

NORTH CAROLINA DIVISION OF  
AIR QUALITY

## Application Review

Issue Date:

**Region:** Winston-Salem Regional Office  
**County:** Davidson  
**NC Facility ID:** 2900268  
**Inspector's Name:** Jim Hafner  
**Date of Last Inspection:** 07/06/2023  
**Compliance Code:** 3 / Compliance - inspection

<b>Facility Data</b>	<b>Permit Applicability (this application only)</b>
<p><b>Applicant (Facility's Name):</b> Kurz Transfer Products, LP</p> <p><b>Facility Address:</b>                  Kurz Transfer Products, LP                  4939 North NC Highway 150                  Lexington, NC 27295</p> <p><b>SIC:</b> 2754 / Commercial Printing, Gravure  <b>NAICS:</b> 323111 / Commercial Gravure Printing</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V  <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>	<p><b>SIP:</b> 02D .0515, .0516, .0521, .1100, .1111, .1806, 02Q .0317,  <b>NSPS:</b> No  <b>NESHAP:</b> MACT JJJJ  <b>PSD:</b> major prior to modification, minor afterwards  <b>PSD Avoidance:</b> yes for VOC  <b>NC Toxics:</b> unacceptable risk evaluation pursuant to 02Q .0706(c)  <b>112(r):</b> No  <b>Other:</b></p>

<b>Contact Data</b>			<b>Application Data</b>
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	Application Number: 2900268.24A and .23B Date Received: 01/08/2024 and 08/03/2023 Application Type: Modification (2) Application Schedule: TV-Sign-501(b)(2) Part II (2) Existing Permit Data Existing Permit Number: 06542/T27 Existing Permit Issue Date: 11/17/2023 Existing Permit Expiration Date: 07/31/2025
LaRue Cribb Plant & EHS Manager (336) 397-1750 4939 North NC Highway 150 Lexington, NC 27295	Thomas Hertlein CEO (704) 927-3700 4939 North NC Highway 150 Lexington, NC 27925	Gary Butler Environmental, Health & Safety Manager (704) 927-3845 11836 Patterson Road Huntersville, NC 28078	

**Total Actual emissions in TONS/YEAR:**

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.0100	1.63	19.64	1.37	---	0.8074	0.7733 [Toluene]
2021	0.0100	2.65	26.90	2.22	0.0100	0.9930	0.9391 [Toluene]
2020	0.0100	1.30	24.56	1.09	---	1.23	1.20 [Toluene]
2019	0.0100	1.32	27.14	1.10	---	1.86	1.83 [Toluene]
2018	0.0100	1.96	28.00	1.65	0.0100	2.06	1.57 [Toluene]

Review Engineer: Joseph Voelker  Review Engineer's Signature: _____ Date: _____	<p><b>Comments / Recommendations:</b>                  Issue 06542/T28                  Permit Issue Date:                  Permit Expiration Date:</p>
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## I. Introduction and Purpose of Application

Kurz Transfer Products, LP (Kurz) operates a hot stamping foils manufacturing plant in Lexington, Davidson County, North Carolina. The facility currently operates under Title V Permit No. 06542T27 issued November 17, 2023.

The primary operations at Kurz are rotogravure processes where various coating materials are applied onto a polyester film substrate.

### **Application No. 2900268.23B**

On June 14, 2023, Kurz was issued Permit No. 6542T26 in response to Application No. 2900268.23A by the North Carolina Department of Environmental Quality (NCDEQ), Division of Air Quality (DAQ) to construct and operate two new coating lines (ID No. ES10) that will exhaust to a new regenerative thermal oxidizer (ID No. RTO-3). Kurz also requested the ability to operate these new coating lines and existing coating lines exhausting to either the new RTO (ID no. RTO-3) or the existing RTO (ID No. RTO-1). However, to allow these new and sources to operate being controlled by the existing RTO (ID No. RTO-1) or to allow the existing sources to operate being controlled by the new RTO (ID No. RTO-3) would contravene or conflict with the monitoring and recordkeeping requirements in the existing permit, operation in these scenarios was restricted by permit conditions at Sections 2.2 A.2.a.i and a.ii until such a request could be processed as a significant modification pursuant to 15A NCAC 02Q .0516. As such, application No. 2900268.23A was processed as a Part 1 application pursuant to the requirements in 15A NCAC 02Q.0300 as indicated by 15A NCAC 02Q.0504(a).

At this time, Kurz is submitting a Part 2 Title V Air Quality Permit Application as required by Section 2.2 A.3 of Permit No. 6542T26<sup>1</sup> permit consistent with 15A NCAC 02Q .0501(b)(2), (c)(2) and 02Q .0504(c). In addition, Kurz is requesting the following modifications to Permit No. 6542T27<sup>1</sup>:

1. Addition of a federally enforceable, facility-wide emissions limitation of volatile organic compounds (VOC) to less than 250 tons per year
2. Removal of VOC emissions limitation of 244 tons per year for Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09
3. Removal of VOC emissions limitation of 40 tons per year for Emission Source ID No. ES10
4. Removal of the operating restriction in Section 2.2 A.2.a.i. Removal of this condition will allow Emission Source ID No. ES10 to exhaust to RTO-1 as a back-up operating scenario.
5. Removal of the operating restriction in Section 2.2 A.2.a.ii. Removal of this condition will allow Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09 to exhaust to RTO-3.

Note that Items 4 and 5 address those modifications that would have contravened or conflicted with the existing permit and therefore required processing pursuant to 15A NCAC 02Q .0501(c)(2).

This application (2900268. 23B) contains all applicable elements of the Part 1 application (2900268.23A) plus additional updates submitted to DAQ during review of the Part 1 application. Applicable documents from the Part 1 application like the PE Certification Form D5 and the Consistency Determination documentation were incorporated into this application by copy as these initial documents were determined to be valid for the Part 2 application.

As a Part 2 application submitted pursuant to 02Q .0504, this application will be processed as a significant modification pursuant to 15A NCAC 02Q .0516.

### **Application No. 2900268.24A**

On November 17, 2023, Kurz was issued Permit No. 6542T27 in response to Application No. 2900268.23C by the North Carolina Department of Environmental Quality (NCDEQ), Division of Air Quality (DAQ) to construct and operate one additional kettle washer. The new kettle washer was identified as ID No. ES11 and was permitted to allow construction for its exhaust to be routed to either regenerative thermal oxidizer RTO-1 (backup scenario) or RTO-3 (primary scenario).

However, to allow the new kettle washer to operate being controlled by the existing RTO (ID No. RTO-1) would contravene or conflict with the monitoring and recordkeeping requirements in the existing permit, operation in that scenario was restricted by a permit condition at Section 2.2 A.2.a.i until such a request could be processed as a significant modification pursuant to 15A NCAC 02Q .0516. As such, application No. 2900268.23C was processed as a Part 1 application pursuant to the requirements in 15A NCAC 02Q.0300 as indicated by 15A NCAC 02Q.0504(a).

<sup>1</sup> This permit application was received August 3, 2023, while operating under permit revision no. T26. Kurz is currently operating under permit revision no. T27 which was issued on November 17, 2023, in response to application no. 2900268.23C.

At this time, Kurz is submitting a Part 2 Title V Air Quality Permit Application as required by Section 2.2 A.3 of the current permit (revision no. T27) consistent with 15A NCAC 02Q .0501(b)(2), (c)(2) and 02Q .0504(c). In addition, Kurz is requesting the following modifications to Permit No. 6542T27:

1. Addition of a federally enforceable, facility-wide emissions limitation of volatile organic compounds (VOC) to less than 250 tons per year
2. Removal of VOC emissions limitation of 244 tons per year for Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09
3. Removal of VOC emissions limitation of 40 tons per year for Emission Source ID No. ES10 **and ES11**
4. Removal of the operating restriction in Section 2.2 A.2.a.i. Removal of this condition will allow Emission Source ID No. ES10 **and ES11** to exhaust to RTO-1 as a back-up operating scenario.
5. Removal of the operating restriction in Section 2.2 A.2.a.ii. Removal of this condition will allow Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09 to exhaust to RTO-3.

Note that these requests are identical to those in application no. 2900268.23B above with the exception of the additional reference to ES11 (i.e., the new kettle washer) in Items 3 and 4.

Note that Item 4 for the new kettle washer (ID No. ES11) address those modification(s) that would have contravened or conflicted with the existing permit and therefore required processing pursuant to 15A NCAC 02Q .0501(c)(2).

This application (2900268.24A) contains all applicable elements of the Part 1 application (2900268.23C) plus additional updates submitted to DAQ during review of the Part 1 application. Applicable documents from the Part 1 application like the PE Certification Form D5 and the Consistency Determination documentation were incorporated into this application by copy as these initial documents were determined to be valid for the Part 2 application.

As a Part 2 application submitted pursuant to 02Q .0504, this application will be processed as a significant modification pursuant to 15A NCAC 02Q .0516.

#### **Application No. 2900268. 23B and .24A consolidation**

Given the nature of the modifications addressed in these two applications, it was decided to consolidate these applications and process as a single TV permit modification with the ultimate goal of issuing a single permit (revision no. T28).

## **II. Chronology**

<b>Date</b>	<b>Description</b>
08/03/2023	Application was received and assigned Application No. 2900268.23B
08/03/2023	An acknowledgement letter sent via email stating:  Your air permit application (2900268.23B) for Kurz Transfer Products, LP, located in Davidson County, North Carolina was received by this division on August 3, 2023. This application submittal did contain all the required elements as indicated and has been accepted for processing. Your application will be considered complete as of August 3, 2023, unless informed otherwise by this office within 60 days.
01/08/2024	Application was received and assigned Application No. 2900268.24A
01/10/2024	An acknowledgement letter sent via email stating:  Your air permit application (2900268.24A) for Kurz Transfer Products, LP, located in Davidson County, North Carolina was received by this division on January 8, 2024. This application submittal did contain all the required elements as indicated and has been accepted for processing. Your application will be considered complete as of January 8, 2024, unless informed otherwise by this office within 60 days.
03/28/2024	An email was received from the responsible official of KURZ requesting the following: 1. Engine ES-EG be moved to the insignificant activities list as its PTE for all pollutants is less than the thresholds at 15A NCAC 02Q .0503(8) based on AP-42 emission factors for all pollutants except NOx and CO, whose calculations relied on the specification sheet for the NSPS JJJ certified engine operating at 500 hr/yr (DAQ/EPA policy for establishing PTE for emergency engines).

Date	Description
	2. Boiler ES-06 be moved to the insignificant activities list as its PTE for all pollutants is less than the thresholds at 15A NCAC 02Q .0503(8) based on AP-42 emission factors 3. A new engine be added to the insignificant activities list as its PTE for all pollutants is less than the thresholds at 15A NCAC 02Q .0503(8) based on AP-42 emission factors for all pollutants operating at 500 hr/yr (DAQ/EPA policy for establishing PTE for emergency engines).
04/01/2024	Draft permit and review sent to Winston-Salem Regional Office (WSRO) and to supervisor for review.
04/03/2024	Comments from the WSRO and supervisor were received. Only minor comments were received (e.g. typos) and incorporated into draft permit.
04/03/2024	Draft permit sent to Kurz for review. Only minor comments received and incorporated into draft permit.
04/04/2024	Phone conversation with Gary Butler to discuss the draft permit. We discussed why the PSD avoidance limit was 230 tpy instead of 250 tpy. I explained this was to minimize recordkeeping of all the small VOC emitting sources on site. He agreed with this approach. See 02Q .0317 discussion in Section IV below.
04/08/2024	Draft permit to be published on NCDEQ website for concurrent public and EPA review pursuant to TV permitting requirements.
05/08/2024	30-day public comment period scheduled ending.
05/23/2024	EPA's concurrent 45-day review period scheduled ending.

### III. Modification Description

#### **Modification as described in the Part 1 Application (No. 2900268.23A)**

As discussed in Section I above, the purpose of this Part 1 application was to construct and operate two new coating lines (ID No. ES10) that will exhaust to a new regenerative thermal oxidizer (ID No. RTO-3). Kurz also requested the ability to operate these new coating lines and existing coating lines exhausting to either the new RTO (ID no. RTO-3) or the existing RTO (ID No. RTO-1).

However, operation in these scenarios was restricted by permit conditions at Sections 2.2 A.2.a.i and a.ii until such a request could be processed as a significant modification pursuant to 15A NCAC 02Q .0516.

The permit review for Permit No. 06542T26 issued in response to Application No. 2900268.23A is included as Attachment A to this review document. It contains the exhaustive regulatory review of the original project and is still applicable except on the topics addressed explicitly below. For current purposes, the discussion below will be focused on the changes necessary to the existing permit. In general, if not explicitly discussed in Section IV below, the testing and monitoring, recordkeeping and reporting requirements in the existing permit are adequate to meet the TV permitting requirements pursuant to 15A NCAC 02Q .0508.

#### **Additional Modifications Requested in the Part 2 Application (No. 2900268.23B)**

As described in Section I above, Kurz is requesting the following:

1. Addition of a federally enforceable, facility-wide emissions limitation of volatile organic compounds (VOC) to less than 250 tons per year
2. Removal of VOC emissions limitation of 244 tons per year for Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09
3. Removal of VOC emissions limitation of 40 tons per year for Emission Source ID No. ES10
4. Removal of the operating restriction in Section 2.2 A.2.a.i. Removal of this condition will allow Emission Source ID No. ES10 to exhaust to RTO-1 as a back-up operating scenario.
5. Removal of the operating restriction in Section 2.2 A.2.a.ii. Removal of this condition will allow Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09 to exhaust to RTO-3.

Note that Items 1 through 3 specifically address VOC with respect to PSD. The net result is the facility-wide potential emissions of VOC will decrease. Items 4 and 5 simply are to remove the RTO-specific operating restrictions. The net result of the removal of these restrictions will be no changes in the potential or actual emissions of any pollutants.

Further discussion of these additional modifications will be discussed in context of the applicable regulations. As mentioned above for the modifications addressed in Application No. 2900268.23A, if not explicitly discussed in Section IV below, the testing and monitoring, recordkeeping and reporting requirements in the existing permit are adequate to meet the TV permitting requirements pursuant to 15A NCAC 02Q .0508.

**Modification as described in the Part 1 Application (No. 2900268.23C)**

As discussed in Section I above, the purpose of this Part 1 application was to construct and operate a new kettle washer (ID No. ES11) that will exhaust to a new regenerative thermal oxidizer (ID No. RTO-3) as the primary scenario, or the existing RTO (ID No ES09 in a backup scenario. However, operation in these scenarios was restricted by the permit condition at Sections 2.2 A.2.a.i until such a request could be processed as a significant modification pursuant to 15A NCAC 02Q .0516.

The permit review for Permit No. 06542T27 issued in response to Application No. 2900268.23C is included as Attachment B to this review document. It contains the exhaustive regulatory review of the original project and is still applicable except on the topics addressed explicitly below. For current purposes, the discussion below will be focused on the changes necessary to the existing permit. In general, if not explicitly discussed in Section IV below, the testing and monitoring, recordkeeping and reporting requirements in the existing permit are adequate to meet the TV permitting requirements pursuant to 15A NCAC 02Q .0508.

**Additional Modifications Requested in the Part 2 Application (No. 2900268.24A)**

As described in Section I above, Kurz is requesting the following:

1. Addition of a federally enforceable, facility-wide emissions limitation of volatile organic compounds (VOC) to less than 250 tons per year
2. Removal of VOC emissions limitation of 244 tons per year for Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09
3. Removal of VOC emissions limitation of 40 tons per year for Emission Source ID No. ES10 **and ES11**
4. Removal of the operating restriction in Section 2.2 A.2.a.i. Removal of this condition will allow Emission Source ID No. ES10 **and ES11** to exhaust to RTO-1 as a back-up operating scenario.
5. Removal of the operating restriction in Section 2.2 A.2.a.ii. Removal of this condition will allow Emission Source ID Nos. ES01, ES02, ES03, ES0S, ES07, and ES09 to exhaust to RTO-3.

Note that Items 1, 2 and 5 are completely redundant with application no. 2900268.23B. Items 3 and 5 are partially redundant in that they address ES10. Addressing ES11 is the only new part of the modification requests under Items 3 and 5.

Note that Items 1 through 3 specifically address VOC with respect to PSD. The net result is the facility-wide potential emissions of VOC will decrease. Items 4 and 5 simply are to remove the RTO-specific operating restrictions. The net result of the removal of these restrictions will be no changes in the potential or actual emissions of any pollutants.

Further discussion of these additional modifications will be discussed in context of the applicable regulations. As mentioned above for the modifications addressed in Application No. 2900268.23A, if not explicitly discussed in Section IV below, the testing and monitoring, recordkeeping and reporting requirements in the existing permit are adequate to meet the TV permitting requirements pursuant to 15A NCAC 02Q .0508.

**Addition of a new emergency engine to the insignificant activities list**

In an email dated 03/28/2024, Kurz requested the addition of a new emergency generator to the insignificant activities list. The generator supplies back-up power primarily to the coating room roof top exhaust fan, and the offices in the event of a power outage. Fuel is natural gas (NG). The generator has a maximum power output of 36 kilowatts (kW). Based on AP-42, Section 3.2 emission factors for NG-fired rich-burn reciprocating engines and operating for 500 hours per year ( consistent with current DAQ and EPA permitting policy), the potential-to-emit (PTE) for all pollutants is less than 5 tons per year and therefore meet the definition of “insignificant activity because of size or production rate pursuant to 15A NCAC 02Q .0503(8).

It will appear in the insignificant activities list as follows:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
IES-EG-2 NSPS JJJJ MACT ZZZ	One natural gas-fired emergency generator (36 kilowatts)	NA	NA

### Emissions Discussion

The following table shows the potential emissions estimates before the two modifications, the contribution from each modification as represented in each application, the contribution from both modifications, and the potential emissions of the facility after the modification. Methanol, MIBK, and Xylene were accounted for in a previous December 2013 application. Kurz no longer uses coating products that contain these pollutants, hence the PTE for these pollutants is now 0 tpy each. Also, note that after incorporation of the requested facility-wide PSD avoidance condition for VOC, the facility-wide PTE will be less than 250 tpy. See PSD discussion in Section IV below. Facility-wide emission rates provided in the table below account for all permitted and insignificant sources operating simultaneously with the RTOs operating with a 95% destruction removal efficiency.

Table 1  
Facility-Wide Emissions  
  
Kurz Transfer Products, LP  
Lexington, North Carolina

Pollutants	Uncontrolled Emissions - Prior to Modification (tpy)	Controlled Emissions - Prior to Modification (tpy)	App 23 A - Uncontrolled Emissions - New Sources (tpy)	APP 23 A - Controlled Emissions - New Sources (tpy)	App 23 C - Uncontrolled Emissions - New Sources (tpy)	APP 23 C - Controlled Emissions - New Sources (tpy)	Both Apps - Uncontrolled Emissions - New Sources (tpy)	Both Apps - Controlled Emissions - New Sources (tpy)	Uncontrolled Emissions - After Modifications (tpy)	Controlled Emissions - After Modifications (tpy)
PM (TSP)	2.74	2.74	0.39	0.39			0.39	0.39	3.13	3.13
PM10	1.96	1.96	0.39	0.39			0.39	0.39	2.35	2.35
PM2.5	1.37	1.37	0.39	0.39			0.39	0.39	1.76	1.76
SO <sub>2</sub>	0.18	0.18	0.031	0.031			0.03	0.03	0.21	0.21
CO	10.91	10.91	4.33	4.33			4.33	4.33	15.24	15.24
NO <sub>x</sub>	17.88	17.88	5.153	5.15			5.15	5.15	23.03	23.03
Lead	6.44E-05	6.44E-05	2.58E-05	2.58E-05			0.00	0.00	0.00	0.00
VOCs	>250	<250	2,803	56.3	239.0	11.9	3042.48	68.29	>250	<250
CO <sub>2e</sub>	13,261	13,261	6,220	6,220			6220.28	6220.28	19481.3	19481.3
Ethyl Acetate*	293	5.86	169	3.38	47.70	2.39	216.94	5.77	510.19	11.64
<sup>(2)</sup> Methanol	36.7	0.73	0	0			0.00	0.00	0.00	0.00
MEK*	1,188	23.8	903	18.1	191.0	9.6	1093.98	27.61	2282.39	51.38
<sup>(2)</sup> MIBK	69.4	1.39	0	0			0.00	0.00	0.00	0.00
Toluene	629	12.57	26	0.53			26.28	0.53	655.02	13.10
<sup>(2)</sup> Xylene	11.0	0.22	0	0			0.00	0.00	0.00	0.00
TDI	0.92	0.018	0.88	1.75E-02			0.88	0.02	1.80	0.04
Hazardous Air Pollutants (HAPs)	--	14.94	--	0.54			--	0.54	--	13.14

Facility-wide emission rates provided in Table above account for all permitted and insignificant sources operating simultaneously with the RTOs operating with a 95% destruction or removal efficiency (DRE) (i.e., the MACT JJJJ required DRE).

