

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Union
NC Facility ID: 9000117
Inspector's Name: Jim Vanwormer
Date of Last Inspection: 12/08/2021
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): OMNOVA Solutions Inc.

Facility Address:
 OMNOVA Solutions Inc.
 2011 North Rocky River Road
 Monroe, NC 28110

SIC: 2754 / Commercial Printing, Gravure
NAICS: 323111 / Commercial Gravure Printing

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

Permit Applicability (this application only)

SIP: 02D .0515, .0516, .0521, 0531. .0614, .0958, .0959
NSPS: NA
NESHAP: 02Q .0317 (MACT Avoidance)
PSD: NA
PSD Avoidance: 02Q .0317
NC Toxics: 02Q .0711
112(r): NA
Other:

Contact Data		
Facility Contact	Authorized Contact	Technical Contact
Cody Lohr EHS Manager (704) 225-2010 2011 North Rocky River Road Monroe, NC 28110	Jerry Diamond Director Operations (704) 225-2040 2011 North Rocky River Road Monroe, NC 28110	Cody Lohr EHS Manager (704) 225-2010 2011 North Rocky River Road Monroe, NC 28110

Application Data

Application Number: 9000117.21A
Date Received: 10/29/2021
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data

Existing Permit Number: 03281/T27
Existing Permit Issue Date: 08/30/2017
Existing Permit Expiration Date: 07/31/2022

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	0.0200	3.82	67.26	3.21	0.0100	11.82	6.44 [Toluene]
2019	0.0100	3.33	69.92	2.80	0.0100	10.69	6.04 [Toluene]
2018	0.0100	3.46	77.32	2.90	0.0100	13.40	7.39 [Toluene]
2017	0.0100	3.33	88.84	2.79	0.0100	14.62	8.06 [Toluene]
2016	0.0100	3.09	75.01	2.60	0.0100	11.47	6.37 [Toluene]

Review Engineer: Eric L. Crump, P.E.

Review Engineer's Signature: _____ **Date:** _____

Comments / Recommendations:

Issue 03281/T28
Permit Issue Date: _____
Permit Expiration Date: _____

1. Purpose of Application

OMNOVA Solutions Inc. (hereinafter referred to as OSI) is a decorative and building products rotogravure printing facility located in Monroe, Union County, North Carolina. The facility currently operates under Title V Permit No. 03281T27 with an expiration date of July 31, 2022. OSI has applied for renewal of their Title V air quality permit. The renewal application was received on October 29, 2021, which is at least six months prior to the expiration date as required by General Condition K of the current permit. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

In permit renewal application No. 9000117.21A, OSI has requested the inclusion of an AlwaysClean 350 Solvent Recycle System (ID No. IC-230) to the permit.

2. Facility Description

OSI produces emulsion polymers, specialty chemicals and engineered surfaces for a variety of commercial, industrial, and residential end uses. The Monroe facility has five rotogravure printing presses for printing wood grain decorative paper for the furniture and housing industry to use in laminated counter tops, cabinets, and various finish surfaces. Emissions from the presses are controlled by one of two natural gas/propane-fired regenerative thermal oxidizers (RTOs)—one with 8 million British thermal units per hour (MMBtu) heat input (ID No. C2); the other with 15 MMBtu heat output (ID No. C3). These devices are configured to allow operation of one or both units.

3. Application Chronology

August 30, 2017	Division of Air Quality (DAQ) issues Permit No. 03281T27 to OSI as a Title V renewal.
October 29, 2021	DAQ receives permit renewal application No. 9000117.21A from OSI.
February 17, 2022	DAQ requests additional information from OSI regarding new solvent recycle system (ID No. IC-230).
February 17-18, 2022	DAQ exchanges several emails with OSI, obtaining additional information on the new solvent recycle system (ID No. IC-230).
February 24, 2022	DAQ sends draft permit to Stationary Source Compliance Branch (SSCB) for review and comment.
March 1, 2022	DAQ receives comments on draft permit from SSCB.
April 25, 2022	Draft permit and review sent for DAQ supervisory review.
May 2, 2022	DAQ supervisor provides comments on draft permit and review.
May 5, 2022	DAQ requests confirmation from the Mooresville Regional Office (MRO) that OSI has recorded five years of VOC emission data that verify the assumptions used in OSI's projected actual emissions calculations to avoid applicability of nonattainment new source review requirements for the addition of a thermal

oxidizer (ID No. C3). MRO confirmed via email that the VOC records were maintained and indicate compliance.

