility, this rule is applicable for all facility wide sources and there is no change to the applicability, operating limits, monitoring, record keeping, and reporting requirements as stipulated in Section 2.2 A. 1., of the permit.

CAM

The Compliance Assurance Monitoring (CAM) Rule (40 CFR Part 64) applies to pollutant-specific emissions units (PSEU) that are pre-control major sources and use a control device to comply with an emissions limit. None of the sources at this facility is subject to a CAM plan.

Changing the control device for the sources flexographic press (Press 15) and Press 15 ink room (Room-15) from the current catalytic oxidizer (CD1) to the new regenerative oxidizer (RTO-1) does not subject these sources to a CAM plan.

112(r)

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

Compliance with Toxics - (NCGS) 143-215.107(a)(5) (House Bill 952)

There are no changes to the permit limit for the emissions of ethyl acetate and previous air dispersion modeling had demonstrated compliance with the allowable ambient limit in NCAC 2D .1100., for this pollutant (See Section III. viii., of this review, above).

The change in control device will not increase any toxic air pollutant emissions to the environment and not present an unacceptable risk to human health and thus comply with North Carolina General Statute (NCGS) 143-215.107(a)(5) (House Bill 952).

Attainment Status and Increments

As per http://daq.state.nc.us/permits/psd/docs/mbd1.pdf the PSD minor source baseline dates for the emissions of PM_{10} has been triggered for Catawba County, which is currently designated as an attainment area. This modification does not increase the emissions of PM_{10}.

Application Processing Schedule

The current catalytic oxidizer (CD1) is used to control volatile organic compound (VOC) emissions from a flexographic press (Press 15) and Press 15 ink room (Room-15). A new regenerative thermal dual chamber oxidizer (RTO-1) will be constructed to replace the catalytic oxidizer, and the exhaust from the above sources will be conveyed to the new RTO.

Changing the control device for flexographic press (Press 15) and the Press 15 ink room (Room-15) from the current catalytic oxidizer (CD1) to the new regenerative thermal dual chamber oxidizer (RTO-1) will involve new a performance test, the establishment of proper operating temperatures, destruction efficiency, and any other variables deemed necessary, including testing protocol approved by the DAQ as specified in Section 2.3 A. 1. cc. i. of the modified permit. Also, the other changes as per "Regenerative Thermal Oxidizer Requirements" in Section 2.3 A. 1. cc, ii., through vii., of the modified permit are major changes and require a "Permit Shield" per General Condition Section R. of the permit.

These testing require different time schedule and permitting actions as specified in Section 2.3 A. 1. cc. ii. and iii., of the modified permit. The testing requirements listed above will not contravene with the existing requirements for the current catalytic oxidizer (CD1) and thus, this application can be processed as a significant modification under 15A NCAC 02Q .0501(b)(2) which states "a construction and operation permit following the procedures set forth in 15A NCAC 02Q .0504 and filing a complete application within 12 months after commencing operation to modify the construction and operation permit to meet the requirements of this Section"

This requirement to file a Title V Air Quality Permit application is stated in the permit (See Section 2.4., of the modified permit).

The foot note under the summary table in the current permit which lists all of the permitted emission sources and associated air pollution control devices indicated that the catalytic fume oxidizer with natural gas-fired pilot burner CD1 was permitted as a minor modification per 15A NCAC 02Q .0515. This foot note has not been removed in the modified permit.

The facility currently has an application (1800184.20A) in house for a Title V and PAL renewal.

Compliance

Based on the latest compliance report on IBEAM the facility was inspected on 3/2/2020 by Mr. Jim Vanwormer of the Mooresville Regional Office. The facility had an NOD issue on 2/18/2020 for late reporting of monthly usage of HAPs, however based on his observations, the facility was found to be compliance with the air quality regulations.

V. Consistency Determination, Comments, and Recommendations

A zoning consistency determination (G.S. 143-215.108) was required since the control device is being replaced.

The facility applied to the City of Hickory, Planning Section and the Assistant Planning Manager for the City of Hickory, Mr. Cal Overby verified on 12/7/2020 that the "proposed operation is consistent with the applicable zoning ordinance."

Professional Engineer Seal

As required by 15A NCAC 02Q .0112 "Applications Requiring Professional Engineer (PE) Seal," a professional engineer registered in North Carolina shall be required to seal technical portions of air permit applications for new sources and modifications of existing sources of particulate matter with air flow rates of more than 10,000 actual cubic feet per minute (acfm)."

A PE seal (15A NCAC 02Q .0112) was required since the control devices being replaced (new RTO) can handle a flow rate of 25,000 (SCFM) process volume and the change in testing schedule for the new control device requires a redesign or determination of the adequacy of the current control system.

The technical analysis for this application was provided on 12/10/2020 by Thomas Sipe, P. E., and his North Carolina Professional Seal number is 050467.

The Regional Office, the applicant, and the SSCB (Stationary Source Compliance Branch) were provided a copy of the modified draft permit for this application for their comments and their comments were taken into consideration.

The SSCB had on comments.

On 4/16/201, Mr. Bruce Ingle, Mooresville Regional Supervisor pointed out "I have reviewed the documents. The permit review discussed periodic testing every 60 months (page 6). I may have missed it but I only see annual test with the option to request 36 months testing in the permit draft (page 18)."

The ”36 months testing in the permit” was in error. This was corrected in Section 2.3 A. 1. dd. vi., of the modified permit to read “The Permittee may request that the performance tests be conducted less often for a given pollutant if the performance tests for at least 3 consecutive years show compliance with the emission limit. If the request is granted, the Permittee shall conduct a performance test no more than 60 months after the previous performance test for the given pollutant.”

VI. Miscellaneous

- The responsible official in the draft permit matches the information on IBEAM.
  There was a change in the responsible official to Mr. Ron Milz, Division Vice President, Manufacturing.
- The facility address matches the information on IBEAM.
- There are no new insignificant activities being added with this modification.
- All the regulatory references to 15A NCAC 02Q and 15A NCAC 02D have been verified.
- Every instance of the word “assure” has been changed to “ensure” in the modified permit.
- Removed all references from the bottom of the permitted sources table that no longer apply.
- Removed word “Subpart” from the permit sources table (i.e., NSPS Subpart IIII, etc.,).
- All old testing requirements have been deleted.
- Updated language from the shell for regulations (example 15A NCAC 02D .0515, .0521, .0516, etc.,).
  (See Section III., of this review, above)
- Updated General Conditions.

VII. Table of changes:

Table of changes made in Air Quality Permit No. 04691T31

Pages	Section	Description of Changes
3	2.4	New requirement to file a Title V application
4	table of permitted sources and control devices	Added regenerative thermal oxidizer with natural gas-fired pilot burner (RTO-1)
5	2.2 A	Added regenerative thermal oxidizer with natural gas-fired pilot burner to control emissions from wide-web flexographic press (Press-15) and Press 15 ink room (Room-15)
16	Section 2.3 A. 1. cc, ii., through vii.	Requirements for the regenerative thermal oxidizer (RTO-1)
17	2.4	Requirement to file a Title V Air Quality Permit Application on or before 12 months after commencing operation of the regenerative thermal oxidizer (RTO-1)
18 through 28	General Conditions	Updated “General Conditions”