**NORTH CAROLINA DIVISION OF AIR QUALITY**

# Application Review

**Issue Date:** Date needed

**Region:** Mooresville Regional Office
**County:** Catawba
**NC Facility ID:** 1800206
**Inspector's Name:** Joe Foutz
**Date of Last Inspection:** 04/06/2023
**Compliance Code:** 3 / Compliance - inspection

## Facility Data

**Applicant (Facility's Name):** Shurtape Technologies - Hickory/Highland Plant

**Facility Address:**
Shurtape Technologies - Hickory/Highland Plant
1620 Highland Avenue, NE
Hickory, NC 28601

**SIC:** 2672 / Paper Coated And Laminated, Nec
**NAICS:** 322222 / Coated and Laminated Paper Manufacturing

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

## Permit Applicability (this application only)

**SIP:** 15A NCAC 02D .0503, .0515, 0516, 0521, .1806
**NSPS:** Dc, RR, and JJJJ
**NESHAP:** KK, EEEE, JJJJ, ZZZZ, GGGGG, and DDDDD
**PSD:** VOC and GHG
**PSD Avoidance:** NA
**NC Toxics:** NA
**112(r):** NA
**Other:** N/A

## Contact Data

| Facility Contact | Authorized Contact | Technical Contact |
|---|---|---|
| Kathleen Fortney<br>Environmental Manager<br>(828) 267-8050<br>PO Box 1530<br>Hickory, NC 28603 | Dan Krueger<br>Director of Manufacturing<br>(828) 322-2700<br>PO Box 1530<br>Hickory, NC 28603 | Kathleen Fortney<br>Environmental Manager<br>(828) 267-8050<br>PO Box 1530<br>Hickory, NC 28603 |

## Application Data

**Application Number:** 1800206.23A
**Date Received:** 06/13/2023
**Application Type:** Renewal
**Application Schedule:** TV-Renewal

**Existing Permit Data**
**Existing Permit Number:** 02218/T39
**Existing Permit Issue Date:** 08/01/2023
**Existing Permit Expiration Date:** 12/31/2023

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

| CY | SO2 | NOX | VOC | CO | PM10 | Total HAP | Largest HAP |
|---|---|---|---|---|---|---|---|
| 2022 | 0.0600 | 10.88 | 289.06 | 9.15 | 4.94 | 179.66 | 175.27 [Toluene] |
| 2021 | 0.0600 | 10.84 | 266.87 | 9.11 | 3.82 | 168.24 | 163.95 [Toluene] |
| 2020 | 0.0600 | 10.01 | 251.48 | 8.41 | 3.55 | 162.76 | 159.28 [Toluene] |
| 2019 | 0.0600 | 10.66 | 338.55 | 8.95 | 3.59 | 219.73 | 215.70 [Toluene] |
| 2018 | 0.0700 | 11.26 | 334.99 | 9.46 | 3.97 | 227.36 | 222.53 [Toluene] |

**Review Engineer:** Jacob Larson

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

**Comments / Recommendations:**
**Issue:** 02218T40
**Permit Issue Date:** Date needed
**Permit Expiration Date:** Date needed

## 1. Purpose of Application

Shurtape Technologies currently holds Title V Permit No. 02218T39 with an expiration date of December 31, 2023 for a pressure-sensitive tape manufacturing facility in Hickory, Catawba County, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on June 13, 2023 or at least six months prior to expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall not expire until the renewal permit has been issued or denied.

## 2. Facility Description

Shurtape operates two plants – Highland plant (Plant 36) and Hickory plant (Plant 33) – at the Hickory site. Because the two plants are under common ownership, on contiguous and adjacent property, and operated under the same Standard Industrial Classification (SIC) code – 2672, the facility is considered one site for permitting purposes.

Shurtape owns and operates a pressure sensitive tape manufacturing facility in Hickory, North Carolina. Both solvent and water-based pressure sensitive tapes are produced at the facility. Adhesive resin is applied to a substrate, primarily paper, on coating lines using continuous rolls (web) of material. The coated web is dried via ovens by evaporating the resin solvent (toluene) or water-based coatings. Additional coatings can be applied to the dried web if necessary. In the last step of production, the dried web is sent to finishing, where the material is sliced and rolled to customer specifications. Other operations at the facility include a rubber grinding and conveying system, adhesive mixers, adhesive and solvent storage tanks, saturant coaters, release coaters, primer coaters, process heat boilers, tape slitters, and various air emission control devices. The facility operates on a 24/7/50 schedule with approximately 250 employees.