May 6, 2022 DAQ sends draft permit to OSI and MRO for review and comment.

May 16, 2022 DAQ receives comments on draft permit from MRO.

May 18, 2022 DAQ receives comments on draft permit from OSI.

xxx Permit renewal notice published, 30-day public notice and comment period begins, and 45-day EPA comment period begins.

xxx 30-day public notice and comment period ends.

xxx 45-day EPA comment period ends.

4. Changes to Permit and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes made to the current OSI permit as a result of this permit renewal:

Page No.	Section	Description of Changes
Cover and throughout	---	<ul style="list-style-type: none"> Updated all dates and permit revision numbers Changed all citations of 15A NCAC 2D to 15A NCAC 02D Changed all citations of 15A NCAC 2Q to 15A NCAC 02Q Corrected facility ID number Revised permit section citations to current format where needed
Insignificant Activities List	Attachment	Moved to new Section 3 of permit
Table of Contents	---	<ul style="list-style-type: none"> Deleted Section 2.2 Added new Section 3, Insignificant Activities per 15A NCAC 02Q .0503(8)
3	List of Acronyms	Moved here from last page of permit
4	1	Corrected Btu per hour heat input for control device ID No. C2
5	2.1 A	Updated limits/standards summary table to current format/wording
	2.1 A.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515
	2.1 A.1.a	Deleted “these sources” after source ID numbers in parentheses

Page No.	Section	Description of Changes
6	2.1 A.4 (former) 2.1 A.4.b.ii.B.2 2.1 A.4.c	<ul style="list-style-type: none"> Deleted permit conditions for 15A NCAC 02D. 0531(n): Use of Projected Actual Emissions to Avoid Applicability of Nonattainment New Source Review. Adjusted numbering of subsequent paragraphs accordingly. Former Section 2.1 A.5 is now Section 2.1 A.4 <p>Changed “natural gas-fired” to “natural gas/propane-fired”</p> <ul style="list-style-type: none"> Updated monitoring approach summary table to most current format Removed unnecessary spaces in citation of 40 CFR Part 64.3(b)(4)(ii) in table
7	2.1 A.4.d 2.1 A.5	<p>Updated to reflect the most current reporting stipulations for 15A NCAC 02D. 0614</p> <p>Former Section 2.1 A.6 is now Section 2.1 A.5</p>
8	2.1 A.5.e 2.2 (former) 2.1 A.6	<p>Reference to “Section 2.2 C.1.a through h” has been changed to “Section 2.1 A.9.a through g”</p> <p>All permit conditions formerly from Section 2.2 have been renumbered and incorporated into Section 2.1. Section 2.2 has been eliminated.</p> <p>Former Section 2.2 A.1 is now Section 2.1 A.6</p>
9	2.1 A.6.e 2.1 A.7 2.1 A.8	<p>Reference to “Section 2.2 A.1.c and d” has been changed to “Section 2.1 A.6.c and d”</p> <p>Section 2.2 A.2 is now Section 2.1 A.7.</p> <p>Section 2.2 B, Facility-Wide Emission Sources and the emission standards table have been removed. Former Section 2.2 B.1 is now Section 2.1 A.8</p>
10	2.1 A.9	<ul style="list-style-type: none"> Section 2.2 C, Facility-Wide Emission Sources and the emission standards table have been removed. Former Section 2.2 C.1 is now Section 2.1 A.9 Updated section (including renumbering and rearrangement of paragraphs) to reflect the most current stipulations for PSD avoidance conditions
12	2..1 A.10	<ul style="list-style-type: none"> Section 2.2 D, Facility-Wide Emission Sources and the emission standards table have been removed. Former Section 2.2 D.1 is now Section 2.1 A.10 Eliminated letter “a” (unnecessary for labeling single paragraph)
13	3	<ul style="list-style-type: none"> Insignificant activities list moved to this section Added source ID No. IC-230, AlwaysClean 350 solvent recycle system to insignificant activities list Moved General Conditions to new Section 4
14-22	4	Updated General Conditions to Version 6.0 dated January 7, 2022