## IV. Regulatory Review

As mentioned in Section III above, if not explicitly discussed below, the testing and monitoring, recordkeeping and reporting requirements in the existing permit are adequate to meet the TV permitting requirements pursuant to 15A NCAC 02Q .0508.

### Review for sources operating under Section 2.1 A of the draft permit

Table IV

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)		
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)		
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)	OR	OR
ES09	One automated kettle washer with integral solvent recovery condenser	RTO-3	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)
ES10 MACT JJJJ	Coating operations consisting of two coating lines (LM802 and LM803) operating within a permanent total enclosure (PTE-4)		
ES11	One automated kettle washer with integral solvent recovery condenser		

### 15A NCAC 02Q .0508(j)(1): OPERATING SCENARIOS

This rule requires:

- (j) A permit shall state the terms and conditions for reasonably anticipated operating scenarios identified by the applicant in the application. These terms and conditions shall:
  - (1) require the permittee, contemporaneously with making a change from one operating scenario to another, to record in a log at the permitted facility a record of the operating scenario in which it is operating;

As discussed in the permit applications Kurz has requested to have the flexibility to route the emission sources presented in Table IV above to either RTO-3 or RTO-1 as needed. By design only RTO-3 can handle the total exhaust flow from all the emission sources. The intent is for RTO-1 to only operate as a backup. Control by RTO for these sources is necessary for either 02D .1111 (i.e., MACT JJJJ), 02Q .0317 (i.e., PSD avoidance) or both. Thus, it is necessary to have explicit recordkeeping addressing these operating scenarios to ensure compliance with these rules. To this end the following language will be added to the permit:

#### 15A NCAC 02Q .0508(j)(1): OPERATING SCENARIOS

- a. The Permittee, contemporaneously with making a change from one operating scenario to another, shall record in a logbook (written or electronic format) the scenario under which it is operating.
- b. An operating scenario is defined for purposes of this condition as follows: For each emission source in Table IV above, the RTO that is controlling its emissions.

The implications of this operating scenario tracking and recordkeeping will be discussed in the 02D .1111 and 02Q .0317 discussion below.

### 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

(40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

As discussed in Attachment A, MACT JJJJ defines the affected source as the collection of “all web coating lines at the facility” and as a result it was concluded that all the web coating lines regardless of construction date are “considered existing affected sources.”

Unrelated to the modification discussed in Attachment A, MACT JJJJ was revised effective as of July 9, 2020. The revised rule clarified that the rule intent was that for affected sources using capture and control systems for compliance with the emission standards (which is the compliance option chosen by the Permittee for all web coating lines), deviations of the capture and control system parameters alone were not violations of the emission standards. The emission standard is determined on a monthly basis. Other substantial changes to the rule affecting this facility include:

- Changes associated with the vacatur of the MACT startup, shutdown and malfunction (SSM) provisions at 40 CFR 63.6. Starting July 9, 2021, the Permittee must be in compliance with the standards at all times. The vacatur had many other implications in this rule (and hence to the permit conditions) including the recordkeeping and reporting requirements.
- Five-year testing cycle: The rule now requires 5-year periodic testing of the thermal oxidizers.
- Electronic reporting: the rule revised the electronic reporting requirements.
- Revised temperature sensor validation procedures
- The option to use of a “Control Destruction Efficiency Curve” pursuant to §63.3360(e)(4),

For the new coating lines first permitted in permit No. Permit No. 06542T26 as discussed in Attachment A, a MACT JJJJ condition consistent with the 2020 rule revision was included in Section 2.1 D of the permit.

For the existing coating lines, the MACT JJJJ condition at Section 2.1 A.1 of the existing permit was not updated, as such a revision is required to be processed with the inclusion of public noticing procedures (see 15A NCAC 02Q .0517). As the current application is being processed with public noticing procedures, the revisions will be made at this time. To accomplish this, both existing MACT JJJJ conditions will be combined and made current at Section 2.1 A.4. Thus, all coating lines will be subject to the same requirements under the revised 2020 rule in the revised draft permit.

In addition to the changes discussed above, the following changes to the existing MACT JJJJ requirements in the existing permit will be made.

#### Monitoring parameter compliance

The current permit included specific reference to the firebox temperature values (i.e., operating limits) and instructions on when and how those values need to be updated via permit application procedures. Those procedures are not explicit MACT JJJJ or Title V requirements but rather were included in previous permits pursuant to the DAQ permitting policy at the time to facilitate practical enforceability. Upon review, those procedures introduced “time lags” between the compliance requirements of the rule and the compliance requirements in the permit as well as additional administrative effort on behalf of Kurz and the DAQ. To remedy this, the permit was revised to add clarification language to the existing rule requirements and relatively simple additional recordkeeping and reporting requirements to the already existing recordkeeping and reporting requirements.

Representative language of the changes is discussed below:

#### Testing [15A NCAC 02Q .0508(f)]

m. The following testing requirements apply:

\* \* \*

iii. For each RTO and coating line, the Permittee shall conduct a performance test once every 5 years according to 40 CFR 63.3360(e). [40 CFR 63.3360(a)]

\* \* \*

vii. Multiple performance tests may be required to obtain all permitted representative normal operating conditions (i.e., operating scenarios as defined at Section 2.1 A.5) consistent with 63.7(e).

The condition m.iii is an explicit requirement of the rule that requires a 5-year testing cycle. As discussed above, this is a new requirement required by the 2020 revisions. The condition m.vii is being added to clarify and make explicit that since Kurz is permitted to operate in multiple scenarios if may be necessary to conduct multiple tests. Note that this condition leverages the “operating scenario” as defined at Section 2.1 A.5, which addresses 15A NCAC 02Q .0508(j) discussed above.

#### RTO Monitoring and Operating Limits [15A NCAC 02Q .0508(f)]

g. The following monitoring requirements apply:

i. For each thermal oxidizer, the average combustion temperature in any 3-hour period (i.e., 3-hour rolling average) shall not fall more than 50°F below the combustion temperature limit established during the most recent performance test. [40 CFR 63.3321(a), Table 1 to 40 CFR Part 63 Subpart JJJJ]

ii. Operation below the DAQ approved minimum operating limit in i above shall constitute a deviation of the established operating limit except during a performance test conducted to determine compliance with an emission limit or to establish a new operating limit. Operating limits must be confirmed or reestablished during performance tests.

iii. The operating limits in i above become final upon review and approval of the test report submitted to the DAQ pursuant to Section 2.1 A.4.q.ii below.

Note condition g.i is an explicit requirement of the rule that triggers the limit based on the most recent test. The language in g.ii is clarification language to state the value established (or confirmed if it is the same as the effective parameter value prior to the test) during the test becomes effective immediately upon completion of the test. Previously, it was ambiguous as to whether to which parameter was in effect until the permit was revised, which could be months. The language in g.iii is also clarification language. It simply states that the value does not become final until the test is submitted and reviewed by the DAQ. Section 2.1 A.4.q.ii mentioned above references the test results reporting requirement as required by the rule. Thus, for conservatism, the Permittee may want to continue to operate at the previous parameter value if during the test the parameter value is less stringent (i.e., lower combustion temperature) than the existing effective parameter value.

The test reporting language is also being revised with this revised compliance approach as follows:

**Performance Test Reports**

- q. The following performance testing reporting requirements apply:  
\* \* \*
- ii. The performance test reports shall also be submitted to the DAQ pursuant to General Condition D within 60 days after the date of completing each performance test. [40 CFR 63.10(d)(2)]
  - iii. The test report shall explicitly state the applicable 3-hour average combustion temperature limit confirmed or established as a result of the performance test and the operating scenarios as defined in Section 2.1 A.5.b below for which the test(s) is conducted.
- \* \* \*

The condition q.ii above has already been discussed. The condition q.iii. clarifies the information that should be included in the test report. This information will allow the DAQ to make a determination of the performance test with respect to which operating scenario(s) was tested and the operating parameter value. That parameter will then be used to determine compliance moving forward for a given source operating in the given scenario. That parameter value will then be used for the associated recordkeeping and reporting discussed below.

**Recordkeeping** [15A NCAC 02Q .0508(f)]

- o. The Permittee shall  
\* \* \*
- v. maintain for each RTO and each operating scenario as defined in Section 2.1 A.5.b below, the following records consistent with iv above:
    - (A) the 3-hour average temperature limits applicable over the previous 5 years; and
    - (B) the date of the performance test on which each 3-hour average temperature limit in i above was established.
  - vi. maintain, for each month, records of the operating scenarios as defined in Section 2.1 A.5.b below.

This specific recordkeeping is being added to ensure that upon inspection it is clear which operating parameter value was in effect for any coating line operating under any given scenario at any given time. In other words, this recordkeeping should allow for practical enforceability by the DAQ.

Additionally, the semi-annual reporting requirement under the rule is being revised to include following:

**Reporting** [15A NCAC 02Q .0508(f)]

**Semiannual reporting**

- p. The following semiannual reporting requirements apply:  
\* \* \*
- iv. The summary report shall also include the information in Section 2.1 A.4.o.v and vi above.
- \* \* \*

By including a summary of the records discussed above, the DAQ can assess compliance with the RTO operating limits by a review of reports, thus allowing for the assessment of compliance even during periods between compliance inspection visits.

In summary, this change in approach to ensuring compliance with the RTO operating limits required by the rule will facilitate practical enforceability and minimize administrative effort on behalf of the DAQ and Kurz.

Continued compliance is expected with this rule.

### **15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

The current permit contains two PSD avoidance conditions:

Section 2.1 A.2 has a 244 tpy VOC limitation and addresses only ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09  
Section 2.1 D.5 has a 40 tpy VOC limitation and addresses only ID No. ES10 and ES11

Note ES08 nor the insignificant activities are included under the current avoidance limits.

To simplify future modifications and since the facility's major VOC sources are captured and controlled by thermal oxidation via the RTOs (ID Nos. RTO-1 or RTO-3) the facility has requested a single PSD avoidance limit of 250 tpy of VOC. Thus, all facility-wide sources of VOC will be covered.

If all sources of VOC emissions were to be quantified on a monthly basis, the PSD avoidance limit could be set to 250 tpy with the appropriate monitoring, recordkeeping and reporting. However, because it is expected that Kurz will achieve compliance with the PSD avoidance limit by a wide margin, a more stringent 230 tpy limit will be imposed with a simplified approach with respect to monitoring and recordkeeping as explained below.

#### **RTO controlled sources**

For all sources controlled by an RTO, the Permittee shall be required to do the following:

- The Permittee shall comply with all monitoring and recordkeeping requirements under MACT JJJJ for the RTOs and PTE to verify the PTEs are capturing all emissions, and the RTOs are operating properly.
- The Permittee shall keep records of the VOC content in the coating materials and shall calculate the VOC emissions after control each month.
- The amount of VOCs entering a RTO 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. The VOC emissions ( $VOC_{out}$ ) shall be calculated as follows:

$$VOC_{out} = (VOC_{in}) \times (1 - CE)$$

where CE equals the control efficiency percent divided by 100 percent.

- The CE for a given month shall be the CE of the RTO with the lowest CE as determined from an approved performance test according to MACT JJJJ requirements.
- For a given RTO, only the most recent performance test result may be considered.
- The CE as determined from an approved performance test as required by MACT JJJJ shall be available for use starting the month after the performance test is completed.
- For a given month that an operating limitation deviation occurs as defined under MACT JJJJ, the Permittee shall calculate  $VOC_{out, RTO}$  using the mass balance approach consistent with MACT JJJJ requirements.
- The Permittee shall also calculate for each month a rolling 12-month total of  $VOC_{out, RTO}$  including the preceding 11 months.
- The results of the calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format) and made available to an authorized representative upon request.

Note that the proposed methodology does not require determining which VOC material is used in a particular coating line or kettle washer, or which coating line or kettle washer is routed to a particular RTO. This is probably the most straightforward, conservative and simple approach.

#### **Uncontrolled sources**

No monitoring or recordkeeping is required for all other sources of VOC emissions not controlled by the RTOs. These sources are identified in the insignificant activities list and include the following:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>
IWSD	One waste solvent distillation unit
IAK83	One vacuum chamber installed on the metalizing process
IAK801	One vacuum chamber associated with coating line LM801
IESCC	Cylinder cleaner
IWK82 and IWK06	Two conditioners
IESPW	Parts washer
IES-RDLH	R&D Lab Hood
IES-T1	Single compartment underground storage tank, MEK (12,000 gallon capacity)
IES-T8	Single compartment underground storage tank, Ethanol (12,000 gallon capacity)
IES-T4-3	Double compartment underground storage tank, IPA and Propyl Cellosolve (8,000 and 2,000 gallon capacity respectively)
IES-T5-7-2	Triple compartment underground storage tank, Toluene, Ethyl Acetate and Acetone (4,000 gallon capacity each)
IES-T6	Single compartment underground storage tank, Isopar (4,000 gallon capacity)

The permit application includes potential emission estimates for these sources which totaled approximately 11 tpy of VOC.

#### **Combustion sources**

No monitoring or recordkeeping is required for the small boiler and small emergency engines (ID Nos. IES06 and IES-EG and IES-EG2). The combined PTE for these sources is less than 1 tpy of VOC.

In summary, the 250 tpy avoidance limit will conservatively be lowered by 20 tpy to account for the approximately 12 tpy total PTE of the sources for which monitoring and recordkeeping will not be required and to simplify the recordkeeping requirement. By using 20 tpy instead of 12 tpy, Kurz will be able to make other small changes to the insignificant activities list, such as adding other small combustion sources, without having to revise the PSD avoidance condition.

Compliance with this rule is expected.

#### **15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

Section 2.2 A.2 of the existing permit has the following operating restrictions.

##### **15A NCAC 02Q .0308(a)(1): OPERATING RESTRICTIONS**

- a. The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0500.
  - i. For the coating lines (**ID No. ES10**) and kettle washer (**ID No. ES11**), the Permittee shall not route emissions to the RTO (**ID No. RTO-1**).
  - ii. For the sources (**ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09**), the Permittee shall not route emissions to the RTO (**ID No. RTO-3**).

The current Part 2 applications (2900268.23B and 24A) request the following:

- Removal of the operating restriction in Section 2.2 A.2.a.i. Removal of this condition will allow Emission Source ID No. ES10 and ES11 to exhaust to RTO-1 as a back-up operating scenario.
- Removal of the operating restriction in Section 2.2 A.2.a.ii. Removal of this condition will allow Emission Source ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09 to exhaust to RTO-3.

Permit No. 6542T26 and T27 issued in response to Application No. 2900268.23A and .23C allowed for the construction of the equipment and ductwork to allow for such emissions control but included the operating restrictions as they contravened or conflicted with the existing testing and monitoring requirements of the permit at that time. The permit reviews for Application Nos. 2900268.23A and 23C (the Part 1 applications) and are included as Attachments A and B to this review.

The testing and monitoring requirements mentioned above are found at the existing MACT JJJJ condition and PSD avoidance condition at Section 2.1 A.1 and 2 respectively. Those permit conditions are being substantially revised at this time to address the removal of these operating restrictions and are discussed elsewhere in this review. See the 02D .1111 and 02Q .0317 discussions for further details.

In summary, as requested in the two Part 2 applications, these restrictions will be removed from the revised permit.

## V. NSPS, NESHAPS, PSD, Attainment Status, 112(r), Toxics and CAM

### NSPS

No New Source Performance standards (NSPS) apply to the proposed modification. See Attachments A and B. However, 40 CFR Part 60 Subpart JJJJ – “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines” applies to the emergency generators (ID Nos. IES-EG and IEG-2)

### NESHAP/MACT

The facility is a major source of HAP emissions. The coating lines are subject to 40 CFR 63, Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating.’ See discussion in Section IV above and Attachment A.

40 CFR 63, Subpart DDDDD “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters” applies to the boiler (IES-06).

### PSD/Attainment status

Davidson County is in attainment for all pollutants.

Kurz is currently considered to a major source under PSD as it has potential emissions of VOC over 250 tpy. In the current application Kurz is requesting a facility-wide PSD Avoidance Limitation for VOC. After the modification the facility will be considered a PSD minor facility. See Section IV above for full discussion.

Davidson County has triggered the minor source baseline date for PM<sub>2.5</sub>, PM<sub>10</sub> and NO<sub>x</sub>. Any emission increases associated with this modification are addressed in the Part 1 applications. See Attachments A and B.

### CAM

The modifications addressed in this application do not trigger a CAM review at this time. See Attachments A and B.

### 112r - Risk Management Program (RMP) (15A NCAC 2D .2100)

The Permittee states on Form A3 of the applications that no chemicals are stored at the facility above the 112(r) thresholds.

### Toxics

See discussion in Section IV of Attachments A and B for the applicability of 02D .1100 and 02Q .0700 (state enforceable only toxics rules) to this modification. No changes are necessary to the existing permit.

## VI. Compliance History

As stated in the most recent compliance inspection report conducted by Jim Hafner of the WSRO on July 6, 2023:

**Based on records review and the site visit on July 6, 2023, Kurz Transfer Products, LP appears to be operating in compliance with all Air Quality standards and regulations.**

The five-year violation history as included in the inspection report is as follows:

<u>Five Year Violation History:</u>			
<u>Date</u>	<u>Letter Type</u>	<u>Rule Violated</u>	<u>Violation Resolution Date</u>
03/06/2020	NOV/NRE	Permit Late Title V ACC	03/12/2020
03/29/2019	NOV	Permit Late Title V ACC	03/29/2019

## VII. Changes Implemented in Revised Permit

See permit Table of changes. Will update here upon completion of supervisor review.

## VIII. 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 the agreement between the DAQ and the EPA, 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 pursuant 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 and local program at or before the time notice provided to the public under 02Q .0521 above. Current NC permitting policy is to provide notice to all local programs in NC and all contiguous states regardless of their status as an affected state under 02Q .0522.

## IX. PE Seal

Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” specifically 02Q .0112(a), a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

- (1) design;
- (2) determination of applicability and appropriateness; or
- (3) determination and interpretation of performance of air pollution capture and control systems.

A Form D5 (Technical Analysis to Support Permit Application) was submitted with the Part I applications (Application Nos. 2900268.23A and 2900268.24A) sealed by Matthew Wike, PE, license no. 029652. See Attachments A and B. A review of the NC Board of Examiners for Professional Engineers and Surveyors website shows the license to be “current.”

## X. Zoning

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0507(d)(1) if the air permit application involves a new facility or the expansion of an existing facility.

NCGS 143.215.108(f) prohibits the Division from acting upon the application until it has received a zoning consistency determination from each local government agency requested to make a determination, or the applicant submits a certified (or clerk stamped and signed) request and 15 days have passed since the application was received by the clerk.

### Application No. 2900268.23B

A FedEx delivery confirmation was received via email by this office on March 7, 2023, showing the request for determination was delivered to the Davidson County Planning and Zoning Office on February 21, 2023, for the associated Part 1 application (application no. 2900268.23A). On March 22, 2023, a zoning consistency determination was received via mail to Winston Salem Regional Office from the Davidson County Planning and Zoning Office dated March 3, 2023, stating, “the proposed operation is consistent with applicable zoning ordinances.”

### Application No. 2900268.24A

A FedEx delivery confirmation was received via email on October 16, 2023, by this office showing the request for determination was delivered to the Davidson County Planning and Zoning Office on September 29, 2023, for the associated Part 1 application (application no 2900268.23C). On November 15, 2023, a zoning consistency determination was received via email from the Davidson County Planning and Zoning Office via Kurz dated November 15, 2023, stating, “the proposed operation is consistent with applicable zoning ordinances.”

## XI. Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

*To be determined upon completion of public noticing procedures.*

# **ATTACHMENT A**

Permit review for permit no. 06542T26  
(Application no. 2900386.23A)

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

## Application Review

**Issue Date:** June 16, 2023

**Region:** Winston-Salem Regional Office  
**County:** Davidson  
**NC Facility ID:** 2900268  
**Inspector's Name:** Jim Hafner  
**Date of Last Inspection:** 03/23/2022  
**Compliance Code:** 3 / Compliance - inspection

**Facility Data**

Applicant (Facility's Name): Kurz Transfer Products, LP

Facility Address:  
 Kurz Transfer Products, LP  
 4939 North NC Highway 150  
 Lexington, NC 27295

SIC: 2771 / Greeting Card Publishing  
 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, .1100, .1111  
 02Q .0308, .0317, .0504, .0706  
**NSPS:** No  
**NESHAP:** MACT JJJJ  
**PSD:** NO  
**PSD Avoidance:** Yes  
**NC Toxics:** evaluation pursuant to G.S. 143-215.107(a)(5)b

**112(r):** No  
**Other:**

**Contact Data**

**Facility Contact**

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 CEO  
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 150  
 Lexington, NC 27295

**Authorized Contact**

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 Lexington, NC 27295

**Technical Contact**

Gary Butler  
 Environmental, Health &  
 Safety Manager  
 (704) 927-3845  
 11836 Patterson Road  
 Huntersville, NC 28078

**Application Data**

Application Number: 2900268.23A  
 Date Received: 02/20/2023  
 Application Type: Modification  
 Application Schedule: TV-Sign-501(b)(2) Part I  
 Existing Permit Data  
 Existing Permit Number: 06542/T25  
 Existing Permit Issue Date: 08/11/2020  
 Existing Permit Expiration Date: 07/31/2025

**Total Actual emissions in TONS/YEAR:**

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	0.0100	2.65	26.90	2.22	0.0100	0.9930	0.9391 [Toluene]
2020	0.0100	1.30	24.56	1.09	---	1.23	1.20 [Toluene]
2019	0.0100	1.32	27.14	1.10	---	1.86	1.83 [Toluene]
2018	0.0100	1.96	28.00	1.65	0.0100	2.06	1.57 [Toluene]
2017	0.0100	1.65	26.00	1.38	0.0100	1.77	1.30 [Toluene]

**Review Engineer:** Joseph Voelker

**Review Engineer's Signature:** **Date:** 06/14/2023

**Comments / Recommendations:**

Issue 06542/T26  
 Permit Issue Date: 06/14/2023  
 Permit Expiration Date: 07/31/2025

## I. Introduction and Purpose of Application

Kurz Transfer Products, LP (Kurz) operates a hot stamping foils manufacturing plant in Lexington, Davidson County, North Carolina. The facility operates under Title V permit No. 06542/T25 issued August 11, 2020.

The primary operation at Kurz are rotogravure processes where various coating materials are applied onto a polyester film substrate. The purpose of this application is to request an air permit to construct and operate two new coating lines that will exhaust to a new regenerative thermal oxidizer (RTO-3). Kurz is also requesting the ability to operate the new and existing coating lines exhausting to either the new RTO or the existing RTO (ID No. RTO-1). This is fully described in Section III below.

It will be shown that this project is a significant modification as defined under the TV permitting rules (15A NCAC 02Q .0500). However, as the final permit application request, which includes requesting operating restrictions, does not contradict or contravene any existing permit conditions, this application will be processed at Kurz's request under the state-only permitting rules (15A NCAC 02Q .0300) and consistent with 15A NCAC 02Q .0501(b)(2) and 02Q .0504.

## II. Chronology

Date	Description
February 20, 2023	Application was received and assigned Application No. 2900268.23A.
February 24, 2023	An ADD INFO email was sent to KURZ stating that the application requests certain modifications that cannot be addressed in a two-step fashion pursuant to 02Q .0504. The applicant was requested to clarify which modifications it would like to pursue.
February 27, 2023	A revised A Form and E5 Form were received via mail in the Winston Salem Regional Office. The forms now reflect the correct responsible official, Thomas Hertlein, CEO.
March 1, 2023	An addendum was received via email from KURZ clarifying which modifications to process at this time. The Permittee has agreed to operating restrictions on aspects of the modification that would otherwise contravene or conflict with conditions in the existing permit.
March 7, 2023	A FedEx delivery confirmation was received via email by this office showing the application and a request for a zoning consistency determination was delivered to the Davidson County Planning and Zoning Office on February 21, 2023.
March 09, 2023	An acknowledgment letter was sent to the Kurz via email stating the application was complete as application submittal did contain all the required elements (except the ePayment) and has been accepted for processing.
March 09, 2023	Application fee received via ePayments.
March 22, 2023	A zoning consistency determination was received via mail to Winston Salem Regional Office from the Davidson County Planning and Zoning Office stating the proposed operation is consistent with applicable zoning ordinances.
May 5, 2023	An ADD INFO email was sent requesting the emission calculations in spreadsheet format to facilitate review.
May 5, 2023	The information requested on May 5, 2023 was received via email.
May 5, 2023	An ADD INFO email was sent asking if the B and D1 forms properly accounted for all HAP/TAP and criteria emissions.
May 9, 2023	Revised D1 form and supporting calculations in PDF form were received in response to the May 5, 2023 ADD INFO email above. These data upon review were incomplete. These data were supplanted by the data submitted on May 26, 2023
May 23, 2023	An email from Kurz was received stating the following:  "I will be sending you new insignificant activity emissions data later today. Also wanted to confirm with you the exhaust scenario question you asked last week. I confirmed with Kurz that all coaters that currently exhaust to RTO-1 will exhaust to RTO-3 along with the two new coaters. That will be their primary exhaust scenario. RTO-1 will remain onsite to serve as a back-up exhaust. Ductwork will be in place to allow the two new coaters to exhaust to RTO-1 but only as a back-up scenario when RTO-3 is not operating."

May 26, 2023	Revised D1 form and Table 1A from the application in PDF form and supporting calculations in spreadsheet form were received in response to the May 5, 2023 ADD INFO email above.
June 6, 2023	Draft permit was sent to Kurz via email.
June 6, 2023	A request to revise the monitoring parameters in Section 2.1 A.1.f.i for RTO-1 and RTO-2 was received via email.
June 13, 2023	Revised draft permit was sent to Kurz via email.
June 14, 2023	An email from Kurz was received stating: "I am in agreement with the changes you have added to the draft."

### III. Modification Description

#### Application No. 2900386.23A

The table below summarizes the coating operations, permanent total enclosures and control devices currently operating at the Kurz facility that will be affected by the proposed modification.

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (20.8 million Btu per hour maximum heat input rate)
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)		
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)		
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)		
ES09	One automated kettle washer with integral solvent recovery condenser		
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)		

The permittee would like to add two new coating lines (LM802 and LM803) operating in a permanent total enclosure (as defined in MACT JJJJ) as emission source (ID No. ES10) and a new RTO (ID No. RTO-3) as follows.

Emission Source ID Nos.	Emission Source Description	Control Device ID No	Control Device Description
ES01	Coating lines LM06 and LM81 operating within permanent total enclosure PTE-1	*RTO-1 or RTO-3	Natural gas-fired RTO with 16.0 MMBtu/hr maximum heat input rate Or Natural gas-fired RTO with 12.0 MMBtu/hr maximum heat input rate
ES02	Mixing operations consisting of 7-20 mixing stations operating with PTE-1		
ES03	Parts cleaning tank operating with PTE-1		
ES05	Coating line LM84 operating within permanent total enclosure PTE-2		
ES07	Parts cleaning tank operating with PTE-2		
ES09	One automated kettle washer with integral solvent recovery condenser		
ES10	Coating lines LM802 and LM803 operating within permanent total enclosure PTE-4	*RTO-1 or RTO-3	Natural gas-fired RTO with 16.0 MMBtu/hr maximum heat input rate Or Natural gas-fired RTO with 12.0 MMBtu/hr maximum heat input rate

The following narrative describes the current and proposed operations.

The Kurz facility is currently permitted (non-exempt) under North Carolina Department of Environmental Quality (NCDEQ) Division of Air Quality (DAQ) Air Permit Number 06542T25 to operate the following process equipment:

- Three coating lines (LM06, LM81, and LM84) that exhaust to a 16.0 million Btu per hour (MM Btu/hr) natural gas-fired regenerative thermal oxidizer (RTO-1). Coating lines LM06 and LM81 are permitted as Emission Source ID No. ES01 and Coating line LM84 is permitted as Emission Source ID No. ES05;
- Mixing operations consisting of 7-20 mixing stations (ES02) that exhausts to RTO-1;
- Two parts cleaning tank operations (ES03 and ES07) that exhausts to RTO-1;
- One coating line (LM801, ID No. ES08) that exhausts to a 5.0 MM Btu/hr natural gas-fired RTO (RTO-2).
- One automated kettle washer (ES09) with integral solvent recovery condenser that exhausts to RTO-1;
- Natural gas/No. 2 fuel oil-fired 4.184 MM Btu/hr boiler (ES06); and
- Natural gas-fired 81 horsepower emergency generator (ES-EG).

In 2018, Kurz replaced the 20.8 MM Btu/hr burner on RTO-1 with four 4.0 MM Btu/hr burners so the current maximum heat input rating of 16.0 MMBtu/hr is updated in this submittal. As a conservative measure, no reduction in natural gas combustion emissions are accounted for in the facility-wide emissions from the burner replacement.

Each of the coating lines, parts cleaning tanks, kettle washer, and mixing operations operate within a permanent total enclosure (PTE).

The two proposed coating lines (LM802 and LM803) will both exhaust to the new RTO (ID No. RTO-3), fired by natural gas only with a maximum heat input rating of 12.0 MMBtu/hr. The two new coating lines will also have ductwork installed to allow for their exhaust to be routed and controlled by RTO-1.

Kurz also plans to modify the capture and duct systems for all the existing sources (ID Nos. ES01 through ES09) that are currently routed to the existing RTO-1 to allow those sources to exhaust to either the existing RTO-1 or the proposed new RTO-3. No changes in actual or potential controlled emissions from these proposed alternative exhaust scenarios will occur with this part of the modification since the same control efficiency is estimated for the proposed RTO-3 as the existing RTO-1. Kurz's facility-wide emissions will only be modified by the additional pollutants expected from the two new coating lines.

Coating lines LM06 and LM81 each have a maximum flow rating of 10,000 cubic feet per minute (cfm). Coating lines LM84, and both proposed coating lines, LM802 and LM803, have a combined maximum flow rating of 20,000 cfm. RTO-1 is designed to handle an inlet exhaust flow rate of up to 40,000 and RTO-3 will have a maximum inlet flow rating of 80,000 cfm.

Though RTO-1 will serve as a back-up control device when RTO-3 is not operating, it cannot handle the simultaneous exhaust from five coating lines like RTO-3. Therefore, Kurz will not exhaust more than three coating lines simultaneously to RTO-1 while it is operating as the back-up control device. High temperature shut down controls are in place on RTO-1 to ensure it does not receive a loading of VOC exhaust greater than it is designed to handle. Additionally, the existing and new coating lines are equipped with interlock controls that will shut down the coating line if the RTO it is exhausting to is not operating.

In summary, after the modification is completed all existing and new sources identified above (ID Nos. ES 01 through ES10) will exhaust through RTO-3 as the primary operating scenario or through RTO-1 as the backup or secondary operating scenario. Although construction of all aspects of this modification will be permitted, full operation after the modification could result in conflict with certain conditions of the existing permit. Hence, it will be shown below in Section IV that operating restrictions will be included in the revised permit.

### **Emissions Discussion**

Emissions from the proposed coating lines are generated from the use of the various liquid coating materials and include volatile organic compounds (VOCs), federal hazardous air pollutants (HAPs), and NC-regulated toxic air pollutants (TAPs).

The pollutant emission rates from the existing permitted coating lines LM06, LM81, and LM84 are not modified in this application. Though the exhaust scenario will change with this modification, emission rates will not change since each line's production rate and RTO control efficiency are not modified with this project. Facility-wide emission rates provided in Table 1 account for all existing and proposed coating lines operating simultaneously.

Natural gas combustion emissions from the proposed RTO-3 are estimated to include the criteria pollutants particulate matter (PM/PM<sub>10</sub>/PM<sub>2.5</sub>), CO, NO<sub>x</sub>, SO<sub>2</sub>, lead, and VOCs. The greenhouse gas (GHG) pollutants, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxides (N<sub>2</sub>O) will also be emitted from RTO-3.

The following tables from the application (revised and received via email on May 26, 2023) show the uncontrolled and controlled emissions estimates from the facility before and after the proposed modification. Note the facility-wide insignificant activities emissions in Table 1a are also included in the facility-wide summary of Table 1.

Further discussion of the emissions will be made with respect to the applicable regulations in Section IV below.

Table 1  
Facility-Wide Emissions

Kurz Transfer Products, LP  
Lexington, North Carolina

Pollutants	<sup>(1)</sup> Uncontrolled Emissions - Prior to Modification (tpy)	<sup>(1)</sup> Controlled Emissions - Prior to Modification (tpy)	Uncontrolled Emissions - New Sources (tpy)	Controlled Emissions - New Sources (tpy)	Uncontrolled Emissions - After Modification (tpy)	Controlled Emissions - After Modification (tpy)
PM (TSP)	2.74	2.74	0.39	0.39	3.13	3.13
PM10	1.96	1.96	0.39	0.39	2.35	2.35
PM2.5	1.37	1.37	0.39	0.39	1.76	1.76
SO <sub>2</sub>	0.18	0.18	0.031	0.031	0.21	0.21
CO	10.91	10.91	4.328	4.33	15.24	15.24
NO <sub>x</sub>	17.88	17.88	5.153	5.15	23.03	23.03
Lead	6.44E-05	6.44E-05	2.58E-05	2.58E-05	9.02E-05	9.02E-05
<sup>(3)</sup> VOCs	>250	<250	2,803	56.3	N/A	<250
CO <sub>2</sub> e	13,261	13,261	6,220	6,220	19,481	19,481
Ethyl Acetate*	293	5.86	169	3.38	462	9.25
<sup>(2)</sup> Methanol	36.7	0.73	0	0	0	0
MEK*	1,188	23.8	903	18.1	2,091	41.83
<sup>(2)</sup> MIBK	69.4	1.39	0	0	0	0
Toluene	629	12.57	26	0.53	655	13.10
<sup>(2)</sup> Xylene	11.0	0.22	0	0	0	0
TDI	0.92	0.018	0.88	1.75E-02	1.80	0.036
Hazardous Air Pollutants (HAPs)	--	14.94	--	0.54	--	13.14

Notes:

- 1) Facility-wide emissions prior to modification were taken from December 2013 permit application for LM801 coating line and RTO-2 and added contributions from Kettle Washer (ES-09) and all insignificant activities.
- 2) Methanol, MIBK, and Xylene were accounted for in December 2013 application. Kurz no longer uses coating products that contain these pollutants.
- 3) Calendar year 2021 air emissions inventory prepared by Kurz, shows controlled VOC emissions from coating lines at 26.77 tons/year.
- 4) Uncontrolled emissions of HAPs/TAPs were not provided in the December 2013 application. Uncontrolled HAP/TAP emissions prior to modification estimated from controlled emission rate by removing the 98% control efficiency (Controlled tpy / 1 - 0.98 = Uncontrolled tpy).
- 5) Insignificant Sources added to facility-summary (05-08-23). See Table 1A taken from 2014 Permit Application.
- 6) Emission contributions from Kettle Washer (ES-09) added based on data prepared by Trinity Consultants in 2016 application.

TABLE 1A  
Emissions from Insignificant Activities

Kurz Transfer Products, LP  
Lexington, North Carolina

Source ID Nos.	Coating Lines	Emission Point	VOC tons/yr	Ethyl acetate tons/yr	MEK tons/yr	Toluene tons/yr	TDI tons/yr	Xylene tons/yr
IWSD <sup>(1)</sup>	Waste solvent distillation unit	Fugitive	0.0014	-	-	-	-	-
IAK83 <sup>(2)</sup>	Vacuum chamber on metallizing process	Fugitive	-	-	-	-	-	-
IAK801 <sup>(2)</sup>	Vacuum chamber on Coating Line LM801	Fugitive	-	-	-	-	-	-
IESCC	Cylinder Cleaner	Fugitive	4.93	-	-	-	-	-
IWK82 <sup>(3)</sup>	One Conditioner	Fugitive	0.21	0.015	0.062	0.061	4.49E-04	0.0011
IESPW	Parts Washer	RTO-1	4.43	0.44	1.51	0.31	-	-
IES-RDLH <sup>(4)</sup>	R&D Lab Hoods	Lab Hood Vent	-	-	-	-	-	-
IES-T1	Single compartment 12,000 gallon UST - MEK	Fugitive	0.25		0.25		-	-
IES-T8	Single compartment 12,000 gallon UST - Ethanol	Fugitive	0.09					
IES-T4-3	Double compartment UST IPA - 8,000 gallon Propyl Cellosolve - 2,000 gallon	Fugitive	0.07					
IES-T5-7-2	Triple compartment UST Toluene - 4,000 gallon Ethyl Acetate - 4,000 gallon Acetone - 4,000 gallon	Fugitive	0.32	0.105		0.032		
IES-T6	Single compartment UST Isopar - 4,000 gallon	Fugitive	3.20E-04					
<b>TOTAL INSIGNIFICANT SOURCES</b>			<b>10.31</b>	<b>0.56</b>	<b>1.84</b>	<b>0.403</b>	<b>4.49E-04</b>	<b>1.10E-03</b>

## Notes:

- 1) Kurz provided GEL with emissions data on Distillation Unit during GEL's preparation of permit application in 2013.
- 2) Vacuum Chambers do not process any raw materials therefore no emissions are expected.
- 3) Conditioner IWK06 listed on current Kurz's Title V Permit Insignificant Activity List was removed from the facility. Conditioners emissions as presented in 2014 application were based on 1% of the emissions generated from the four permitted Coating Lines. Since one Conditioner was removed, emissions were divided by 2 to estimate current emission level.
- 4) R&D Lab Hoods only handle materials in small containers and lids are in place when not in use. No measurable emissions are expected.
- 5) Parts Washer emissions data are uncontrolled and were provided in 2014 permit application.
- 6) UST emissions based on TANKS 4.0.9d assuming a worst case 24 turnovers per year for each tank.

The modifications will appear in the revised permit in Section 1 of the permit as follows:

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
ES01 <b>MACT JJJJ</b>	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
ES05 <b>MACT JJJJ</b>	One coating line (LM84) operating within a permanent total enclosure (PTE-2)		
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)		
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)	OR	OR
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative
ES09	One automated kettle washer with integral		

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
	solvent recovery condenser		thermal oxidizer (12 million Btu per hour maximum heat input rate)
ES10 MACT JJJJ	Coating operations consisting of two coating lines (LM802 and LM803) operating within a permanent total enclosure (PTE-4)		

### Requested revisions to the monitoring parameters for RTO-1 and RTO-2.

On June 6, 2023, Kurz submitted a request to revise the monitoring parameters for RTO-1 and RTO-2 that are found at Section 2.1 A.1.f.i of the permit. Section 2.1 A.1 addresses 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart JJJJ – "National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating."

Section 2.1 A.1.f. reads as follows:

#### RTO Operating Limits [15A NCAC 02Q .0508(f)]

- f. The Permittee shall:
- i. For each thermal oxidizer, the average combustion temperature in any 3-hour period must not fall below the following parameter values: [§63.3321(a), MACT JJJJ Table 1]

**Table 2.1 A.1.f**

Control device	Temperature, 3-hour rolling average
RTO-1	1465°F
RTO-2	1641°F

- ii. confirm or reestablish the monitoring parameters above during performance tests. If, during performance testing, the parameter values are not adhered to and:
  - (A) are more stringent (i.e. the temperature(s) is greater), the permittee shall submit a request to revise the value(s) in the permit at the same time the test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
  - (B) are less stringent (i.e. the temperature(s) is less), the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.

If the requirements are not met, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111.

Thus, the parameters may be revised administratively if more stringent and via the TV minor modification procedures if less stringent. In this case, the request was received while the permit was open for application (application no. 2900386.23A) and was being processed by the two-step significant modification process. Thus, this request to revise the parameters can simply be consolidated into the more stringent processing requirements of the significant modification application.

Kurz had conducted VOC destruction efficiency testing on October 5, 2022. The results of the testing were approved by the DAQs stationary Source Compliance Branch (SSCB) via a memo issued March 28, 2023 and subsequently revised on April 10, 2023 (tracking no. 2022-226st). A summary of the results are as follows (excerpted from the test approval memo):

RTO-1 – October 5, 2022	Test Results [VOC as C]	2Q .0317 & 63 Subpart JJJJ Destruction Requirement	Compliance
Inlet	295.3 lb/hr	---	---
Outlet	8.98 lb/hr	---	---
Destruction Efficiency	97.0%	95%	Indicated

#### October 5, 2022 Reported Parameters by Run

RTO-1	Temperature, °F	RTO Inlet Loading [VOC as C]	RTO Outlet Emissions [VOC as C]	DRE
Run 1	1,444	269.4 lb/hr	6.4 lb/hr	97.6%
Run 2	1,377	315.5 lb/hr	10.34 lb/hr	96.8%
Run 3	1,373	301.0 lb/hr	10.19 lb/hr	96.8%
Average	1,398	295.3 lb/hr	8.98 lb/hr	97.0%

<b>RTO-2 – October 5, 2022</b>	Test Results [VOC as C]	2Q .0317 & 63 Subpart JJJJ Destruction Requirement	Compliance
Inlet	182.5 lb/hr	---	---
Outlet	1.88 lb/hr	---	---
Destruction Efficiency	98.9%	95%	Indicated

October 5, 2022 Reported Parameters by Run

<b>RTO-2</b>	Temperature, °F	RTO Inlet Loading [VOC as C]	RTO Outlet Emissions [VOC as C]	DRE
Run 1	1,571	220.6 lb/hr	1.97 lb/hr	99.1%
Run 2	1,604	202.6 lb/hr	2.09 lb/hr	99.0%
Run 3	1,608	124.3 lb/hr	1.57 lb/hr	98.7%
Average	1,595	182.5 lb/hr	1.88 lb/hr	98.9%

The memo further states:

The test results are acceptable to determine compliance with the destruction efficiency requirement and to establish the operating temperature for RTO-1 and RTO-2. DAQ approves the use of the average destruction efficiency determined during this test program.