The following change has been made to the TVEE:

Addition of AlwaysClean 350 solvent recycle system (ID No. IC-230)

5. Description of Changes and Estimated Emissions

In their permit renewal application, OSI reported the addition of AlwaysClean 350 Solvent Recycle System (ID No. IC-230) to the facility. The system will be located in the ink room where the facility stores raw inks used within the process. The system will recover n-propyl acetate (75 to 80 percent of the total solvent recovered), n-butyl acetate and ethyl acetate from the printing process. Roughly 65-80% of the solvent used is expected to be reclaimed after the machine is calibrated. The remaining solvent will be discharged into 55-gallon waste drums and transported off site for hazardous waste disposal. The system is not open to the atmosphere. OSI has requested the solvent recycle system be designated as an insignificant activity.

While OSI projects they will generate no more than 300 gallons of waste solvent per day (gal/day), the system has a maximum capacity of 594 gal/day. Emission estimates were calculated using the following values and equations.

Chemical Use Rate: 594.00 gal/day
 Ambient Temperature, T1: 72°F = 345.15 K
 Gas Constant: 1.3144 atm ft³/lb-mole K

$$\text{Vapor phase Mole fraction} = \frac{\text{Weight percent (\%)} \times \text{Vapor Pressure (psia)}}{100 \times \text{Atmospheric Pressure (14.7 psia)}}$$

$$\text{Emission Rate (lb/day)} = \text{Vapor phase mole fraction} \times \text{Atmospheric pressure (1 atm)} \times \text{Molecular Wt.} \times \text{Estimated Chemical Usage (gal/day)} \div \text{Gas Constant (atm ft}^3\text{/lb-mole K)} \times \text{T1 (K)} \times 7.48 \text{ lb/gal}$$

	Weight Percent, %	Vapor Pressure at T1	Vapor Phase Mole Fraction	Molecular Weight, lb/lb-mole	Emission Rate, lb/day
Solvent mix	100	1.088	0.0740	90.52	1.17

Annual VOC emissions:

$$\text{In lb/yr} = \text{Emission Rate (lb/day)} \times 365 \text{ day/yr} = 428.01 \text{ lb/yr}$$

$$\text{In ton/yr} = \text{Emission Rate (lb/yr)} \times 1 \text{ ton}/2000 \text{ lb} = 0.21 \text{ ton/yr}$$

While the solvent recycle system (ID No. IC-230) is subject to the regulations for control of VOC emissions, it will be classified as an insignificant activity under 15A NCAC 02Q .0503(8) because its emissions would not violate any applicable emissions standard, its potential uncontrolled criteria pollutant emissions are no more than five tons per year and its potential uncontrolled HAP emissions are below 1000 pounds per year. For this reason, no conditions are included in the permit for this source.

It should be noted that classifying an emission source or activity as insignificant does not mean it is exempted from any applicable requirement, or that OSI is exempted from demonstrating compliance with any applicable requirement. OSI is required to have documentation— including calculations, if necessary—available at the facility at all times to demonstrate that an emission source or activity is insignificant.

6. Regulatory Review

OSI is subject to the following state regulations, in addition to the requirements in the General Conditions:

15A NCAC 02D .0515: Particulates from Miscellaneous Industrial Processes. This rule addresses emissions of particulate matter from stacks, vents, or outlets for any industrial process for which no other emission control standards apply. For such processes, the allowable emission rates shall not exceed the level calculated using one of the following equations, as appropriate:

$$E = 4.10(P)^{-0.67} \quad \text{for process rates less than or equal to 30 tons per hour (ton/hr)}$$

$$E = 55.0(P)^{0.11} - 40 \quad \text{for process rates greater than 30 ton/hr}$$

Where:

- E = allowable emissions limit for particulate matter in pounds per hour (lb/hr), and
 P = process rate in ton/hr (i.e., the total weight per hour of all materials introduced into a specific process that may cause any emission of particulate matter. Liquid and gaseous fuels and combustion air are not included in the process weight).

The potential for particulate emissions from the printing presses (ID Nos. 1, 2, 3, 4, and 6) or the thermal oxidizers (ID Nos. C1 and C2) is minimal. For this reason no monitoring, recordkeeping or reporting is required for particulate matter emissions from these sources. This permit renewal does not affect this status. Continued compliance with this rule is expected.

15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources. Under this regulation, emissions of sulfur dioxide (SO₂) from any source of combustion discharged from any vent, stack, or chimney shall not exceed 2.3 pounds of SO₂ per million British thermal units (MMBtu) input. OMI only fires natural gas or propane in the RTOs (ID Nos. C1 and C2) that control emissions from the printing presses. No monitoring, recordkeeping, or reporting is required when firing natural gas or propane because of the low sulfur content of these fuels. This permit renewal does not affect this status. Continued compliance with this rule is expected.

15A NCAC 02D .0521, Control of Visible Emissions: The intent of this rule is to prevent, abate, and control visible emissions generated from fuel burning operations and industrial processes where visible emissions are expected to occur. The regulation establishes opacity limits for visible emissions from sources based on the date the sources were manufactured. Because the sources at OSI were manufactured after July 1, 1971, this regulation limits them to 20 percent opacity averaged over a six-minute period. The six-minute averaging periods may exceed 20 percent not more than once in any hour, and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

There is little potential for violating visible emission limits from the firing of natural gas or propane in the thermal oxidizers, and as discussed above, the printing presses do not emit any significant amounts of particulate matter. Therefore, no monitoring, recordkeeping, reporting is required for visible emissions from these sources. This permit renewal does not affect this status. Continued compliance is expected.

15A NCAC 02D. 0531(n): Use of Projected Actual Emissions to Avoid Applicability of Nonattainment New Source Review. By reference, this rule incorporates 40 CFR Part 52.21(r), which establishes requirements for the construction of any new major stationary source or the major modification of any existing major stationary source in areas designated as attainment or unclassifiable under sections 107(d)(1)(A)(ii) or (iii) of the Clean Air Act. OSI has elected to use projected actual emissions to avoid applicability of Nonattainment New Source Review requirements for the modification to add thermal

oxidizer (ID No. C3). In order to verify the assumptions used in the projected actual emissions calculations, the Permittee shall comply with the testing, record keeping and reporting requirements.

15A NCAC 02D .0614, Compliance Assurance Monitoring (CAM) – OMNOVA is subject to CAM because it currently uses its oxidizers (ID Nos. C2 and C3) to comply with 02D .0959 under the Reasonable Available Control Technology (RACT) rules. CAM is discussed in more detail in Section 10 of this review.

15A NCAC 02D .0959 - Petition for Superior Alternative Controls – The facility has demonstrated that the use of the thermal oxidizers is superior to the controls required in 15A NCAC 02D .0951, Miscellaneous Volatile Organic Compound Emissions. This is discussed in further detail in Section 9 of this review.

15A NCAC 02D .0958, Work Practices for Sources of Volatile Organic Compounds. This rule applies to any facility that uses volatile organic compounds (VOCs) as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture VOCs, or emit VOCs as a product of chemical reactions—provided that, in accordance with 15A NCAC 02D .0902, the facility is located in a moderate nonattainment area for the 1997 8-hour ozone standard as designated in 40 CFR 81.334 prior to January 2, 2014. Since OSI is located in Union County, which is one of those nonattainment areas, this rule applies to the facility.

Under this rule, OSI is required to:

- store all material, including waste material, containing VOCs in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
- clean up spills of VOCs as soon as possible following proper safety procedures,
- store wipe rags containing VOCs in closed containers,
- not clean sponges, fabric, wood, paper products, and other absorbent materials with VOCs,
- transfer solvents containing VOC used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
- clean mixing, blending, and manufacturing vats and containers containing VOCs 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 02D .0958(c)]
- When cleaning parts with a solvent containing a VOC:
 - flush parts in the freeboard area,
 - take precautions to reduce the pooling of solvent on and in the parts,
 - tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
 - not fill cleaning machines above the fill line,
 - not agitate solvent to the point of causing splashing. [15A NCAC 02D .0958(d)]

To ensure compliance with these work practices, OSI must, at a minimum, perform a monthly visual inspection during normal operations of all operations and processes onsite that use VOCs. This permit renewal does not affect this status. Continued compliance is expected.

15A NCAC 02Q .0317, Avoidance Conditions – Operation of the oxidizers is required for PSD avoidance, per the permit condition. This is discussed in more detail in Section 9 of this review.