Thus, the permit will be revised as requested. Table 2.1 A.1.f will be revised to read as follows:

**Table 2.1 A.1.f**

<b>Control device</b>	<b>Temperature, 3-hour rolling average</b>
RTO-1	1398°F
RTO-2	1595°F

#### IV. Regulatory Review

##### IV-A -Existing sources (excluding the coating lines) affected by the modification

The following subset of existing sources will be discussed together.

<b>Emission Source ID Nos.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)	OR	OR
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)
ES09	One automated kettle washer with integral solvent recovery condenser		

##### **15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL SOURCES**

##### **15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

##### **15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

These operations are common support operations to all of the existing and new coating lines. The emissions from these operations from a calculation standpoint are generally associated with the VOC/HAP/TAP material usage of the coating lines. Thus, emissions associated with these operations are expected to increase proportionally with the production associated with the new coating lines. However, these emissions are and will continue to be captured and exhausted to RTO-1 or the new RTO-3. PM and SO<sub>2</sub> emissions from these operations are associated with the combustion emissions of the RTOs. Thus, PM and SO<sub>2</sub> emissions of these sources are minimal. With respect to visible emissions no changes are expected from the proposed modifications.

In summary, no changes are necessary to the existing permit conditions with respect to these sources. Continued compliance with respect to these regulations is expected.

**15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

These sources, along with the existing coating lines described in Section IV-B below, are subject to a 244 tpy VOC emission limitation to avoid PSD review. The sources discussed in IV-B below emit the majority of the VOCs subject to this VOC emission limitation. This avoidance condition requires the Permittee to primarily comply with the MACT JJJ requirements which ensure that the RTO-1 is capturing and destroying over 95 of the organic HAP, which is determined by total VOC (as a surrogate) testing as specified under the MACT. Using the mass of VOC used and the control efficiency determined pursuant to MACT JJJ, the Permittee determines the monthly VOC emitted and calculates the rolling 12-month total VOC emissions.

Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

As described above in Section III above, these sources are currently permitted to be controlled by the existing RTO-1. Because the routing of the emissions from these sources to the new RTO (ID no. RTO-3) would require retesting of the new RTO as well as revise exiting monitoring and recordkeeping requirements, these changes are considered to be a significant modification to the existing monitoring and recordkeeping requirements of the permit. Since this significant modification would conflict with the existing permit, consistent with 15A NCAC 02Q .0501(c)(2), operation after these modifications cannot be permitted until a Title V is issued pursuant to 02Q .0516.

To allow the construction aspects of routing the emissions from these sources to the new RTO-3 to proceed, the following operating restriction will be placed into the permit at Section 2.2 A.2.

The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0516.

For the sources (**ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09**), the Permittee shall not route emissions to the RTO (**ID No. RTO-3**).

Associated recordkeeping will also be added. Thus, the Permittee will be allowed to construct all necessary ductwork and other appurtenant systems necessary to allow the future use of RTO-3 and the existing RTO-1 in a backup scenario as described in Section III above. The operating restriction will be removed at a future date once a TV permit has been issued pursuant to the significant modification procedures at 15A NCAC 02Q .0516. The future permit will include all revised testing, monitoring, recordkeeping and reporting requirements as necessary to comply with all applicable requirements.

**State Enforceable Only**

**15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

**State Enforceable Only**

**15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

See facility-wide regulatory considerations discussion below.

**IV-B - Existing coating lines affected by the modification**

<b>Emission Source ID Nos.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
		OR	OR
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)

These coating lines are subject to all of the regulations addressed in Section IV-A above. The discussion in section IV-A above applies to these sources as well. However, the coating lines are also subject to MACT JJJJ which is discussed below.

**15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

(40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

The existing coating lines (ID Nos. ES01 and ES05) are subject to 40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating’ (MACT JJJJ).

These coating lines are subject to the existing following emission limitations and operating restrictions as included in Section 2.1 A.1.e of the existing permit:

**Emission Standards** [15A NCAC 02Q .0508(f)]

- e.
  - i. The Permittee shall limit organic HAP emissions to no more than 5 percent of the organic HAP applied each month (95 percent reduction). [§63.3320(b)]
  - ii. The Permittee shall meet the limits in paragraph e.i by the use of a capture and control system(s) consisting of permanent total enclosure(s) (PTE) and thermal oxidizers. [§63.3370(a)(5)(i), (e)(1), (k)(1)-(2), (p)(3),
  - iii. For each capture and control system, the Permittee shall determine compliance with paragraph e.i according to the following equation:

$$R = \frac{(E)(CE)}{100}$$

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

[40 CFR 63.3370(k)(2), (p)(3)]

The permit also includes all relevant applicable requirements under the rule including general compliance requirements, PTE operating limits and monitoring requirements, continuous parameter monitoring systems (CPMS) requirements, testing requirements, notification requirements, and recordkeeping and reporting requirements. Continued compliance with this rule is expected when the emissions are routed to the new RTO-3 or the existing RTO-1.

Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

The discussion in Section IV-A above applies here as well. Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

See discussion in Section IV-A above.

**IV-C - New coating lines**

<b>Emission Source ID Nos.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES10 MACT JJJJ	Coating operations consisting of two coating lines (LM802 and LM803) operating within a permanent total enclosure (PTE-4)	RTO-1  OR  RTO-3	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)  OR  One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)

**15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL SOURCES**

This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equations:

$$\begin{aligned} \text{For process rates up to 30 tons per hour:} & \quad E = 4.10(P)^{0.67} \\ \text{For process rates greater than 30 tons per hour:} & \quad E = 55.0(P)^{0.11} - 40 \end{aligned}$$

Where: E = Allowable emission rate in pounds per hour  
P = Process weight in tons per hour, (tph)

These coating lines are primarily VOC/HAP/TAP sources with the emissions captured and subsequently controlled by an RTO. All the PM emissions are estimated to be generated by the combustion of natural gas and the process exhaust. Based on the heat input to the RTOs and the AP-42 emission factors for natural gas combustion, the Permittee estimates these emissions to be less than 1 tpy or .25 lb/hr.

Given the expected large margin of compliance, no monitoring, recordkeeping and reporting is required for the new sources. Compliance with this rule is expected.

**15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

This regulation applies to any combustion source that emits sulfur dioxide (SO<sub>2</sub>) formed by the combustion of sulfur in fuels, wastes, ores, and other substances. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

The combustion of natural gas in the RTOs is the only source of SO<sub>2</sub> emissions from these sources. The combustion of natural gas will have negligible SO<sub>2</sub> emissions. Given the expected large margin of compliance, no monitoring, recordkeeping and reporting is required for the new sources nor are any changes necessary to the existing permit conditions. Compliance with this rule is expected.

**15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

This regulation applies to fuel burning operations and industrial processes where visible emissions can be reasonably expected to occur. As these coating lines were manufactured after July 1, 1971, the visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period except for the following exceptions:

Six-minute averaging periods may exceed 20 percent opacity if:

- (1) no six-minute period exceeds 87 percent opacity;
- (2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
- (3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

Visible emissions resulting from the combustion of the process emissions in conjunction with the firing of the natural gas are generally negligible. Given the expected large margin of compliance based on the history of the performance of the existing coating lines controlled by RTOs and consistent with current DAQ policy, no monitoring, recordkeeping and reporting is required for the new sources. Compliance with this rule is expected.

### **15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

(40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

The new coating lines (ID No. ES10) are subject to 40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (MACT JJJJ)

Pursuant to 63.3300:

*The affected source subject to this subpart is the collection of all web coating lines at your facility.....*

Web coating line is defined at 63.3310 as:

*Web coating line means any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.*

The collection of web coating lines at the existing facility are ID Nos. ES02, ES05 and ES08. Coating lines ES01 and ES05 are defined as existing under the rule (constructed prior to September 12, 2000) and hence are subject to a 95% overall organic HAP reduction. Although ES08 was constructed well after that date, the rule defines the affected source as the collection of “all web coating lines at the facility.” This interpretation is consistent with the Q&A document published on May 29, 2003, shortly after the original rule. Therefore, all three sources are considered existing and subject to the same 95% overall organic HAP reduction. This argument holds true for the new coating lines (ID No. ES10). Since the Permittee has chosen the same compliance option for the new coating lines as the existing coating lines (i.e, using a capture and control system including an RTO), the new coating lines will be subject to the same emission limitations as well as all of the other applicable requirements under this rule as the existing coating lines. Thus, the MACT JJJJ discussion provided in Section IV-B above applies to these new coating lines as well.

Unrelated to the modification, MACT JJJJ was revised effective as of July 9, 2020. The revised rule clarified that the rule intent was that for affected sources using capture and control systems for compliance with the emission standards (which is the compliance option chosen by the Permittee for all three web coating lines), deviations of the capture and control system parameters alone were not violations of the emission standards. The emission standard is determined on a monthly basis. Other substantial changes to the rule affecting this facility include:

- Changes associated with the vacatur of the MACT startup, shutdown and malfunction (SSM) provisions at 40 CFR 63.6. Starting July 9, 2021, the Permittee must be in compliance with the standards at all times. The vacatur had many other implications in this rule (and hence to the permit conditions) including the recordkeeping and reporting requirements.
- Five-year testing cycle: The rule now requires 5-year periodic testing of the thermal oxidizers.
- Electronic reporting: the rule revised the electronic reporting requirements.
- Revised temperature sensor validation procedures
- The option to use of a “Control Destruction Efficiency Curve” pursuant to §63.3360(e)(4),

A permit condition will be placed into the permit with all applicable requirements under this rule for the new coating lines.

### **15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

Kurz is not in one of the 28 source categories subject to the 100 tons per year PSD major source threshold and is therefore subject to the 250 tons per year major source threshold. Facility-wide potential emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub> will each not exceed 250 tons per year. Potential VOC emissions are estimated to be greater than 250 tons per year and therefore Kurz is a major source for VOC with respect to PSD.

The current modification with respect to the existing emission sources is not expected to result in an increase in emissions. With respect to the new sources, the coating lines LM802 and LM803 (collectively ID No. ES10) have potential controlled

emissions of VOC of 56 tpy, which is greater than the 40 tpy threshold to be considered a PSD major modification. To avoid triggering a PSD review, the Permittee has requested a 40 tpy PSD avoidance condition for the new coating lines.

Similar to the existing PSD avoidance condition found in Section 2.1 A.2 of the existing permit (discussed in IV-A above), the Permittee will be required to meet the operating limits, monitoring and recordkeeping requirements of MACT JJJJ and also calculate on a monthly and a 12-month rolling basis the after-control VOC emissions. In months where an “operating limit deviation” as defined under MACT JJJJ has occurred, the Permittee will calculate the VOC emissions on mass balance basis as specified under MACT JJJJ. The control efficiency will be determined consistent with the requirements of MACT JJJJ. Semiannual reporting will also be required.

Compliance with this avoidance limit is expected.

### **15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

As described above in Section III above, these new sources will be permitted to be controlled by the new RTO-3 and the existing RTO-1 as a backup. As the operation of these new sources as controlled by the new RTO will not contradict or conflict with a condition in the existing permit (all added conditions addressing these sources are provided in a new separate section from the existing sources) no operating restrictions other than those described elsewhere in this review are necessary.

However, the routing of the emissions from these sources to the existing RTO (ID no. RTO-1) would require retesting of the existing RTO as well as revise exiting monitoring and recordkeeping requirements, this aspect of the modification is considered to be a significant modification to the existing monitoring and recordkeeping requirements of the permit. Since this aspect of the significant modification would conflict with the existing permit, consistent with 15A NCAC 02Q .0501(c)(2), operation in such a scenario after this aspect of the modification cannot be permitted until a Title is issued pursuant to 02Q .0516.

To allow the construction aspects of routing the emissions from these sources to the existing RTO-1 to proceed, the following operating restriction will be placed into the permit at Section 2.2 A.2.

The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0516.

For the coating lines (**ID No. ES10**), the Permittee shall not route emissions to the RTO (**ID No. RTO-1**).

Associated recordkeeping will also be added. Thus, the Permittee will be allowed to construct all necessary ductwork and other appurtenant systems necessary to allow the future use of the coating lines (ID No. ES10) with the existing RTO-1 in a backup scenario as described in Section III above. The operating restriction will be removed at a future date once a TV permit has been issued pursuant to the significant modification procedures at 15A NCAC 02Q .0516. The future permit will include all revised testing, monitoring, recordkeeping and reporting requirements as necessary to comply with all applicable requirements.

## **FACILITY-WIDE REGULATORY CONSIDERATIONS**

### **State enforceable only**

#### **15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

This rule requires that 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.

To date odors have not been an issue at the facility. Continued compliance is expected.

### **State enforceable only**

#### **15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES**

#### **15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond

the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

Pursuant to 15A NCAC 02Q .0706(b), the facility is only required to submit a permit application under 15A NCAC 02D .1100 if the modification results in:

- (1) a net increase in emissions or ambient concentration of any toxic air pollutant that the facility was emitting before the modification; or
- (2) emissions of any toxic air pollutant that the facility was not emitting before the modification if such emissions exceed the levels contained in Rule .0711 of this Section.

It is expected based on the emissions information submitted (see Emissions discussion in Section III above) that an increase in four TAPs will occur as a result of the modification and the post project potential emissions will be as follows as compared to each TAPs respective TPER.

Toxic Air Pollutant	CAS no.	Potential emissions, facility-wide			TPERS		Emissions over TPER?
		tpy	lb/day	lb/hr	lb/day	lb/hr	
Ethyl Acetate	141-78-6	9.2	50.7	2.1	NA	36	No
Methyl Ethyl Ketone (MEK)	78-93-3	41.8	229.2	9.5	78	22.4	YES
Toluene	108-88-3	13.1	71.8	3.0	98	14.4	NO
2,4-Toluene Diisocyanate (TDI)	584-84-9	0.036	0.20	0.008	0.003	NA	YES

All existing TAP emitting sources are subject to a MACT and have been determined to be exempt from the state enforceable only toxics rules found at 15A NCAC 2D .1100 or the facility-wide emission rates are below the permitting emission rates (TPERS) found at 15A NCAC 02Q .0711. These determinations were made in the permit reviews for Permit Nos. T21, T22 and T23.

The two new coating lines are subject to MACT JJJJ and therefore meet the exemption at 15A NCAC 02Q .0702(a)(27). However, pursuant 15A NCAC 02Q .0706(c), sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S. 143-215.107(a)(5)b to ensure they do not pose an "an unacceptable risk to human health."

As seen in the table above, only MEK and TDI will be emitted above their respective TPER after the modification. The other TAPs are emitted below their respective TPER and therefore presumably do not pose an "an unacceptable risk to human health."

### TDI

The Permittee had submitted a modeling analysis with permit application no. 2900268.14A on January 06, 2014. However, the modeling was subsequently revised on 03/04/2014 to address the fact that the stack height of RTO-2 was to be lowered from the original planned height of 50 feet to 45 feet. The revised modeling was reviewed by the air quality analysis branch (AQAB) and in a memo dated March 18, 2014, it was determined that:

*(the) modeling submitted to the AQAB demonstrate that the proposed 2,4-TDI emissions rates will not exceed the Ambient Acceptable Levels (AAL) contained in 15A NCAC 02D.1104*

The results of the modeling were as follows:

**Maximum Predicted Concentration  
Kurz Transfer Products, L.P. – Davidson County, NC**

Pollutant	Scenario	Averaging Period	% of AAL
2,4-TDI	All Emission Sources	24-hour	99.6 %

The modeled parameters were as follows:

ID	EM. RATE	UTM	UTM	BASE	STACK	STACK	STACK	STACK	CAP	BLG
	2,4-TDI	X	Y	ELEV	HT	TEMP	VEL	DIA	HORZ	

	(lbs/hr)	(m)	(m)	(ft)	(ft)	(F)	(ft/sec)	(ft)		
RTO-1	0.0164	560218.59	3974639.44	687.4	50.0	318	46.7	5.00	NO	YES
RTO-2	0.0140	560254.64	3974733.19	691.3	45.0	215	47.8	3.33	NO	YES

Note the total of the TDI emission rates modeled was 0.03 lb/hr, or on a 24-hour basis, 0.73 lb/day. As noted above, the current facility-wide potential controlled emission rate for TDI is 0.2 lb/day. Thus, the current potential emissions rate would have to increase by approximately a factor of 3.7 (i.e., 0.73/0.2) before the AAL for TDI would be approached. Since it is not expected that this modification will result in an exceedance of the TDI AAL by a wide margin, this modification does not pose an “an unacceptable risk to human health” with respect to TDI.

### **MEK**

Since the ALL impact is proportional to the emission rate, the TDI emission rate and AAL impact were used to calculate the emission rate for MEK to achieve 99.6% of its respective AAL. This proportional approach is only valid for the TAPs with 24-hour AALs (which is true for MEK), since the TDI modeling was conducted on a 24-hour AAL basis.

#### **The TAP emission rates necessary to achieve 99.6% of the respective AALs**

TAP	Emission rate to hit 99.6% AAL	AAL	Potential emissions after the modification
	lb/day	mg/m3	lb/day
MEK	13505	3.7	229
TDI*	0.73	0.0002	<del>0.79</del> -0.20**

\*modeled TAP

\*\*this correction made on 11/08/2023 after permit issuance date.

Note that for MEK, the current potential emissions rate would have to increase by approximately a factor of 59 (i.e., 13505/229) before the AAL for MEK would be approached. Since it is not expected that this modification will result in an exceedance of the MEK AAL by a wide margin, this modification does not pose an “an unacceptable risk to human health” with respect to MEK.

In summary, for the reasons posed above, it is not expected that this modification will pose an “an unacceptable risk to human health.” These two new coating lines, as will the existing MACT affected sources, retain the exemption from toxics permitting at 15A NCAC 02Q .0702(a)(27). No changes are necessary to the existing permit.

## **V. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM**

### **NSPS**

No NSPS apply to the modified or new sources addressed in this application.

### **NESHAP/MACT**

The facility is a major source of HAP emissions. The coating lines are subject to 40 CFR 63, Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating.’ See discussion in Section IV above.

### **PSD**

Davidson County is in attainment for all pollutants.

The existing permit contains one PSD avoidance condition with a limit of 244 tpy of VOC for the primary VOC sources that were permitted prior to the coating line ES-08. ES-08 was permitted assuming it had a PSD PTE of 70 tpy, much less than 250 tpy that would have made it a major modification by itself for PSD purposes. The net result is the facility-wide PTE prior to the proposed modification is now over 250 tpy and thus it is classified as PSD major source. The proposed new sources will be covered under a 40 tpy VOC PSD avoidance condition. Please see Section IV above for full discussion.

Davidson County has triggered the minor source baseline date for PM<sub>2.5</sub>, PM<sub>10</sub> and NO<sub>x</sub>. For increment tracking purposes, the following derivation shows the pounds per hour increase of each pollutant.

Pollutant	<sup>(1)</sup> Controlled Emissions - Prior to Modification (tpy)	Controlled Emissions - After Modification (tpy)	Net increase from modification (tpy)	Net increase from modification (lb/hr)
PM10	1.96	2.35	0.39	0.09
PM2.5	1.37	1.76	0.39	0.09
NOx	17.88	23.03	5.15	1.18

### CAM

The modifications addressed in this application do not trigger a CAM review at this time. Each of these new sources and modified existing sources (i.e., pollutant specific emissions units, or PSEUs) in this application each have potential pre-control device emissions of greater than 100 tpy of VOC and 10/25 tpy for individual/total HAP. However, since each PSEU has post-control emissions less than these thresholds these sources are considered “other PSEUs.” Pursuant to 40 CFR 64.5(b), CAM applicability for “other PSEUs” will be addressed during the next TV permit renewal.

### 112r - Risk Management Program (RMP) (15A NCAC 2D .2100)

The Permittee states on Form A3 of the application that no chemicals are stored at eh facility above the 112(r) thresholds.

## VI. Compliance History

As stated in the most recent compliance inspection report conducted by Jim Hafner of the FRO on March 23, 2022:

Based on records review and the site visit on March 23 2022, Kurz Transfer Products, LP appears to be operating in compliance with all Air Quality standards and regulations.