15A NCAC 02Q .0711, Emission Rates Requiring a Permit – Operation of the oxidizers is required to ensure that emissions from the facility remain below the TPERs for several TAPs. This is discussed in more detail in Section 11 of this review

15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions. This rule, which applies facility-wide and is state-enforceable only, provides for the control and prohibition of objectionable odorous emissions. The rule requires OSI to either implement management practices or install and operate odor control equipment that are sufficient to prevent odorous emissions from causing or contributing to objectionable odors beyond the facility's boundary. This permit renewal does not affect this status. Continued compliance is expected.

The permit has been updated to reflect the most current stipulations for all applicable regulations.

7. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Maximum and/or Generally Achievable Control Technology (MACT/GACT)

Rather than meeting the requirements of 40 CFR Part 63 Subpart KK, National Emission Standards for the Printing and Publishing Industry as a major source of hazardous air pollutants (HAPs), OSI has elected to accept an avoidance condition under 15A NCAC 02Q .0317 to remain classified a minor source for HAPs and avoid applicability of this regulation. OSI must demonstrate that its facility emissions are less than 10 tons per year of each individual HAP, and less than 25 tons per year of all HAPs combined. OSI is required to keep the following monthly consumption records of each HAP containing material as follows:

- pounds of individual HAP used each month and for the 12-month period ending on that month
- pounds of all HAP used each month and for the 12-month period ending on that month

OSI must also submit quarterly reports summarizing HAP emissions containing the following data:

- greatest quantity in pounds of an individual HAP used:
 - for each month during the quarter, and
 - for each 12-month period ending on each month during the quarter using a 12-month rolling average;
- pounds of all HAP used:
 - for each month during the quarter, and
 - for each 12-month period ending on each month during the quarter using a 12-month rolling average.

This permit renewal does not affect this status. Continued compliance is expected.

8. New Source Performance Standards (NSPS)

OSI is not subject to any NSPS. This permit renewal does not affect this status.

9. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

OSI accepted a PSD avoidance condition under 15A NCAC 02Q .0317 in their permit when Union County, where OSI is located, was in attainment for ozone. This condition required OSI to maintain its annual VOC emissions below 250 tons per year (tpy). Union County subsequently became nonattainment for ozone in 2004.

In the application review for Air Permit No. 03281T21 (August 8, 2006), it was noted that the OSI facility was “. . . subject to PSD avoidance (02Q .0317) requiring annual VOC emissions to be less than 250 tpy, making the facility's current non-attainment new source review (NAA NSR) status major for VOCs”. Also, “since there is no operational limit on the source it might have the potential to emit more than 15 lbs of VOCs per day”, OSI had become subject to 15A NCAC 02D .0958, Work Practices for Sources of Volatile Organic Compounds, so those work practice requirements were included in the permit.

On July 17, 2007, DAQ informed OSI that their facility may be subject to RACT. As described in the application review for Air Permit 03281T24 (August 16, 2010), OSI proposed two viable alternatives for complying with RACT:

- *Option 1* - comply with 02D .0920 - Paper Coating where all coatings are limited to 4.8 lb VOC/gallon of solids.
- *Option 2* - invoke and petition the Director under 15A NCAC 02D .0959, Petition for Superior Alternative Controls, that since the presses are all controlled by thermal oxidizers, the oxidizers be determined as superior to RACT (OSI's preferred option).

Option 2 was ultimately selected and added to the permit as being superior to RACT.

At this time, the OSI permit still had the PSD avoidance limit of 250 tons/year of VOCs. However, since the major source threshold in non-attainment areas is 100 tpy, OSI is considered major under NAA NSR. However, the facility did not request to remove the avoidance condition, so it remained in the permit.

On January 2, 2014, Union County was redesignated to a maintenance area, as the 1997 8-hour national ambient air quality standard (NAAQS) for ozone NAAQS was revoked. As discussed in the application review for Air Permit No. 03281T26 (March 2, 2015), OMNOVA replaced one of its thermal oxidizers (ID No. C1) with a larger oxidizer (ID NO. C3) – requiring a modification to their permit. When OSI compared their baseline actual and projected actual emissions, no pollutants were found to have exceeded their significance level, and NAA NSR was required after permit modification. Under 15A NCAC 02D .0531(n), OMNOVA was required to keep records of actual emissions from the project and report emissions annually for five years. Those five years have been completed, and as such this permit condition (15A NCAC 02D. 0531(n): Use of Projected Actual Emissions to Avoid Applicability of Nonattainment New Source Review) is being removed from the permit in this renewal.

On August 27, 2015, Union County was redesignated to a maintenance area under the 2008 8-hr ozone NAAQS. Since that time the OSI permit has had a PSD avoidance limit of 250 tpy for VOC, and RACT requirements under 15A NCAC 02D .0959, Petition for Superior Alternative Controls. This permit renewal does not affect this status. Continued compliance is expected.

10. Risk Management Plan (RMP) Requirements

40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop a RMP in accordance with Section 112(r) of the Clean Air Act. The RMP lists the potential

effects of a chemical accident at the facility, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident should occur.

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

10. Compliance Assurance Monitoring (CAM)

The CAM rule (40 CFR 64) applies to each pollutant specific emissions unit located at a major source that is required to obtain a Title V, Part 70 or 71 permit if it meets all of the following criteria:

- It is subject to an emission limitation or standard, and
- It uses a control device to achieve compliance, and
- It has potential pre-control emissions that equal or exceed the major source threshold (i.e., either 100 tpy for criteria pollutants, 10 tpy of any individual HAP, or 25 tpy of any combination of HAP).

The following emission limitations or standards are exempted from the CAM rule:

- NSPS or NESHAP standards proposed after November 15, 1990;
- Stratospheric ozone protection requirements under Title VI of the Clean Air Act
- Acid rain program requirements;
- Emission limitations or standards or other requirements that apply solely under an approved emissions trading program;
- An emissions cap that meets requirements of 40 CFR 70.4(b)(12) or 71.6(a)(13);
- Emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method, as defined in 40 CFR 64.1, unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (e.g., a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this part would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).
- Certain municipally-owned utility units, as defined in 40 CFR 72.2.

Please note that the emission unit is not exempted from the CAM rule if nonexempt emission limitations or standards (e.g. a state rule or an older NSPS emission limits) apply to the emissions unit.

CAM was determined in a preceding permit review (B. Gatano, 11/06/2012, Air Permit No. 03281T24) to apply to the OSI facility because the thermal oxidizers (ID Nos. C2 and C3) are used to ensure compliance with RACT, and the facility's potential pre-controlled emissions of VOC exceed CAM thresholds. This permit renewal does not affect the facility's status with respect CAM.

OSI submitted a CAM plan with the current permit renewal application (No. 9000117.21A). The key indicators and assurances for compliance are summarized in the following table.

Measure	Indicator No. 1
I. Indicator	Chamber temperature
Measuring approach	The chamber temperature is measured with a thermocouple and programmable logic controller.
II. Indicator Range	<p>The set point indicator is the following:</p> <ul style="list-style-type: none"> • Temperature readings from 1400 °F to 1600 °F for the Regenerative Thermal Oxidizer (Source ID: C2) • Temperature readings from 1500 °F to 1650 °F for the Regenerative Thermal Oxidizer (Source ID: C3); <p>Excursions of temperatures below the minimum set point trigger a fault alarm and corrective action.</p>
III. Performance Criteria	
A. Data Representativeness	A minimum of two (2) thermocouples are located in each chamber.
B. Verification of Operational Status	N/A
C. Quality Assurance/Control Practices	Programmable logic controller is equipped with fault alarms and deductive reasoning to confirm or respond to operation upset.
D. Monitoring Frequency	Temperature in the combustion chamber will be continuously monitored and recorded every fifteen minutes per 40 CFR Part 64.3(b)(4)(ii).
E. Data Collection Procedure	Temperature is continuously recorded electronically at a minimum of once per shift. Written logs and/or printouts are generated and maintained for fault alarms and maintenance.
F. Averaging Period	Temperature is recorded every fifteen minutes per 40 CFR Part 64.3(b)(4)(ii).

This permit renewal does not affect the facility’s status with respect CAM. Continued compliance with these requirements is expected.

11. Facility-wide Air Toxics Review

The OSI permit lists the following State-enforceable only NC toxic air pollutants (TAPs) and their respective toxic permit emission rates (TPERs) as established in 15A NCAC 02Q .0711, “Emission Rates Requiring a Permit”.