The five-year violation history as included in the inspection report is as follows:

<b>Five Year Violation History:</b>			
<u>Date</u>	<u>Letter Type</u>	<u>Rule Violated</u>	<u>Violation Resolution Date</u>
03/06/2020	NOV/NRE	Permit Late Title V ACC	03/12/2020
03/29/2019	NOV	Permit Late Title V ACC	03/29/2019
02/14/2018	NOV/NRE	2D .0530 Prevention of Significant Deterioration	02/28/2018
02/14/2018	NOV/NRE	Part 63 - NESHAP/MACT Subpart JJJJ Paper and Other Web Coating	02/28/2018
08/15/2017	NOV/NRE	2D .0530 Prevention of Significant Deterioration	09/01/2017
08/15/2017	NOV/NRE	Permit Condition	09/01/2017
08/15/2017	NOV/NRE	Part 63 - NESHAP/MACT Subpart JJJJ Paper and Other Web Coating	09/01/2017

## VII. Changes Implemented in Revised Permit

Page No.	Section	Description of Changes
NA	Cover Letter	<ul style="list-style-type: none"> <li>Updated cover letter for current date, modification etc.</li> <li>Added NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION</li> </ul>

4	Section 1	<ul style="list-style-type: none"> <li>The heat input for RTO-1 was revised from 20.8 to 16 million Btu per hour.</li> <li>The equipment list was revised to add the two new coating lines (ID No. ES 10) and the new RTO (ID No. RTO-3) and to allow the emissions from these lines to be controlled by the existing RTO (ID No. RTO-1). The use of RTO-1 for these sources is restricted as provided by the operating restriction added at Section 2.2 A.2.</li> <li>The equipment list was revised to allow emissions from ID Nos. ES01, ES02, ES03, ES05, ES07, ES09 to be controlled by either the existing RTO-1 or by the new RTO-3. The use of RTO-3 for these sources is restricted as provided by the operating restriction added at Section 2.2 A.2.</li> <li>Added footnote to address the permit application submittal requirements for the modifications addressed in the current application pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2).</li> </ul>						
5	Section 2.1 A	<ul style="list-style-type: none"> <li>Emission source table was revised to include the new RTO-3</li> <li>Reference to new operating restriction included.</li> <li>Existing permit condition no. Section 2.1 A.6 was removed. It was a startup notification for the kettle washer (ID No. ES09). The kettle washer began operation on September 1, 2022.</li> <li>Table 2.1 A.1.f was revised as requested on June 6, 2023 to read as follows: <table border="1" data-bbox="740 877 1349 1003"> <caption data-bbox="948 852 1117 877"><b>Table 2.1 A.1.f</b></caption> <thead> <tr> <th data-bbox="740 877 1013 940">Control device</th> <th data-bbox="1013 877 1349 940">Temperature, 3-hour rolling average</th> </tr> </thead> <tbody> <tr> <td data-bbox="740 940 1013 972">RTO-1</td> <td data-bbox="1013 940 1349 972">1398°F</td> </tr> <tr> <td data-bbox="740 972 1013 1003">RTO-2</td> <td data-bbox="1013 972 1349 1003">1595°F</td> </tr> </tbody> </table> </li> </ul> <ul style="list-style-type: none"> <li>See permit review for full justification</li> </ul>	Control device	Temperature, 3-hour rolling average	RTO-1	1398°F	RTO-2	1595°F
Control device	Temperature, 3-hour rolling average							
RTO-1	1398°F							
RTO-2	1595°F							
19	Section 2.1 D	<ul style="list-style-type: none"> <li>Added a section to address the new coating lines (ID No. ES10) and RTO (ID No. RTO-3)</li> <li>Added specific permit conditions to address all applicable regulations</li> </ul>						
28	Section 2.2	<ul style="list-style-type: none"> <li>Added operating restrictions consistent with the current application for RTO-1 and RTO-3 at Section 2.2 A.2.</li> <li>Added permit application submittal and startup notification requirements for the modification addressed in the current application pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2) and (c)(2) at Section 2.2 A.3.</li> </ul>						
29	Section 3	<ul style="list-style-type: none"> <li>INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)</li> <li>This section is new. These activities were included as an ATTACHMENT in the previous permit revision.</li> </ul>						
30	Section 4	<ul style="list-style-type: none"> <li>GENERAL CONDITIONS (version 6.0, 01/07/2022)</li> <li>This section was Section 3 in the previous permit revision.</li> <li>The conditions were revised from version 5.4, 07/20/2020 to version 6.0, 01/07/2022</li> </ul>						

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

Since the modifications addressed in this application are considered significant modifications that would not contravene or conflict with a condition in the existing permit, this application is being processed at the Permittee's request as a significant modification pursuant to the "two step" significant modification procedures at 15A NCAC 02Q .0501(b)(2) and 02Q .0504. This application, "step one", is being processed, pursuant to 15A NCAC 02Q .0504(a), under the "state only" permitting rules at 15A NCAC 02Q .0300. As such no public notice or EPA review procedures apply at this time.

**IX. PE Seal**

Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” specifically 02Q .0112(a), a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

- (1) design;
- (2) determination of applicability and appropriateness; or
- (3) determination and interpretation of performance of air pollution capture and control systems.

A Form D5 (Technical Analysis to Support Permit Application) was submitted with the application sealed by Matthew Wike, PE, license no.029652. A review of the NC Board of Examiners for Professional Engineers and Surveyors website shows the license to be “current.”

**X. Zoning**

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0304(b) if the air permit application involves a new facility or the expansion of an existing facility. A FedEx delivery confirmation was received via email by this office showing the request for determination was delivered to the Davidson County Planning and Zoning Office on February 21, 2023. On March 22, 2023, a zoning consistency determination was received via mail to Winston Salem Regional Office from the Davidson County Planning and Zoning Office stating “the proposed operation is consistent with applicable zoning ordinances.”

**XI. Recommendations**

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements with exceptions as noted in Section VI described above.

The Winston Salem Regional Office has received a copy of the draft permit and had no substantial comments.

The DAQ recommends issuance of Permit No. 06542T26.

## **ATTACHMENT B**

Permit review for permit no. 06542T27  
(Application no. 2900386.23C)

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

Issue Date: **November 17, 2025**

Region: Winston-Salem Regional Office  
 County: Davidson  
 NC Facility ID: 2900268  
 Inspector's Name: Jim Hafner  
 Date of Last Inspection: 07/06/2023  
 Compliance Code: 3 / Compliance - inspection

<p><b>Facility Data</b></p> <p>Applicant (Facility's Name): Kurz Transfer Products, LP</p> <p>Facility Address:                  Kurz Transfer Products, LP                  4939 North NC Highway 150                  Lexington, NC 27295</p> <p>SIC: 2754 / Commercial Printing, Gravure                  NAICS: 323111 / Commercial Gravure Printing</p> <p>Facility Classification: Before: Title V After: Title V                  Fee Classification: Before: Title V After: Title V</p>	<p><b>Permit Applicability (this application only)</b></p> <p>SIP: 02D .0515, .0516, .0521, 02Q .0317                  NSPS: NA                  NESHAP: No                  PSD: No                  PSD Avoidance: YES                  NC Toxics: Yes                  112(r): No                  Other: operating restriction pursuant to 02Q .0308(a)(1)</p>
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Contact Data			Application Data
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	Application Number: 2900268.23C Date Received: 10/11/2023 Application Type: Modification Application Schedule: TV-Sign-501(b)(2) Part I Existing Permit Data Existing Permit Number: 06542/T26 Existing Permit Issue Date: 06/14/2023 Existing Permit Expiration Date: 07/31/2025
LaRue Cribb Plant & EHS Manager (336) 397-1750 4939 North NC Highway 150 Lexington, NC 27295	Thomas Hertlein CEO (704) 927-3700 4939 North NC Highway 150 Lexington, NC 27925	Gary Butler Environmental, Health & Safety Manager (704) 927-3845 11836 Patterson Road Huntersville, NC 28078	

**Total Actual emissions in TONS/YEAR:**

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.0100	1.63	19.64	1.37	---	0.8074	0.7733 [Toluene]
2021	0.0100	2.65	26.90	2.22	0.0100	0.9930	0.9391 [Toluene]
2020	0.0100	1.30	24.56	1.09	---	1.23	1.20 [Toluene]
2019	0.0100	1.32	27.14	1.10	---	1.86	1.83 [Toluene]
2018	0.0100	1.96	28.00	1.65	0.0100	2.06	1.57 [Toluene]

<p><b>Review Engineer:</b> Joseph Voelker</p> <p><b>Review Engineer's Signature:</b>  </p> <p><b>Date:</b> November 17, 2025</p>	<p><b>Comments / Recommendations:</b>                  Issue 06542/T27                  Permit Issue Date: 11/17/2023                  Permit Expiration Date: 07/31/2025</p>
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## I. Introduction and Purpose of Application

Kurz Transfer Products, LP (Kurz) operates a hot stamping foils manufacturing plant in Lexington, Davidson County, North Carolina. The facility operates under Title V permit No. 06542T26 issued June 14, 2023.

The primary operation at Kurz are rotogravure processes where various coating materials are applied onto a polyester film substrate.

Kurz is submitting this application to request an air permit to construct and operate one additional kettle washer. The new kettle washer will be identified as ID No. ES11, will be located next to the existing permitted kettle washer (ID No. ES09) and will exhaust to either regenerative thermal oxidizer RTO-1 (backup scenario) or RTO-3 (primary scenario). This is fully described in Section III below.

It will be shown that this project is a significant modification as defined under the TV permitting rules (15A NCAC 02Q .0500). However, as the modification it will not contradict or contravene any existing TV permit conditions, this application will be processed at Kurz's request under the state-only permitting rules (15A NCAC 02Q .0300) and consistent with 15A NCAC 02Q .0501(b)(2) and 02Q .0504.

## II. Chronology

Date	Description
October 11, 2023	Application was received and assigned Application No. 2900268.23B
October 12, 2023	Application fee of \$7764 received via ePay.
October 16, 2023	A FedEx delivery confirmation was received via email by this office showing the request for determination was delivered to the Davidson County Planning and Zoning Office on September 29, 2023.
October 27, 2023	<p>ADD INFO email sent requesting:</p> <ol style="list-style-type: none"> <li>1. Please provide the supporting calcs for the application in spreadsheet format to facilitate review.</li> <li>2. Please revise your calculations and forms as necessary to reflect the requested enforceable DRE of the affected RTO (i.e, 95%). Feel free to include expected actual emissions in addition/elsewhere but for PTE purposes the enforceable DRE is appropriate.</li> <li>3. This kettle washer is very close in time to the recent project that resulted in permit no. T26. Please address why these two projects and any of the previous modifications should or should not be "aggregated" to each other or any of the previous modifications, consistent with the NSR "aggregation" rule, as implemented through 83 FR 57324, November 15, 2018, referencing the requirements in 74 FR, 2376, January 15, 2009. Based on our discussions it "appears" that they should be aggregated and if so we could simply include the new kettle under the existing 40 tpy PSD avoidance condition at Section 2.1 D.5.</li> <li>4. If you wish to process the subject application in the two-step fashion pursuant to 02Q .0504 as allowed under 15A NCAC 02Q .0501(b), please send in a request to process it as such consistent with 15A NCA 02Q .0504(b). An email originating from the RO should suffice.</li> </ol>
November 2, 2023	<p>Information requested on October 27, 2023, received via email. To support the response for item 2, the permittee supplied the following revised sections of the application:</p> <ul style="list-style-type: none"> <li>• Emission Assumptions and Calculations I – Kettle Washer</li> <li>• Form B – Kettle Washer</li> <li>• Form C3- CD-RTO-1</li> <li>• Form C3- CD-RTO-3</li> <li>• Form D1- Facility-wide Emissions summary</li> </ul>
November 2, 2023	<p>Email received from Thomas Hertlein, Responsible Official stating: Please process the application submitted for the new kettle washer in the two-step fashion pursuant to 15A NCAC 02Q .0504(b), as allowed under 15A NCAC 02Q .0501(b).</p>
November 8, 2023	<p>ADD INFO email sent requesting appropriate recordkeeping requirements for the new kettle washer (ID No. ES11) with respect to PSD avoidance.</p>

Date	Description
November 13, 2023	Information requested on November 8, 2023, received via email.

### III. Modification Description

#### Application No. 2900386.23C

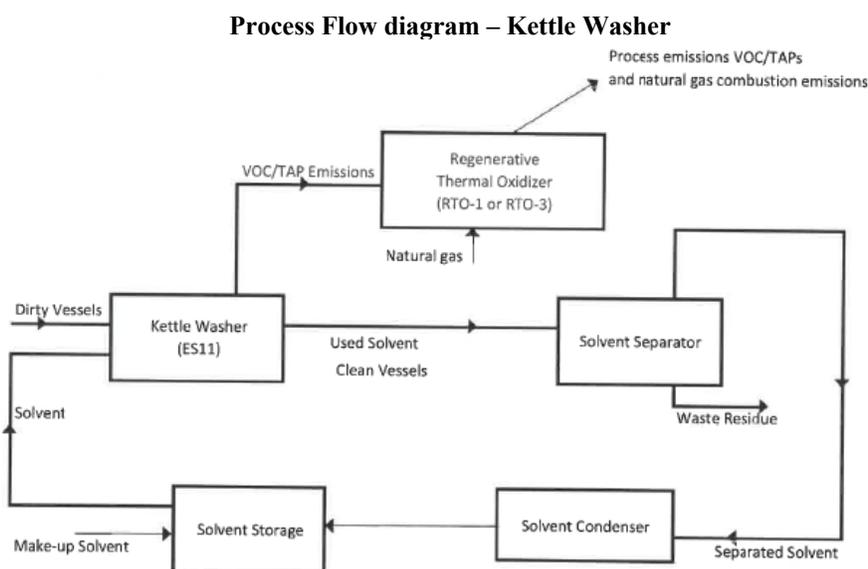
Kurz is submitting this application to request an air permit to construct and operate one additional kettle washer. The new kettle washer will be identified as ID No. ES11, will be located next to the permitted kettle washer (ID No. ES09) and will exhaust to either regenerative thermal oxidizer (ID No. RTO- 1, backup scenario or ID No. RTO-3, primary scenario).

The proposed kettle washer (ID No. ES11) will be identical in operation, production, and emissions as the existing permitted kettle washer (ID No. ES09). Note Kurz claims the existing and proposed kettle washers will not be able to operate simultaneously. For employee safety, Kurz has alarms in place to prevent the ambient air inside the building from reaching the lower explosive limit (LEL) established by the Occupational Safety and Health Administration (OSHA). The proposed kettle washer will have an alarm and interlock system in place to stop operation if the room it is located in approaches the LEL identified by monitors placed in locations established by Kurz's health and safety professionals. The existing permitted kettle washer also has the same alarm/interlock system in place.

The proposed kettle washer will clean vessels used in the coating operations. The vessels are loaded into the enclosed kettle washer that is equipped with a rotating spray system. The vessels are cleaned with a solvent solution with an approximate 80:20 MEK to ethyl acetate ratio at a maximum production rate of three cleaning cycles per hour. The liquid solvent is collected in an enclosed reservoir, run through a filter and reused.

When a cleaning cycle is completed but before the washer is opened, the solvent is completely flushed from the enclosed chamber through an equipped ventilator while ambient air simultaneously enters the chamber through a valve. The solvent laden air collected from the cleaning chamber will be routed to RTO-3 as the primary operating scenario. The new kettle washer will also have the ability to exhaust through RTO-1 during periods that RTO-3 is down for maintenance. This exhaust scenario is similar to the new coating lines as described in Kurz's last application which resulted in the current permit (revision no. T26). Like the existing kettle washer, the new unit will be automated through a programmable logic controller (PLC) system in order to prevent an accidental release of solvent laden air with VOC emissions.

Given the operating scenarios discussed above, Kurz does not expect there will be an increase increase in actual hourly emissions with this project. Details on the process description and emission calculations are provided in the Emission Assumptions and Calculations section of the application. A diagram of the kettle washing process is shown below.



The kettle washer will appear in the revised permit as follows:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES11	One automated kettle washer with integral solvent recovery condenser	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
		OR	OR
		RTO-3*	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)

### Emissions Discussion

Air pollutants estimated to be released from the kettle washer process include the criteria pollutant VOCs and the NC toxic air pollutants (TAPs) MEK and ethyl acetate. MEK and ethyl acetate are not classified as federal hazardous air pollutants (HAPs). Below is an emissions summary for the new kettle washer.

Emission Source ID No.	A	Pollutant	B	C	D	E	F	G
	Usage Rate (lbs/hr)		Weight%	Uncontrolled Hourly Emissions (lbs/hr)	Uncontrolled Annual Emissions (tons/yr)	Control Efficiency (%)	Controlled Hourly Emissions (lbs/hr)	Controlled Annual Emissions (tons/yr)
Kettle Washer (ES11)	54.5	VOC	100%	54.5	239	95%	2.73	11.94
		Ethyl Acetate	20%	10.9	47.7		0.55	2.39
		MEK	80%	43.6	191		2.18	9.55

Facility-wide emission rates provided in Table 1 at the end of the Summary Section of the application account for all permitted and insignificant sources operating simultaneously. Though the new kettle washer will not be able to operate simultaneously with the existing kettle washer (ES09), emissions in Table 1 presented for "After Modification" in the application account for all permitted and insignificant sources operating. Emissions "Prior to Modification" provided in Table 1 at the end of the Summary Section of the application are identical to the "After Modification" emission rates provided in the August 2023 application, Part II Title V Air Quality Permit Application – "Two Coating Lines and Regenerative Thermal Oxidizer" which resulted in the issuance of permit revision no. T26. Kurz submitted revised emissions calculations based on a 95% destruction removal efficiency on November 2, 2023. The revised "Table 1" is reproduced below.

**Table 1  
Facility-wide Emissions**

Pollutants	<sup>(1)</sup> Uncontrolled Emissions - Prior to Modification (tpy)	<sup>(1)</sup> Controlled Emissions - Prior to Modification (tpy)	Uncontrolled Emissions - New Sources (tpy)	Controlled Emissions - New Sources (tpy)	Uncontrolled Emissions - After Modification (tpy)	Controlled Emissions - After Modification (tpy)
PM (TSP)	3.13	3.13			3.13	3.13
PM10	2.35	2.35			2.35	2.35
PM2.5	1.76	1.76			1.76	1.76
SO <sub>2</sub>	0.21	0.21			0.21	0.21
CO	15.24	15.24			15.24	15.24
NOx	23.03	23.03			23.03	23.03
Lead	9.02E-05	9.02E-05			9.02E-05	9.02E-05
<sup>(3)</sup> VOCs	N/A	<250	239	11.94	N/A	<250
CO2e	19,481	19,481			19,481	19,481
Ethyl Acetate*	463	9.26	47.7	2.39	511	11.65
Methanol	0.0	0.00			0	0
MEK*	2,094	41.89	191	9.55	2,285	51.44
MIBK	0.0	0.00			0	0
Toluene	658	13.16			658	13.16
Xylene	0.0	0.00			0	0
TDI	1.82	0.036			1.82	0.036
Hazardous Air Pollutants (HAPs)	--	13.20	--	0.00	--	13.20

Further discussion of the emissions will be made with respect to the applicable regulations in Section IV below.

## IV. Regulatory Review

### 15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL SOURCES

This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equations:

$$\begin{aligned} \text{For process rates up to 30 tons per hour:} & \quad E = 4.10(P)^{0.67} \\ \text{For process rates greater than 30 tons per hour:} & \quad E = 55.0(P)^{0.11} - 40 \end{aligned}$$

Where: E = Allowable emission rate in pounds per hour  
P = Process weight in tons per hour, (tph)

The kettle washer is a VOC and TAP source with the emissions captured and subsequently controlled by an RTO. All the PM emissions are estimated to be generated by the combustion of natural gas and the process exhaust. Based on the heat input to the RTOs and the AP-42 emission factors for natural gas combustion, the Permittee estimates these emissions to be less than 1 tpy or .25 lb/hr.

Given the expected large margin of compliance, no monitoring, recordkeeping, and reporting is required for the new kettle washer. Compliance with this rule is expected.

### 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

This regulation applies to any combustion source that emits sulfur dioxide (SO<sub>2</sub>) formed by the combustion of sulfur in fuels, wastes, ores, and other substances. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu

heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

The combustion of natural gas in the RTOs is the only source of SO<sub>2</sub> emissions from the combustion of VOCs emitted from the kettle washer. The combustion of natural gas will have negligible SO<sub>2</sub> emissions. Given the expected large margin of compliance, no monitoring, recordkeeping, and reporting is required for the new kettle washer controlled by the RTOs. Compliance with this rule is expected.

#### **15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

This regulation applies to fuel burning operations and industrial processes where visible emissions can be reasonably expected to occur. As these coating lines were manufactured after July 1, 1971, the visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period except for the following exceptions:

Six-minute averaging periods may exceed 20 percent opacity if:

- (1) no six-minute period exceeds 87 percent opacity;
- (2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
- (3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

Visible emissions resulting from the combustion of the VOC/HAP/TAP emissions from the controlled processes including the kettle washer in conjunction with the firing of the natural gas are expected to be generally negligible. Given the expected large margin of compliance based on the history of the performance of the existing coating lines and existing kettle washer controlled by RTOs and consistent with current DAQ policy, no monitoring, recordkeeping, and reporting is required for the new kettle washer. Compliance with this rule is expected.