Pollutant	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Chromic acid		0.013		
Ethyl acetate			36	
Formaldehyde				0.04
Hydrogen chloride				0.18
Methyl ethyl ketone		78		22.4

Pollutant	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Methyl isobutyl ketone		52		7.6
Sulfuric acid		0.25	0.025	
Toluene		98		14.4
Toluene diisocyanate - 2,4 and 2,6 isomers		0.003		
Xylene		57		16.4

OSI has made a demonstration that its plant-wide actual emissions do not exceed the TPERs. The permit requires OSI to operate and maintain the facility so that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed the TPERs; and to maintain records that demonstrate compliance with each TPER. More specifically:

- When using solvent-based inks, OSI is required to vent the five rotogravure printing presses (ID Nos. 1, 2, 3, 4, and 6) to one of the two thermal oxidizers (ID Nos. C2 and C3).
- When using alcohol/water based inks, two of the presses (ID Nos. 3 and 4) may vent to the atmosphere uncontrolled. To ensure compliance with this condition, OSI must keep records of the types of inks being used at these two presses, and the times when these two presses are vented to the oxidizers.
- At no time shall more than four of the five rotogravure printing presses be vented to one of the two thermal oxidizers, and at no time shall the volume of the exhaust routed to the oxidizers exceed the oxidizer design volume.

Based on the most recent inspection, OSI has been complying with this regulation. Continued compliance will be determined during subsequent inspections.

12. Facility Emissions Review

The table in the header page of this review summarizes emissions OSI has reported in the annual emissions inventories for the years 2016 through 2020, after application of required emission controls. As discussed in Section 5 of this review, the addition of the AlwaysClean 350 Solvent Recycle System (ID No. IC-230) will have a negligible impact on overall emissions at this facility.

From 2016 to 2020, annual emissions of most criteria pollutants from the OSI facility have been low. SO₂ and particulate matter emissions have rarely approached 100 pounds per year, and annual NO_x and CO emissions did not exceed 4 tons per year during this period. Annual VOC emissions reported have ranged from 67.26 tons in 2020 to 88.84 tons in 2017. Total HAP emissions during the same time period have ranged from 10.69 tons in 2019 to 14.62 tons in 2017, with toluene comprising a little more than half of the total HAP emitted. These numbers suggest that emissions from the OSI facility are being controlled as required by state and Federal regulations.

13. Compliance History and Status

The following chronology dates from when the OSI permit was last renewed on August 30, 2017.

- February 22, 2018 Jim Hefner, Mooresville Regional Office (MRO) conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
- October 29, 2018 Bob Caudle, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
- June 30, 2018 MRO issues Notice of Violation (NOV) to OSI for late submittal of HAP and VOC emissions reports within the required timeframe as required by Sections 2.2 B.1 and 2.2 C.1 of Air Permit No. 03281T27.
- November 26, 2019 Jim Vanwormer, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
- December 1, 2020 Jim Vanwormer, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.
- December 8, 2021 Jim Vanwormer, MRO conducts facility compliance inspection. Facility appeared to be operating in compliance with all permit requirements.

In summary, OSI's only compliance issue during this time period was a single late submittal of required reports. No other violations were observed. At this time there is no indication that OSI will have additional compliance issues. Continued compliance is expected.

14. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above.

South Carolina is an affected state within 50 miles of the facility, and Mecklenburg County Department of Environmental Protection is an affected local program.

Notice of the DRAFT Title V Permit to Affected States ran from XXXX YY, 2021, to XXXX YY, 2021. ***Discuss any comments received from Affected States or Local Programs.***

Public Notice of the DRAFT Title V Permit ran from XXXX YY, 2021, to XXXX YY, 2021. ***Discuss any public comments received.***

EPA's 45-day review period ran concurrent with the 30-day Public Notice, from XXXX YY, 2021, to XXXX YY, 2021. ***Discuss any comments received from EPA and U.S. EPA Region 4 regarding the DRAFT Title V Permit.***

15. Other Regulatory Considerations

The following items were not required in Permit Application No. 9000117.21A:

- Professional Engineer’s seal
- Zoning consistency determination
- Permit fee.

16. Recommendations

DAQ has reviewed the permit application for OMNOVA Solutions Inc. located in Monroe, Union County, North Carolina to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 03281T28.