#### **15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

As shown in Section III, Emissions Discussion above, the potential controlled emissions increase for VOC from the proposed project is 11.94 tpy, well below the PSD significant emission rate (SER) for VOC. However, Kurz was asked to determine if this project should be “aggregated” with any recent projects, notably the project that resulted in the issuance of permit revision no. T26, for PSD applicability purposes (see Chronology above). Kurz maintains this project should not be aggregated with any other project but the explanation was not rigorous. For expediency, Kurz requested that the new kettle washer be placed under the 40 tpy PSD avoidance condition implemented for the project that resulted in the issuance of permit revision no. T26, which would have been necessary to avoid PSD review if aggregation of the projects was required anyway. The condition is in the current permit at Section 2.1 D.5. Since the condition at Section 2.1 D.5 was included via the 02Q .0300 procedures (i.e., Part 1 of the 2 step process pursuant to 15A 02Q .0504), it is not yet part of the TV permit. Therefore, adding the kettle washer under this avoidance condition would not contravene or conflict with an existing TV permit condition and can therefore be added during the current 02Q .0300 permitting process.

The existing avoidance condition requires the Permittee to primarily comply with the MACT JJJ requirements which ensure that the RTO-3 is capturing and destroying over 95 of the organic HAP from the coating lines (ID No. ES10), which is determined by total VOC (as a surrogate) testing as specified under the MACT. Using the mass of VOC used and the control efficiency determined pursuant to MACT JJJ, the Permittee determines the monthly VOC emitted and calculates the rolling 12-month total VOC emissions.

Monitoring will be added to address the kettle washer (ID No .ES11). The kettle washer is ducted to RTO-3 (and eventually RTO-1 as discussed) and its emissions are assuming to be 100% captured. However, the new kettle washer and the existing kettle washer use solvents from a common storage tank. The Permittee recommended the following monitoring/recordkeeping strategy in an email received 11/13/2023.

The solvent usage for the kettle washers will be from a common storage tank. Therefore, the most efficient way for Kurz to track the VOC emissions from the new kettle washer will be from tracking its hours of operation along with total solvent usage from both washers. The operating hours from the new machine will be used in combination with the total solvent usage for both kettle washers to partition out the VOC emissions from the new kettle washer.

This approach seems reasonable and was incorporated into the draft permit at Section 2.1 D.5. Typical reporting will also be required. Compliance with this rule is expected.

**15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

As described above in Section III above, the kettle washer will be permitted to be controlled by the RTO-3 (still under construction and not yet operational) and the existing and operational RTO-1 as a backup.

However, the routing of the emissions from the new kettle washer to the existing RTO-1 would require retesting of the existing RTO-1 as well as revise existing monitoring and recordkeeping requirements. This aspect of the modification is considered to be a significant modification to the existing TV monitoring and recordkeeping requirements of the permit. Since this aspect of the significant modification would conflict with the existing permit, consistent with 15A NCAC 02Q .0501(c)(2), operation in such a scenario after this aspect of the modification cannot be permitted until a Title V is issued pursuant to 02Q .0516.

To allow the construction aspects of routing the emissions from the kettle washer to RTO-1 to proceed as requested in this application, the following operating restriction will be placed into the permit at Section 2.2 A.2.

The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0516.

For the kettle washer (**ID No. ES11**), the Permittee shall not route emissions to the RTO (**ID No. RTO-1**).

Associated recordkeeping will also be added. Thus, the Permittee will be allowed to construct all necessary ductwork and other appurtenant systems necessary to allow the future use of the kettle washer (ID No. ES11) with RTO-1 in a backup scenario as described in Section III above. The operating restriction will be removed at a future date once a TV permit has been issued pursuant to the significant modification procedures at 15A NCAC 02Q .0516. The future permit will include all revised testing, monitoring, recordkeeping, and reporting requirements as necessary to comply with all applicable requirements.

Note that Section 2.2 A.2 of the existing permit already has similar operating restrictions to address the modification that resulted in the issuance of permit revision no. T36.

**15A NCAC 02Q .0308(a)(1): OPERATING RESTRICTIONS**

- a. The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0500.
  - i. For the coating lines (**ID No. ES10**), the Permittee shall not route emissions to the RTO (**ID No. RTO-1**).
  - ii. For the sources (**ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09**), the Permittee shall not route emissions to the RTO (**ID No. RTO-3**).

The kettle washer restriction will simply be added to Section 2.2 A.2.a.i of the permit. Compliance with this restriction is expected.

**State Enforceable Only****15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS****State Enforceable Only****15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

See facility-wide regulatory considerations discussion below.

**FACILITY-WIDE REGULATORY CONSIDERATIONS****State enforceable only****15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

This rule requires that 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.

To date odors have not been an issue at the facility. Continued compliance is expected.

**State enforceable only****15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES****15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104

contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

As discussed in Section III above, the proposed kettle washer is a new source of the NC TAP ethyl acetate (CAS No. 141-78-6) and MEK (CAS No. 78-93-3). Ethyl acetate has an hourly TPER. MEK has an hourly (22.4 lb/hr) and a daily TPER (78/lb/day).

Also, as discussed in Section III above, the new kettle washer will not be able to operate at the same time as the existing kettle washer. Therefore, there will not be an increase in hourly emissions. However, Kurz (converting the emission rates in Table 1 in section III above to an hourly and daily basis) estimates its facility-wide potentially hourly emissions of ethyl acetate as 2.7 lb/hr and for MEK 11.74 lb/hr or 282 lb/day assuming both kettle washers operate 8760 hours per year and does not account for TAPs not emitted by the use of the solvent recovery systems. Thus, the TAP emissions estimates are very conservative. Note that the Kurz facility-wide potential emission rate of MEK on a daily basis (282 lb/day) exceeds the MEK TPER of 78 lb/day. Emissions of ethyl acetate and MEK on an hourly basis do not exceed their respective TPER.

In the previous review for permit revision no. T26, an unacceptable risk analysis was conducted for MEK (See ATTACHMENT, Section IV Facility-wide Regulatory Considerations). It was estimated that the facility-wide emissions of MEK would have to approach 13,505 lb/day to approach the MEK AAL. Thus, it is expected that the use of the new kettle washer will not result in emissions that exceed the MEK AAL by a wide margin.

For comparative purposes, a review of the previous two years of emission inventory data (calendar years 2021 and 2022) shows that the maximum MEK emitted in an entire calendar year (2021) was 13,965 lb/yr or 38 lb/day on an average annual basis. Thus, with the marginal expected increase (if any) in actual MEK emissions, the actual emissions are not expected to approach the MEK AAL.

No changes are necessary to the existing permit with respect to these rules.

### **General Conditions Discussion**

EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions<sup>1</sup>. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses<sup>2</sup> and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

The DAQ has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500) nor other state regulations. Hence, no changes to its Title V or other state regulations are necessary. Instead, DAQ had chosen to include them directly in individual Title V permits as General Condition J. Therefore, as discussed above, the DAQ is required to promptly remove such impermissible provisions, from individual Title V permits, after August 21, 2023, through the normal course of permit issuance. General Condition J will therefore be removed from the revised permit.

## **V. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM**

### **NSPS**

No New Source Performance standards (NSPS) apply to the proposed kettle washer.

<sup>1</sup> NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

<sup>2</sup> In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

**NESHAP/MACT**

The facility is a major source of HAP emissions. The coating lines are subject to 40 CFR 63, Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating.’

However, the kettle washer is not an affected source under JJJJ nor is it an affected source under any other NESHAP or MACT rule.

**PSD/Attainment status**

Davidson County is in attainment for all pollutants.

Kurz is considered to a major source under PSD as it has potential emissions of VOC over 250 tpy. The proposed kettle washer will be covered under a 40 tpy VOC PSD avoidance condition. See Section IV above for full discussion.

Davidson County has triggered the minor source baseline date for PM<sub>2.5</sub>, PM<sub>10</sub> and NO<sub>x</sub>. However, the proposed modification is not expected to result in an increase of any of these pollutants.

**CAM**

The modification addressed in this application does not trigger a CAM review at this time. The proposed kettle washer has potential pre-control device emissions of greater than 100 tpy of VOC. However, since it has post-control emissions less than 100 tpy the kettle washer is considered an “other PSEU.” Pursuant to 40 CFR 64.5(b), CAM applicability for “other PSEUs” will be addressed during the next TV permit renewal.

**112r - Risk Management Program (RMP) (15A NCAC 2D .2100)**

The Permittee states on Form A3 of the application that no chemicals are stored at the facility above the 112(r) thresholds.

**VI. Compliance History**

As stated in the most recent compliance inspection report conducted by Jim Hafner of the WSRO on July 6, 2023:

**Based on records review and the site visit on July 6, 2023, Kurz Transfer Products, LP appears to be operating in compliance with all Air Quality standards and regulations.**

The five-year violation history as included in the inspection report is as follows:

<b><u>Five Year Violation History:</u></b>			
<b><u>Date</u></b>	<b><u>Letter Type</u></b>	<b><u>Rule Violated</u></b>	<b><u>Violation Resolution Date</u></b>
03/06/2020	NOV/NRE	Permit Late Title V ACC	03/12/2020
03/29/2019	NOV	Permit Late Title V ACC	03/29/2019

**VII. Changes Implemented in Revised Permit**

<b>Page No.</b>	<b>Section</b>	<b>Description of Changes</b>
NA	Cover Letter	<ul style="list-style-type: none"> <li>Updated cover letter for current date, modification etc.</li> </ul>
1	Permit page 1	<ul style="list-style-type: none"> <li>Updated page 1 for current date, modification etc.</li> <li></li> </ul>

4	Section 1	<ul style="list-style-type: none"> <li>• The equipment list was revised to add the new kettle washer (ID No. ES11) and to allow the emissions from the kettle washer to be controlled by the RTOs (ID No. RTO-1 and RTO-3). The use of RTO-1 for this source is restricted as provided by the operating restriction added at Section 2.2 A.2.</li> <li>• Removed footnote to address the permit application submittal requirements for the modifications addressed in application no. 2900268.23A pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2). This application has been submitted.</li> <li>• Added footnote to address the permit application submittal requirements for the modifications addressed in the current application (2900268.23C) pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2).</li> </ul>
19	Section 2.1 D	<ul style="list-style-type: none"> <li>• Added a reference to the new kettle washer (ID No. ES11) at this section.</li> <li>• Added specific reference to the kettle washer in the PSD avoidance condition at section 2.1 D.5 and revised the recordkeeping and reporting requirements to address the kettle washer (ID No. ES11).</li> </ul>
28	Section 2.2	<ul style="list-style-type: none"> <li>• Added operating restrictions consistent with the current application for RTO-1 and RTO-3 with respect to new kettle washer (ID no. ES11) at Section 2.2 A.2.</li> <li>• Removed permit application submittal and startup notification requirements for the modification addressed in application no. 2900268.23A pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2) and (c)(2) at Section 2.2 A.3 as the application has been submitted.</li> <li>• Added permit application submittal and startup notification requirements for the modification addressed in the current application (2900268.23C) pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2) and (c)(2) at Section 2.2 A.3.</li> </ul>
30	Section 4	<ul style="list-style-type: none"> <li>▪ Revised the general conditions from version 6.0, 01/07/2022 to version 7.0, 08/21/2023) Changes include: <ul style="list-style-type: none"> <li>-GC J – the emergency provisions were removed. See discussion in Section V of permit review.</li> </ul> </li> </ul>

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

Since the modifications addressed in this application are considered significant modifications that would not contravene or conflict with a condition in the existing permit, this application is being processed at the Permittee's request as a significant modification pursuant to the "two step" significant modification procedures at 15A NCAC 02Q .0501(b)(2) and 02Q .0504. This application, "step one", is being processed, pursuant to 15A NCAC 02Q .0504(a), under the "state only" permitting rules at 15A NCAC 02Q .0300. As such no public notice or EPA review procedures apply at this time.

### IX. PE Seal

Pursuant to 15A NCAC 02Q .0112 "Application requiring a Professional Engineering Seal," specifically 02Q .0112(a), a professional engineer's seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

- (1) design;
- (2) determination of applicability and appropriateness; or
- (3) determination and interpretation of performance of air pollution capture and control systems.

A Form D5 (Technical Analysis to Support Permit Application) was submitted with the application sealed by Matthew Wike, PE, license no. 029652. A review of the NC Board of Examiners for Professional Engineers and Surveyors website shows the license to be “current.”

## **X. Zoning**

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0304(b) if the air permit application involves a new facility or the expansion of an existing facility.

NCGS 143.215.108(f) prohibits the Division from acting upon the application until it has received a zoning consistency determination from each local government agency requested to make a determination, or the applicant submits a certified (or clerk stamped and signed) request and 15 days have passed since the application was received by the clerk.

A FedEx delivery confirmation was received via email on October 16, 2023, by this office showing the request for determination was delivered to the Davidson County Planning and Zoning Office on September 29, 2023. More than 15 days have passed since the application/request was received by the clerk. Therefore, DAQ may act upon the application and proceed with permit issuance.

## **XI. Recommendations**

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements with exceptions as noted in Section VI described above.

The Winston Salem Regional Office has received a copy of the draft permit and had no substantial comments.

The DAQ recommends issuance of Permit No. 06542T27.

# **ATTACHMENT**

Permit review for permit no. 06542T26

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Application Review**

**Issue Date:** June 16, 2023

**Region:** Winston-Salem Regional Office  
**County:** Davidson  
**NC Facility ID:** 2900268  
**Inspector's Name:** Jim Hafner  
**Date of Last Inspection:** 03/23/2022  
**Compliance Code:** 3 / Compliance - inspection

**Facility Data**

Applicant (Facility's Name): Kurz Transfer Products, LP

Facility Address:  
 Kurz Transfer Products, LP  
 4939 North NC Highway 150  
 Lexington, NC 27295

SIC: 2771 / Greeting Card Publishing  
 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, .1100, .1111  
 02Q .0308, .0317, .0504, .0706  
**NSPS:** No  
**NESHAP:** MACT JJJJ  
**PSD:** NO  
**PSD Avoidance:** Yes  
**NC Toxics:** evaluation pursuant to G.S. 143-215.107(a)(5)b

**112(r):** No  
**Other:**

**Contact Data**

**Facility Contact**

Thomas Hertlein  
 CEO  
 (704) 927-3700  
 4939 North NC Highway  
 150  
 Lexington, NC 27295

**Authorized Contact**

LaRue Cribb  
 Plant/EHS Manager  
 (336) 397-1750  
 4939 North NC Highway  
 150  
 Lexington, NC 27295

**Technical Contact**

Gary Butler  
 Environmental, Health &  
 Safety Manager  
 (704) 927-3845  
 11836 Patterson Road  
 Huntersville, NC 28078

**Application Data**

Application Number: 2900268.23A  
 Date Received: 02/20/2023  
 Application Type: Modification  
 Application Schedule: TV-Sign-501(b)(2) Part I  
 Existing Permit Data  
 Existing Permit Number: 06542/T25  
 Existing Permit Issue Date: 08/11/2020  
 Existing Permit Expiration Date: 07/31/2025

**Total Actual emissions in TONS/YEAR:**

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	0.0100	2.65	26.90	2.22	0.0100	0.9930	0.9391 [Toluene]
2020	0.0100	1.30	24.56	1.09	---	1.23	1.20 [Toluene]
2019	0.0100	1.32	27.14	1.10	---	1.86	1.83 [Toluene]
2018	0.0100	1.96	28.00	1.65	0.0100	2.06	1.57 [Toluene]
2017	0.0100	1.65	26.00	1.38	0.0100	1.77	1.30 [Toluene]

**Review Engineer:** Joseph Voelker

**Review Engineer's Signature:** **Date:** 06/14/2023

**Comments / Recommendations:**

Issue 06542/T26  
 Permit Issue Date: 06/14/2023  
 Permit Expiration Date: 07/31/2025

## I. Introduction and Purpose of Application

Kurz Transfer Products, LP (Kurz) operates a hot stamping foils manufacturing plant in Lexington, Davidson County, North Carolina. The facility operates under Title V permit No. 06542/T25 issued August 11, 2020.

The primary operation at Kurz are rotogravure processes where various coating materials are applied onto a polyester film substrate. The purpose of this application is to request an air permit to construct and operate two new coating lines that will exhaust to a new regenerative thermal oxidizer (RTO-3). Kurz is also requesting the ability to operate the new and existing coating lines exhausting to either the new RTO or the existing RTO (ID No. RTO-1). This is fully described in Section III below.

It will be shown that this project is a significant modification as defined under the TV permitting rules (15A NCAC 02Q .0500). However, as the final permit application request, which includes requesting operating restrictions, does not contradict or contravene any existing permit conditions, this application will be processed at Kurz's request under the state-only permitting rules (15A NCAC 02Q .0300) and consistent with 15A NCAC 02Q .0501(b)(2) and 02Q .0504.

## II. Chronology

Date	Description
February 20, 2023	Application was received and assigned Application No. 2900268.23A.
February 24, 2023	An ADD INFO email was sent to KURZ stating that the application requests certain modifications that cannot be addressed in a two-step fashion pursuant to 02Q .0504. The applicant was requested to clarify which modifications it would like to pursue.
February 27, 2023	A revised A Form and E5 Form were received via mail in the Winston Salem Regional Office. The forms now reflect the correct responsible official, Thomas Hertlein, CEO.
March 1, 2023	An addendum was received via email from KURZ clarifying which modifications to process at this time. The Permittee has agreed to operating restrictions on aspects of the modification that would otherwise contravene or conflict with conditions in the existing permit.
March 7, 2023	A FedEx delivery confirmation was received via email by this office showing the application and a request for a zoning consistency determination was delivered to the Davidson County Planning and Zoning Office on February 21, 2023.
March 09, 2023	An acknowledgment letter was sent to the Kurz via email stating the application was complete as application submittal did contain all the required elements (except the ePayment) and has been accepted for processing.
March 09, 2023	Application fee received via ePayments.
March 22, 2023	A zoning consistency determination was received via mail to Winston Salem Regional Office from the Davidson County Planning and Zoning Office stating the proposed operation is consistent with applicable zoning ordinances.
May 5, 2023	An ADD INFO email was sent requesting the emission calculations in spreadsheet format to facilitate review.
May 5, 2023	The information requested on May 5, 2023 was received via email.
May 5, 2023	An ADD INFO email was sent asking if the B and D1 forms properly accounted for all HAP/TAP and criteria emissions.
May 9, 2023	Revised D1 form and supporting calculations in PDF form were received in response to the May 5, 2023 ADD INFO email above. These data upon review were incomplete. These data were supplanted by the data submitted on May 26, 2023
May 23, 2023	An email from Kurz was received stating the following:  "I will be sending you new insignificant activity emissions data later today. Also wanted to confirm with you the exhaust scenario question you asked last week. I confirmed with Kurz that all coaters that currently exhaust to RTO-1 will exhaust to RTO-3 along with the two new coaters. That will be their primary exhaust scenario. RTO-1 will remain onsite to serve as a back-up exhaust. Ductwork will be in place to allow the two new coaters to exhaust to RTO-1 but only as a back-up scenario when RTO-3 is not operating."

May 26, 2023	Revised D1 form and Table 1A from the application in PDF form and supporting calculations in spreadsheet form were received in response to the May 5, 2023 ADD INFO email above.
June 6, 2023	Draft permit was sent to Kurz via email.
June 6, 2023	A request to revise the monitoring parameters in Section 2.1 A.1.f.i for RTO-1 and RTO-2 was received via email.
June 13, 2023	Revised draft permit was sent to Kurz via email.
June 14, 2023	An email from Kurz was received stating: "I am in agreement with the changes you have added to the draft."

### III. Modification Description

#### Application No. 2900386.23A

The table below summarizes the coating operations, permanent total enclosures and control devices currently operating at the Kurz facility that will be affected by the proposed modification.

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (20.8 million Btu per hour maximum heat input rate)
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)		
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)		
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)		
ES09	One automated kettle washer with integral solvent recovery condenser		
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)		

The permittee would like to add two new coating lines (LM802 and LM803) operating in a permanent total enclosure (as defined in MACT JJJJ) as emission source (ID No. ES10) and a new RTO (ID No. RTO-3) as follows.

Emission Source ID Nos.	Emission Source Description	Control Device ID No	Control Device Description
ES01	Coating lines LM06 and LM81 operating within permanent total enclosure PTE-1	*RTO-1 or RTO-3	Natural gas-fired RTO with 16.0 MMBtu/hr maximum heat input rate Or Natural gas-fired RTO with 12.0 MMBtu/hr maximum heat input rate
ES02	Mixing operations consisting of 7-20 mixing stations operating with PTE-1		
ES03	Parts cleaning tank operating with PTE-1		
ES05	Coating line LM84 operating within permanent total enclosure PTE-2		
ES07	Parts cleaning tank operating with PTE-2		
ES09	One automated kettle washer with integral solvent recovery condenser		
ES10	Coating lines LM802 and LM803 operating within permanent total enclosure PTE-4	*RTO-1 or RTO-3	Natural gas-fired RTO with 16.0 MMBtu/hr maximum heat input rate Or Natural gas-fired RTO with 12.0 MMBtu/hr maximum heat input rate

The following narrative describes the current and proposed operations.

The Kurz facility is currently permitted (non-exempt) under North Carolina Department of Environmental Quality (NCDEQ) Division of Air Quality (DAQ) Air Permit Number 06542T25 to operate the following process equipment:

- Three coating lines (LM06, LM81, and LM84) that exhaust to a 16.0 million Btu per hour (MM Btu/hr) natural gas-fired regenerative thermal oxidizer (RTO-1). Coating lines LM06 and LM81 are permitted as Emission Source ID No. ES01 and Coating line LM84 is permitted as Emission Source ID No. ES05;
- Mixing operations consisting of 7-20 mixing stations (ES02) that exhausts to RTO-1;
- Two parts cleaning tank operations (ES03 and ES07) that exhausts to RTO-1;
- One coating line (LM801, ID No. ES08) that exhausts to a 5.0 MM Btu/hr natural gas-fired RTO (RTO-2).
- One automated kettle washer (ES09) with integral solvent recovery condenser that exhausts to RTO-1;
- Natural gas/No. 2 fuel oil-fired 4.184 MM Btu/hr boiler (ES06); and
- Natural gas-fired 81 horsepower emergency generator (ES-EG).

In 2018, Kurz replaced the 20.8 MM Btu/hr burner on RTO-1 with four 4.0 MM Btu/hr burners so the current maximum heat input rating of 16.0 MMBtu/hr is updated in this submittal. As a conservative measure, no reduction in natural gas combustion emissions are accounted for in the facility-wide emissions from the burner replacement.

Each of the coating lines, parts cleaning tanks, kettle washer, and mixing operations operate within a permanent total enclosure (PTE).

The two proposed coating lines (LM802 and LM803) will both exhaust to the new RTO (ID No. RTO-3), fired by natural gas only with a maximum heat input rating of 12.0 MMBtu/hr. The two new coating lines will also have ductwork installed to allow for their exhaust to be routed and controlled by RTO-1.

Kurz also plans to modify the capture and duct systems for all the existing sources (ID Nos. ES01 through ES09) that are currently routed to the existing RTO-1 to allow those sources to exhaust to either the existing RTO-1 or the proposed new RTO-3. No changes in actual or potential controlled emissions from these proposed alternative exhaust scenarios will occur with this part of the modification since the same control efficiency is estimated for the proposed RTO-3 as the existing RTO-1. Kurz's facility-wide emissions will only be modified by the additional pollutants expected from the two new coating lines.

Coating lines LM06 and LM81 each have a maximum flow rating of 10,000 cubic feet per minute (cfm). Coating lines LM84, and both proposed coating lines, LM802 and LM803, have a combined maximum flow rating of 20,000 cfm. RTO-1 is designed to handle an inlet exhaust flow rate of up to 40,000 and RTO-3 will have a maximum inlet flow rating of 80,000 cfm.

Though RTO-1 will serve as a back-up control device when RTO-3 is not operating, it cannot handle the simultaneous exhaust from five coating lines like RTO-3. Therefore, Kurz will not exhaust more than three coating lines simultaneously to RTO-1 while it is operating as the back-up control device. High temperature shut down controls are in place on RTO-1 to ensure it does not receive a loading of VOC exhaust greater than it is designed to handle. Additionally, the existing and new coating lines are equipped with interlock controls that will shut down the coating line if the RTO it is exhausting to is not operating.

In summary, after the modification is completed all existing and new sources identified above (ID Nos. ES 01 through ES10) will exhaust through RTO-3 as the primary operating scenario or through RTO-1 as the backup or secondary operating scenario. Although construction of all aspects of this modification will be permitted, full operation after the modification could result in conflict with certain conditions of the existing permit. Hence, it will be shown below in Section IV that operating restrictions will be included in the revised permit.

### **Emissions Discussion**

Emissions from the proposed coating lines are generated from the use of the various liquid coating materials and include volatile organic compounds (VOCs), federal hazardous air pollutants (HAPs), and NC-regulated toxic air pollutants (TAPs).

The pollutant emission rates from the existing permitted coating lines LM06, LM81, and LM84 are not modified in this application. Though the exhaust scenario will change with this modification, emission rates will not change since each line's production rate and RTO control efficiency are not modified with this project. Facility-wide emission rates provided in Table 1 account for all existing and proposed coating lines operating simultaneously.

Natural gas combustion emissions from the proposed RTO-3 are estimated to include the criteria pollutants particulate matter (PM/PM<sub>10</sub>/PM<sub>2.5</sub>), CO, NO<sub>x</sub>, SO<sub>2</sub>, lead, and VOCs. The greenhouse gas (GHG) pollutants, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxides (N<sub>2</sub>O) will also be emitted from RTO-3.

The following tables from the application (revised and received via email on May 26, 2023) show the uncontrolled and controlled emissions estimates from the facility before and after the proposed modification. Note the facility-wide insignificant activities emissions in Table 1a are also included in the facility-wide summary of Table 1.

Further discussion of the emissions will be made with respect to the applicable regulations in Section IV below.

Table 1  
Facility-Wide Emissions

Kurz Transfer Products, LP  
Lexington, North Carolina

Pollutants	<sup>(1)</sup> Uncontrolled Emissions - Prior to Modification (tpy)	<sup>(1)</sup> Controlled Emissions - Prior to Modification (tpy)	Uncontrolled Emissions - New Sources (tpy)	Controlled Emissions - New Sources (tpy)	Uncontrolled Emissions - After Modification (tpy)	Controlled Emissions - After Modification (tpy)
PM (TSP)	2.74	2.74	0.39	0.39	3.13	3.13
PM10	1.96	1.96	0.39	0.39	2.35	2.35
PM2.5	1.37	1.37	0.39	0.39	1.76	1.76
SO <sub>2</sub>	0.18	0.18	0.031	0.031	0.21	0.21
CO	10.91	10.91	4.328	4.33	15.24	15.24
NO <sub>x</sub>	17.88	17.88	5.153	5.15	23.03	23.03
Lead	6.44E-05	6.44E-05	2.58E-05	2.58E-05	9.02E-05	9.02E-05
<sup>(3)</sup> VOCs	>250	<250	2,803	56.3	N/A	<250
CO <sub>2</sub> e	13,261	13,261	6,220	6,220	19,481	19,481
Ethyl Acetate*	293	5.86	169	3.38	462	9.25
<sup>(2)</sup> Methanol	36.7	0.73	0	0	0	0
MEK*	1,188	23.8	903	18.1	2,091	41.83
<sup>(2)</sup> MIBK	69.4	1.39	0	0	0	0
Toluene	629	12.57	26	0.53	655	13.10
<sup>(2)</sup> Xylene	11.0	0.22	0	0	0	0
TDI	0.92	0.018	0.88	1.75E-02	1.80	0.036
Hazardous Air Pollutants (HAPs)	--	14.94	--	0.54	--	13.14

Notes:

- 1) Facility-wide emissions prior to modification were taken from December 2013 permit application for LM801 coating line and RTO-2 and added contributions from Kettle Washer (ES-09) and all insignificant activities.
- 2) Methanol, MIBK, and Xylene were accounted for in December 2013 application. Kurz no longer uses coating products that contain these pollutants.
- 3) Calendar year 2021 air emissions inventory prepared by Kurz, shows controlled VOC emissions from coating lines at 26.77 tons/year.
- 4) Uncontrolled emissions of HAPs/TAPs were not provided in the December 2013 application. Uncontrolled HAP/TAP emissions prior to modification estimated from controlled emission rate by removing the 98% control efficiency (Controlled tpy / 1 - 0.98 = Uncontrolled tpy).
- 5) Insignificant Sources added to facility-summary (05-08-23). See Table 1A taken from 2014 Permit Application.
- 6) Emission contributions from Kettle Washer (ES-09) added based on data prepared by Trinity Consultants in 2016 application.

TABLE 1A  
Emissions from Insignificant Activities

Kurz Transfer Products, LP  
Lexington, North Carolina

Source ID Nos.	Coating Lines	Emission Point	VOC tons/yr	Ethyl acetate tons/yr	MEK tons/yr	Toluene tons/yr	TDI tons/yr	Xylene tons/yr
IWSD <sup>(1)</sup>	Waste solvent distillation unit	Fugitive	0.0014	-	-	-	-	-
IAK83 <sup>(2)</sup>	Vacuum chamber on metallizing process	Fugitive	-	-	-	-	-	-
IAK801 <sup>(2)</sup>	Vacuum chamber on Coating Line LM801	Fugitive	-	-	-	-	-	-
IESCC	Cylinder Cleaner	Fugitive	4.93	-	-	-	-	-
IWK82 <sup>(3)</sup>	One Conditioner	Fugitive	0.21	0.015	0.062	0.061	4.49E-04	0.0011
IESPW	Parts Washer	RTO-1	4.43	0.44	1.51	0.31	-	-
IES-RDLH <sup>(4)</sup>	R&D Lab Hoods	Lab Hood Vent	-	-	-	-	-	-
IES-T1	Single compartment 12,000 gallon UST - MEK	Fugitive	0.25		0.25		-	-
IES-T8	Single compartment 12,000 gallon UST - Ethanol	Fugitive	0.09					
IES-T4-3	Double compartment UST IPA - 8,000 gallon Propyl Cellosolve - 2,000 gallon	Fugitive	0.07					
IES-T5-7-2	Triple compartment UST Toluene - 4,000 gallon Ethyl Acetate - 4,000 gallon Acetone - 4,000 gallon	Fugitive	0.32	0.105		0.032		
IES-T6	Single compartment UST Isopar - 4,000 gallon	Fugitive	3.20E-04					
TOTAL INSIGNIFICANT SOURCES			10.31	0.56	1.84	0.403	4.49E-04	1.10E-03

## Notes:

- 1) Kurz provided GEL with emissions data on Distillation Unit during GEL's preparation of permit application in 2013.
- 2) Vacuum Chambers do not process any raw materials therefore no emissions are expected.
- 3) Conditioner IWK06 listed on current Kurz's Title V Permit Insignificant Activity List was removed from the facility. Conditioners emissions as presented in 2014 application were based on 1% of the emissions generated from the four permitted Coating Lines. Since one Conditioner was removed, emissions were divided by 2 to estimate current emission level.
- 4) R&D Lab Hoods only handle materials in small containers and lids are in place when not in use. No measurable emissions are expected.
- 5) Parts Washer emissions data are uncontrolled and were provided in 2014 permit application.
- 6) UST emissions based on TANKS 4.0.9d assuming a worst case 24 turnovers per year for each tank.

The modifications will appear in the revised permit in Section 1 of the permit as follows:

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)		
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)		
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)	OR	OR
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative
ES09	One automated kettle washer with integral		

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
	solvent recovery condenser		thermal oxidizer (12 million Btu per hour maximum heat input rate)
ES10 MACT JJJJ	Coating operations consisting of two coating lines (LM802 and LM803) operating within a permanent total enclosure (PTE-4)		

### Requested revisions to the monitoring parameters for RTO-1 and RTO-2.

On June 6, 2023, Kurz submitted a request to revise the monitoring parameters for RTO-1 and RTO-2 that are found at Section 2.1 A.1.f.i of the permit. Section 2.1 A.1 addresses 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart JJJJ – "National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating."

Section 2.1 A.1.f. reads as follows:

#### RTO Operating Limits [15A NCAC 02Q .0508(f)]

- f. The Permittee shall:
- i. For each thermal oxidizer, the average combustion temperature in any 3-hour period must not fall below the following parameter values: [§63.3321(a), MACT JJJJ Table 1]

**Table 2.1 A.1.f**

Control device	Temperature, 3-hour rolling average
RTO-1	1465°F
RTO-2	1641°F

- ii. confirm or reestablish the monitoring parameters above during performance tests. If, during performance testing, the parameter values are not adhered to and:
  - (A) are more stringent (i.e. the temperature(s) is greater), the permittee shall submit a request to revise the value(s) in the permit at the same time the test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
  - (B) are less stringent (i.e. the temperature(s) is less), the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.

If the requirements are not met, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111.

Thus, the parameters may be revised administratively if more stringent and via the TV minor modification procedures if less stringent. In this case, the request was received while the permit was open for application (application no. 2900386.23A) and was being processed by the two-step significant modification process. Thus, this request to revise the parameters can simply be consolidated into the more stringent processing requirements of the significant modification application.

Kurz had conducted VOC destruction efficiency testing on October 5, 2022. The results of the testing were approved by the DAQs stationary Source Compliance Branch (SSCB) via a memo issued March 28, 2023 and subsequently revised on April 10, 2023 (tracking no. 2022-226st). A summary of the results are as follows (excerpted from the test approval memo):

RTO-1 – October 5, 2022	Test Results [VOC as C]	2Q .0317 & 63 Subpart JJJJ Destruction Requirement	Compliance
Inlet	295.3 lb/hr	---	---
Outlet	8.98 lb/hr	---	---
Destruction Efficiency	97.0%	95%	Indicated

#### October 5, 2022 Reported Parameters by Run

RTO-1	Temperature, °F	RTO Inlet Loading [VOC as C]	RTO Outlet Emissions [VOC as C]	DRE
Run 1	1,444	269.4 lb/hr	6.4 lb/hr	97.6%
Run 2	1,377	315.5 lb/hr	10.34 lb/hr	96.8%
Run 3	1,373	301.0 lb/hr	10.19 lb/hr	96.8%
Average	1,398	295.3 lb/hr	8.98 lb/hr	97.0%

<b>RTO-2 – October 5, 2022</b>	Test Results [VOC as C]	2Q .0317 & 63 Subpart JJJJ Destruction Requirement	Compliance
Inlet	182.5 lb/hr	---	---
Outlet	1.88 lb/hr	---	---
Destruction Efficiency	98.9%	95%	Indicated

## October 5, 2022 Reported Parameters by Run

<b>RTO-2</b>	Temperature, °F	RTO Inlet Loading [VOC as C]	RTO Outlet Emissions [VOC as C]	DRE
Run 1	1,571	220.6 lb/hr	1.97 lb/hr	99.1%
Run 2	1,604	202.6 lb/hr	2.09 lb/hr	99.0%
Run 3	1,608	124.3 lb/hr	1.57 lb/hr	98.7%
Average	1,595	182.5 lb/hr	1.88 lb/hr	98.9%

The memo further states:

The test results are acceptable to determine compliance with the destruction efficiency requirement and to establish the operating temperature for RTO-1 and RTO-2. DAQ approves the use of the average destruction efficiency determined during this test program.

Thus, the permit will be revised as requested. Table 2.1 A.1.f will be revised to read as follows:

Table 2.1 A.1.f

Control device	Temperature, 3-hour rolling average
RTO-1	1398°F
RTO-2	1595°F

#### IV. Regulatory Review

##### IV-A -Existing sources (excluding the coating lines) affected by the modification

The following subset of existing sources will be discussed together.

Emission Source ID Nos.	Emission Source Description	Control Device ID No.	Control Device Description
ES02	Mixing operations consisting of seven to 20 mixing stations operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
ES03	Parts cleaning tank operating within a permanent total enclosure (PTE-1)	OR	OR
ES07	Parts cleaning tank operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)
ES09	One automated kettle washer with integral solvent recovery condenser		

##### **15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL SOURCES**

##### **15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

##### **15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

These operations are common support operations to all of the existing and new coating lines. The emissions from these operations from a calculation standpoint are generally associated with the VOC/HAP/TAP material usage of the coating lines. Thus, emissions associated with these operations are expected to increase proportionally with the production associated with the new coating lines. However, these emissions are and will continue to be captured and exhausted to RTO-1 or the new RTO-3. PM and SO<sub>2</sub> emissions from these operations are associated with the combustion emissions of the RTOs. Thus, PM and SO<sub>2</sub> emissions of these sources are minimal. With respect to visible emissions no changes are expected from the proposed modifications.

In summary, no changes are necessary to the existing permit conditions with respect to these sources. Continued compliance with respect to these regulations is expected.

**15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

These sources, along with the existing coating lines described in Section IV-B below, are subject to a 244 tpy VOC emission limitation to avoid PSD review. The sources discussed in IV-B below emit the majority of the VOCs subject to this VOC emission limitation. This avoidance condition requires the Permittee to primarily comply with the MACT JJJ requirements which ensure that the RTO-1 is capturing and destroying over 95 of the organic HAP, which is determined by total VOC (as a surrogate) testing as specified under the MACT. Using the mass of VOC used and the control efficiency determined pursuant to MACT JJJ, the Permittee determines the monthly VOC emitted and calculates the rolling 12-month total VOC emissions.

Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

As described above in Section III above, these sources are currently permitted to be controlled by the existing RTO-1. Because the routing of the emissions from these sources to the new RTO (ID no. RTO-3) would require retesting of the new RTO as well as revise exiting monitoring and recordkeeping requirements, these changes are considered to be a significant modification to the existing monitoring and recordkeeping requirements of the permit. Since this significant modification would conflict with the existing permit, consistent with 15A NCAC 02Q .0501(c)(2), operation after these modifications cannot be permitted until a Title V is issued pursuant to 02Q .0516.

To allow the construction aspects of routing the emissions from these sources to the new RTO-3 to proceed, the following operating restriction will be placed into the permit at Section 2.2 A.2.

The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0516.

For the sources (**ID Nos. ES01, ES02, ES03, ES05, ES07, and ES09**), the Permittee shall not route emissions to the RTO (**ID No. RTO-3**).

Associated recordkeeping will also be added. Thus, the Permittee will be allowed to construct all necessary ductwork and other appurtenant systems necessary to allow the future use of RTO-3 and the existing RTO-1 in a backup scenario as described in Section III above. The operating restriction will be removed at a future date once a TV permit has been issued pursuant to the significant modification procedures at 15A NCAC 02Q .0516. The future permit will include all revised testing, monitoring, recordkeeping and reporting requirements as necessary to comply with all applicable requirements.

**State Enforceable Only**

**15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

**State Enforceable Only**

**15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

See facility-wide regulatory considerations discussion below.

**IV-B - Existing coating lines affected by the modification**

<b>Emission Source ID Nos.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES01 MACT JJJJ	Coating operations consisting of two coating lines (LM06 and LM81) operating within a permanent total enclosure (PTE-1)	RTO-1	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)
		OR	OR
ES05 MACT JJJJ	One coating line (LM84) operating within a permanent total enclosure (PTE-2)	RTO-3	One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)

These coating lines are subject to all of the regulations addressed in Section IV-A above. The discussion in section IV-A above applies to these sources as well. However, the coating lines are also subject to MACT JJJJ which is discussed below.

**15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

(40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

The existing coating lines (ID Nos. ES01 and ES05) are subject to 40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating’ (MACT JJJJ).

These coating lines are subject to the existing following emission limitations and operating restrictions as included in Section 2.1 A.1.e of the existing permit:

**Emission Standards** [15A NCAC 02Q .0508(f)]

- e.
  - i. The Permittee shall limit organic HAP emissions to no more than 5 percent of the organic HAP applied each month (95 percent reduction). [§63.3320(b)]
  - ii. The Permittee shall meet the limits in paragraph e.i by the use of a capture and control system(s) consisting of permanent total enclosure(s) (PTE) and thermal oxidizers. [§63.3370(a)(5)(i), (e)(1), (k)(1)-(2), (p)(3),
  - iii. For each capture and control system, the Permittee shall determine compliance with paragraph e.i according to the following equation:

$$R = \frac{(E)(CE)}{100}$$

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

[40 CFR 63.3370(k)(2), (p)(3)]

The permit also includes all relevant applicable requirements under the rule including general compliance requirements, PTE operating limits and monitoring requirements, continuous parameter monitoring systems (CPMS) requirements, testing requirements, notification requirements, and recordkeeping and reporting requirements. Continued compliance with this rule is expected when the emissions are routed to the new RTO-3 or the existing RTO-1.

Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

The discussion in Section IV-A above applies here as well. Since the revised permit will restrict the operation of these sources to the existing emissions control scenario, no changes are necessary to the existing permit condition. Continued compliance with this rule is expected.

**15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

See discussion in Section IV-A above.

**IV-C - New coating lines**

<b>Emission Source ID Nos.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES10 MACT JJJJ	Coating operations consisting of two coating lines (LM802 and LM803) operating within a permanent total enclosure (PTE-4)	RTO-1  OR  RTO-3	One natural gas-fired regenerative thermal oxidizer (16 million Btu per hour maximum heat input rate)  OR  One natural gas-fired regenerative thermal oxidizer (12 million Btu per hour maximum heat input rate)

**15A NCAC 02D .0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL SOURCES**

This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equations:

$$\begin{aligned} \text{For process rates up to 30 tons per hour:} & \quad E = 4.10(P)^{0.67} \\ \text{For process rates greater than 30 tons per hour:} & \quad E = 55.0(P)^{0.11} - 40 \end{aligned}$$

Where: E = Allowable emission rate in pounds per hour  
P = Process weight in tons per hour, (tph)

These coating lines are primarily VOC/HAP/TAP sources with the emissions captured and subsequently controlled by an RTO. All the PM emissions are estimated to be generated by the combustion of natural gas and the process exhaust. Based on the heat input to the RTOs and the AP-42 emission factors for natural gas combustion, the Permittee estimates these emissions to be less than 1 tpy or .25 lb/hr.

Given the expected large margin of compliance, no monitoring, recordkeeping and reporting is required for the new sources. Compliance with this rule is expected.

**15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

This regulation applies to any combustion source that emits sulfur dioxide (SO<sub>2</sub>) formed by the combustion of sulfur in fuels, wastes, ores, and other substances. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

The combustion of natural gas in the RTOs is the only source of SO<sub>2</sub> emissions from these sources. The combustion of natural gas will have negligible SO<sub>2</sub> emissions. Given the expected large margin of compliance, no monitoring, recordkeeping and reporting is required for the new sources nor are any changes necessary to the existing permit conditions. Compliance with this rule is expected.

**15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

This regulation applies to fuel burning operations and industrial processes where visible emissions can be reasonably expected to occur. As these coating lines were manufactured after July 1, 1971, the visible emissions from these sources shall not be more than 20 percent opacity when averaged over a six-minute period except for the following exceptions:

Six-minute averaging periods may exceed 20 percent opacity if:

- (1) no six-minute period exceeds 87 percent opacity;
- (2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
- (3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

Visible emissions resulting from the combustion of the process emissions in conjunction with the firing of the natural gas are generally negligible. Given the expected large margin of compliance based on the history of the performance of the existing coating lines controlled by RTOs and consistent with current DAQ policy, no monitoring, recordkeeping and reporting is required for the new sources. Compliance with this rule is expected.

### **15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

(40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

The new coating lines (ID No. ES10) are subject to 40 CFR 63 Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (MACT JJJJ)

Pursuant to 63.3300:

*The affected source subject to this subpart is the collection of all web coating lines at your facility.....*

Web coating line is defined at 63.3310 as:

*Web coating line means any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.*

The collection of web coating lines at the existing facility are ID Nos. ES02, ES05 and ES08. Coating lines ES01 and ES05 are defined as existing under the rule (constructed prior to September 12, 2000) and hence are subject to a 95% overall organic HAP reduction. Although ES08 was constructed well after that date, the rule defines the affected source as the collection of “all web coating lines at the facility.” This interpretation is consistent with the Q&A document published on May 29, 2003, shortly after the original rule. Therefore, all three sources are considered existing and subject to the same 95% overall organic HAP reduction. This argument holds true for the new coating lines (ID No. ES10). Since the Permittee has chosen the same compliance option for the new coating lines as the existing coating lines (i.e, using a capture and control system including an RTO), the new coating lines will be subject to the same emission limitations as well as all of the other applicable requirements under this rule as the existing coating lines. Thus, the MACT JJJJ discussion provided in Section IV-B above applies to these new coating lines as well.

Unrelated to the modification, MACT JJJJ was revised effective as of July 9, 2020. The revised rule clarified that the rule intent was that for affected sources using capture and control systems for compliance with the emission standards (which is the compliance option chosen by the Permittee for all three web coating lines), deviations of the capture and control system parameters alone were not violations of the emission standards. The emission standard is determined on a monthly basis. Other substantial changes to the rule affecting this facility include:

- Changes associated with the vacatur of the MACT startup, shutdown and malfunction (SSM) provisions at 40 CFR 63.6. Starting July 9, 2021, the Permittee must be in compliance with the standards at all times. The vacatur had many other implications in this rule (and hence to the permit conditions) including the recordkeeping and reporting requirements.
- Five-year testing cycle: The rule now requires 5-year periodic testing of the thermal oxidizers.
- Electronic reporting: the rule revised the electronic reporting requirements.
- Revised temperature sensor validation procedures
- The option to use of a “Control Destruction Efficiency Curve” pursuant to §63.3360(e)(4),

A permit condition will be placed into the permit with all applicable requirements under this rule for the new coating lines.

### **15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION**

Kurz is not in one of the 28 source categories subject to the 100 tons per year PSD major source threshold and is therefore subject to the 250 tons per year major source threshold. Facility-wide potential emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, SO<sub>2</sub>, and NO<sub>x</sub> will each not exceed 250 tons per year. Potential VOC emissions are estimated to be greater than 250 tons per year and therefore Kurz is a major source for VOC with respect to PSD.

The current modification with respect to the existing emission sources is not expected to result in an increase in emissions. With respect to the new sources, the coating lines LM802 and LM803 (collectively ID No. ES10) have potential controlled

emissions of VOC of 56 tpy, which is greater than the 40 tpy threshold to be considered a PSD major modification. To avoid triggering a PSD review, the Permittee has requested a 40 tpy PSD avoidance condition for the new coating lines.

Similar to the existing PSD avoidance condition found in Section 2.1 A.2 of the existing permit (discussed in IV-A above), the Permittee will be required to meet the operating limits, monitoring and recordkeeping requirements of MACT JJJJ and also calculate on a monthly and a 12-month rolling basis the after-control VOC emissions. In months where an “operating limit deviation” as defined under MACT JJJJ has occurred, the Permittee will calculate the VOC emissions on mass balance basis as specified under MACT JJJJ. The control efficiency will be determined consistent with the requirements of MACT JJJJ. Semiannual reporting will also be required.

Compliance with this avoidance limit is expected.

### **15A NCAC 02Q .0308(a)(1) OPERATING RESTRICTIONS**

As described above in Section III above, these new sources will be permitted to be controlled by the new RTO-3 and the existing RTO-1 as a backup. As the operation of these new sources as controlled by the new RTO will not contradict or conflict with a condition in the existing permit (all added conditions addressing these sources are provided in a new separate section from the existing sources) no operating restrictions other than those described elsewhere in this review are necessary.

However, the routing of the emissions from these sources to the existing RTO (ID no. RTO-1) would require retesting of the existing RTO as well as revise exiting monitoring and recordkeeping requirements, this aspect of the modification is considered to be a significant modification to the existing monitoring and recordkeeping requirements of the permit. Since this aspect of the significant modification would conflict with the existing permit, consistent with 15A NCAC 02Q .0501(c)(2), operation in such a scenario after this aspect of the modification cannot be permitted until a Title is issued pursuant to 02Q .0516.

To allow the construction aspects of routing the emissions from these sources to the existing RTO-1 to proceed, the following operating restriction will be placed into the permit at Section 2.2 A.2.

The following operating restrictions shall remain in effect until a revised permit is issued pursuant to 15A NCAC 02Q .0516.

For the coating lines (**ID No. ES10**), the Permittee shall not route emissions to the RTO (**ID No. RTO-1**).

Associated recordkeeping will also be added. Thus, the Permittee will be allowed to construct all necessary ductwork and other appurtenant systems necessary to allow the future use of the coating lines (ID No. ES10) with the existing RTO-1 in a backup scenario as described in Section III above. The operating restriction will be removed at a future date once a TV permit has been issued pursuant to the significant modification procedures at 15A NCAC 02Q .0516. The future permit will include all revised testing, monitoring, recordkeeping and reporting requirements as necessary to comply with all applicable requirements.

### **FACILITY-WIDE REGULATORY CONSIDERATIONS**

#### **State enforceable only**

#### **15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

This rule requires that 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.

To date odors have not been an issue at the facility. Continued compliance is expected.

#### **State enforceable only**

#### **15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES**

#### **15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS**

The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond

the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

Pursuant to 15A NCAC 02Q .0706(b), the facility is only required to submit a permit application under 15A NCAC 02D .1100 if the modification results in:

- (1) a net increase in emissions or ambient concentration of any toxic air pollutant that the facility was emitting before the modification; or
- (2) emissions of any toxic air pollutant that the facility was not emitting before the modification if such emissions exceed the levels contained in Rule .0711 of this Section.

It is expected based on the emissions information submitted (see Emissions discussion in Section III above) that an increase in four TAPs will occur as a result of the modification and the post project potential emissions will be as follows as compared to each TAPs respective TPER.

Toxic Air Pollutant	CAS no.	Potential emissions, facility-wide			TPERS		Emissions over TPER?
		tpy	lb/day	lb/hr	lb/day	lb/hr	
Ethyl Acetate	141-78-6	9.2	50.7	2.1	NA	36	No
Methyl Ethyl Ketone (MEK)	78-93-3	41.8	229.2	9.5	78	22.4	YES
Toluene	108-88-3	13.1	71.8	3.0	98	14.4	NO
2,4-Toluene Diisocyanate (TDI)	584-84-9	0.036	0.20	0.008	0.003	NA	YES

All existing TAP emitting sources are subject to a MACT and have been determined to be exempt from the state enforceable only toxics rules found at 15A NCAC 2D .1100 or the facility-wide emission rates are below the permitting emission rates (TPERS) found at 15A NCAC 02Q .0711. These determinations were made in the permit reviews for Permit Nos. T21, T22 and T23.

The two new coating lines are subject to MACT JJJJ and therefore meet the exemption at 15A NCAC 02Q .0702(a)(27). However, pursuant 15A NCAC 02Q .0706(c), sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S. 143-215.107(a)(5)b to ensure they do not pose an "an unacceptable risk to human health."

As seen in the table above, only MEK and TDI will be emitted above their respective TPER after the modification. The other TAPs are emitted below their respective TPER and therefore presumably do not pose an "an unacceptable risk to human health."

### TDI

The Permittee had submitted a modeling analysis with permit application no. 2900268.14A on January 06, 2014. However, the modeling was subsequently revised on 03/04/2014 to address the fact that the stack height of RTO-2 was to be lowered from the original planned height of 50 feet to 45 feet. The revised modeling was reviewed by the air quality analysis branch (AQAB) and in a memo dated March 18, 2014, it was determined that:

*(the) modeling submitted to the AQAB demonstrate that the proposed 2,4-TDI emissions rates will not exceed the Ambient Acceptable Levels (AAL) contained in 15A NCAC 02D.1104*

The results of the modeling were as follows:

**Maximum Predicted Concentration  
Kurz Transfer Products, L.P. – Davidson County, NC**

Pollutant	Scenario	Averaging Period	% of AAL
2,4-TDI	All Emission Sources	24-hour	99.6 %

The modeled parameters were as follows:

ID	EM. RATE	UTM	UTM	BASE	STACK	STACK	STACK	STACK	CAP	BLG
	2,4-TDI	X	Y	ELEV	HT	TEMP	VEL	DIA	HORZ	

	(lbs/hr)	(m)	(m)	(ft)	(ft)	(F)	(ft/sec)	(ft)		
RTO-1	0.0164	560218.59	3974639.44	687.4	50.0	318	46.7	5.00	NO	YES
RTO-2	0.0140	560254.64	3974733.19	691.3	45.0	215	47.8	3.33	NO	YES

Note the total of the TDI emission rates modeled was 0.03 lb/hr, or on a 24-hour basis, 0.73 lb/day. As noted above, the current facility-wide potential controlled emission rate for TDI is 0.2 lb/day. Thus, the current potential emissions rate would have to increase by approximately a factor of 3.7 (i.e., 0.73/0.2) before the AAL for TDI would be approached. Since it is not expected that this modification will result in an exceedance of the TDI AAL by a wide margin, this modification does not pose an “an unacceptable risk to human health” with respect to TDI.

### MEK

Since the ALL impact is proportional to the emission rate, the TDI emission rate and AAL impact were used to calculate the emission rate for MEK to achieve 99.6% of its respective AAL. This proportional approach is only valid for the TAPs with 24-hour AALs (which is true for MEK), since the TDI modeling was conducted on a 24-hour AAL basis.

#### The TAP emission rates necessary to achieve 99.6% of the respective AALs

TAP	Emission rate to hit 99.6% AAL	AAL	Potential emissions after the modification
	lb/day	mg/m3	lb/day
MEK	13505	3.7	229
TDI*	0.73	0.0002	<del>0.79</del> -0.20**

\*modeled TAP

\*\*this correction made on 11/08/2023 after permit issuance date.

Note that for MEK, the current potential emissions rate would have to increase by approximately a factor of 59 (i.e., 13505/229) before the AAL for MEK would be approached. Since it is not expected that this modification will result in an exceedance of the MEK AAL by a wide margin, this modification does not pose an “an unacceptable risk to human health” with respect to MEK.

In summary, for the reasons posed above, it is not expected that this modification will pose an “an unacceptable risk to human health.” These two new coating lines, as will the existing MACT affected sources, retain the exemption from toxics permitting at 15A NCAC 02Q .0702(a)(27). No changes are necessary to the existing permit.

## V. NSPS, NESHAPS, PSD, Attainment Status, 112(r), and CAM

### NSPS

No NSPS apply to the modified or new sources addressed in this application.

### NESHAP/MACT

The facility is a major source of HAP emissions. The coating lines are subject to 40 CFR 63, Subpart JJJJ – ‘National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating.’ See discussion in Section IV above.

### PSD

Davidson County is in attainment for all pollutants.

The existing permit contains one PSD avoidance condition with a limit of 244 tpy of VOC for the primary VOC sources that were permitted prior to the coating line ES-08. ES-08 was permitted assuming it had a PSD PTE of 70 tpy, much less than 250 tpy that would have made it a major modification by itself for PSD purposes. The net result is the facility-wide PTE prior to the proposed modification is now over 250 tpy and thus it is classified as PSD major source. The proposed new sources will be covered under a 40 tpy VOC PSD avoidance condition. Please see Section IV above for full discussion.

Davidson County has triggered the minor source baseline date for PM<sub>2.5</sub>, PM<sub>10</sub> and NO<sub>x</sub>. For increment tracking purposes, the following derivation shows the pounds per hour increase of each pollutant.

Pollutant	<sup>(1)</sup> Controlled Emissions - Prior to Modification (tpy)	Controlled Emissions - After Modification (tpy)	Net increase from modification (tpy)	Net increase from modification (lb/hr)
PM10	1.96	2.35	0.39	0.09
PM2.5	1.37	1.76	0.39	0.09
NOx	17.88	23.03	5.15	1.18

### CAM

The modifications addressed in this application do not trigger a CAM review at this time. Each of these new sources and modified existing sources (i.e., pollutant specific emissions units, or PSEUs) in this application each have potential pre-control device emissions of greater than 100 tpy of VOC and 10/25 tpy for individual/total HAP. However, since each PSEU has post-control emissions less than these thresholds these sources are considered “other PSEUs.” Pursuant to 40 CFR 64.5(b), CAM applicability for “other PSEUs” will be addressed during the next TV permit renewal.

### 112r - Risk Management Program (RMP) (15A NCAC 2D .2100)

The Permittee states on Form A3 of the application that no chemicals are stored at eh facility above the 112(r) thresholds.

## VI. Compliance History

As stated in the most recent compliance inspection report conducted by Jim Hafner of the FRO on March 23, 2022:

Based on records review and the site visit on March 23 2022, Kurz Transfer Products, LP appears to be operating in compliance with all Air Quality standards and regulations.

The five-year violation history as included in the inspection report is as follows:

<b>Five Year Violation History:</b>			
<u>Date</u>	<u>Letter Type</u>	<u>Rule Violated</u>	<u>Violation Resolution Date</u>
03/06/2020	NOV/NRE	Permit Late Title V ACC	03/12/2020
03/29/2019	NOV	Permit Late Title V ACC	03/29/2019
02/14/2018	NOV/NRE	2D .0530 Prevention of Significant Deterioration	02/28/2018
02/14/2018	NOV/NRE	Part 63 - NESHAP/MACT Subpart JJJJ Paper and Other Web Coating	02/28/2018
08/15/2017	NOV/NRE	2D .0530 Prevention of Significant Deterioration	09/01/2017
08/15/2017	NOV/NRE	Permit Condition	09/01/2017
08/15/2017	NOV/NRE	Part 63 - NESHAP/MACT Subpart JJJJ Paper and Other Web Coating	09/01/2017

## VII. Changes Implemented in Revised Permit

Page No.	Section	Description of Changes
NA	Cover Letter	<ul style="list-style-type: none"> <li>Updated cover letter for current date, modification etc.</li> <li>Added NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION</li> </ul>

4	Section 1	<ul style="list-style-type: none"> <li>The heat input for RTO-1 was revised from 20.8 to 16 million Btu per hour.</li> <li>The equipment list was revised to add the two new coating lines (ID No. ES 10) and the new RTO (ID No. RTO-3) and to allow the emissions from these lines to be controlled by the existing RTO (ID No. RTO-1). The use of RTO-1 for these sources is restricted as provided by the operating restriction added at Section 2.2 A.2.</li> <li>The equipment list was revised to allow emissions from ID Nos. ES01, ES02, ES03, ES05, ES07, ES09 to be controlled by either the existing RTO-1 or by the new RTO-3. The use of RTO-3 for these sources is restricted as provided by the operating restriction added at Section 2.2 A.2.</li> <li>Added footnote to address the permit application submittal requirements for the modifications addressed in the current application pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2).</li> </ul>						
5	Section 2.1 A	<ul style="list-style-type: none"> <li>Emission source table was revised to include the new RTO-3</li> <li>Reference to new operating restriction included.</li> <li>Existing permit condition no. Section 2.1 A.6 was removed. It was a startup notification for the kettle washer (ID No. ES09). The kettle washer began operation on September 1, 2022.</li> <li>Table 2.1 A.1.f was revised as requested on June 6, 2023 to read as follows: <table border="1" data-bbox="740 877 1349 1003"> <caption data-bbox="948 852 1117 877"><b>Table 2.1 A.1.f</b></caption> <thead> <tr> <th data-bbox="740 877 1013 940">Control device</th> <th data-bbox="1013 877 1349 940">Temperature, 3-hour rolling average</th> </tr> </thead> <tbody> <tr> <td data-bbox="740 940 1013 972">RTO-1</td> <td data-bbox="1013 940 1349 972">1398°F</td> </tr> <tr> <td data-bbox="740 972 1013 1003">RTO-2</td> <td data-bbox="1013 972 1349 1003">1595°F</td> </tr> </tbody> </table> </li> </ul> <ul style="list-style-type: none"> <li>See permit review for full justification</li> </ul>	Control device	Temperature, 3-hour rolling average	RTO-1	1398°F	RTO-2	1595°F
Control device	Temperature, 3-hour rolling average							
RTO-1	1398°F							
RTO-2	1595°F							
19	Section 2.1 D	<ul style="list-style-type: none"> <li>Added a section to address the new coating lines (ID No. ES10) and RTO (ID No. RTO-3)</li> <li>Added specific permit conditions to address all applicable regulations</li> </ul>						
28	Section 2.2	<ul style="list-style-type: none"> <li>Added operating restrictions consistent with the current application for RTO-1 and RTO-3 at Section 2.2 A.2.</li> <li>Added permit application submittal and startup notification requirements for the modification addressed in the current application pursuant to 15A NCAC 02Q .0504 and 15A NCAC 02Q .0501(b)(2) and (c)(2) at Section 2.2 A.3.</li> </ul>						
29	Section 3	<ul style="list-style-type: none"> <li>INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)</li> <li>This section is new. These activities were included as an ATTACHMENT in the previous permit revision.</li> </ul>						
30	Section 4	<ul style="list-style-type: none"> <li>GENERAL CONDITIONS (version 6.0, 01/07/2022)</li> <li>This section was Section 3 in the previous permit revision.</li> <li>The conditions were revised from version 5.4, 07/20/2020 to version 6.0, 01/07/2022</li> </ul>						

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

Since the modifications addressed in this application are considered significant modifications that would not contravene or conflict with a condition in the existing permit, this application is being processed at the Permittee's request as a significant modification pursuant to the "two step" significant modification procedures at 15A NCAC 02Q .0501(b)(2) and 02Q .0504. This application, "step one", is being processed, pursuant to 15A NCAC 02Q .0504(a), under the "state only" permitting rules at 15A NCAC 02Q .0300. As such no public notice or EPA review procedures apply at this time.

## **IX. PE Seal**

Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” specifically 02Q .0112(a), a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

- (1) design;
- (2) determination of applicability and appropriateness; or
- (3) determination and interpretation of performance of air pollution capture and control systems.

A Form D5 (Technical Analysis to Support Permit Application) was submitted with the application sealed by Matthew Wike, PE, license no.029652. A review of the NC Board of Examiners for Professional Engineers and Surveyors website shows the license to be “current.”

## **X. Zoning**

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0304(b) if the air permit application involves a new facility or the expansion of an existing facility. A FedEx delivery confirmation was received via email by this office showing the request for determination was delivered to the Davidson County Planning and Zoning Office on February 21, 2023. On March 22, 2023, a zoning consistency determination was received via mail to Winston Salem Regional Office from the Davidson County Planning and Zoning Office stating “the proposed operation is consistent with applicable zoning ordinances.”

## **XI. Recommendations**

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements with exceptions as noted in Section VI described above.

The Winston Salem Regional Office has received a copy of the draft permit and had no substantial comments.

The DAQ recommends issuance of Permit No. 06542T26.