This facility is a major source for Title V, PSD, and is a major source for HAP.

## 3. History/Background/Application Chronology

History/Background

| | |
|---|---|
| January 11, 2019 | TV permit renewal and minor modification issued. Minor modification was for new adhesive coating line. Air Permit No. 02218T36 was issued on January 11, 2019 with an expiration date of December 31, 2023. |
| July 14, 2021 | Air Permit No. 02218T37 was issued for significant modification to renew PAL for VOC of 865 tons per year. |
| November 23, 2021 | Air Permit No. 02218T38 was issued to renew the PAL for GHGs of 114,271 tons per year $CO_2e$. Application was processed as significant modification. |
| August 1, 2023 | Air Permit No, 02218T39 was issued to add new pressure-sensitive tape production line. Application was processed as minor modification. |

Application Chronology

| | |
|---|---|
| June 13, 2023 | DEQ received permit application 1800206.23A for Title V renewal. |
| June 27, 2023 | Sent acknowledgment letter indicating that the application for permit renewal was complete. |
| January 11, 2024 | PFAS Disclosure questionnaire sent to applicant. Kathleen Fortney confirmed receipt same day. |
| January 19, 2024 | Draft permit and review forwarded for comments to Permitting Supervisor. |
| January 22, 2024 | Mark Hawes from Trinity Consultants requested clarification regarding PFAS disclosure and extension of 30-day deadline. January 11, 2024 request for technical information was end dated in IBEAM and new technical information request was started on January 23, 2024. Consultant received requested guidance. |
| January 26, 2024 | Comments received from Booker Pullen, Permitting Supervisor. |
| January 29, 2024 | Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received February 13, 2023. |
| January 29, 2024 | Draft permit and review forwarded to the Mooresville Regional Office for comments. No comments were received February 02, 2023. |
| February 23, 2024 | Received completed PFAS discloser from Kathleen Fortney. |
| February 26, 2024 | Draft permit forwarded to the applicant for comments. Minor comments were received March 08, 2023. |
| XXXX xx, 2024 | Draft permit and permit review forwarded to public notice. |
| XXXX xx, 2024 | Public comment period ends. ___ comments received. |
| XXXX xx, 2024 | EPA comment period ends. ___ comments received. |
| XXXX xx, 2024 | Permit issued. |

## 4. Permit Modifications/Changes and TVEE Discussion

The following table describes the modifications to the current permit as part of the renewal process.

| Pages | Section | Description of Changes |
|---|---|---|
| -- | Cover page and Throughout | Updated all dates and permit revision numbers. |
| 9 | Emission Source Table | Subparagraph d removed because minor modification condition was resolved September 29, 2023. |
| 11 | 2.1 A.2.d | Changed monitoring requirement to current shell version. |
| 14 | 2.1 C.2.a | Changed requirement to shell version. |
| 16 | 2.1 E.1.a | Changed to current shell language |
| 16 | 2.1 E.2.a | Changed to current shell language |
| 20 | 2.1 F.1.c | -Corrected numbering from b to c<br>-Changed assure to ensure |
| 20 | 2.1 F.2.c | Changed assure to ensure |
| 21 | 2.2 A. 2. | Added PFAS discloser condition |
| 22-23 | 2.2 B.1 | Corrected 36-RTO-1 and 33-56-RTO to CD-36-RTO and CD-33-56-RTO |
| 23 | 2.2 B.1.e (paragraph 3) | Removed exact testing date for simplicity |
| 33 | 2.2 D.1.h | Changed temperature requirement to reference most recent performance test. |
| 35 | 2.2 D.1 q | Changed assure to ensure |
| 41 | 2.3 | Corrected numbering from f to j |

This permit renewal is without modification, and no changes to the Title V Equipment Editor are needed.

## 5. Regulatory Review

Shurtape is subject to the following regulations. The facility's equipment and operations have not changed since the modification in 2023. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

- 15A NCAC 02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers – The boilers (ID No. ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-33-BLR-TEMP, and ES-36-BLR-B1) are subject to the following particulate emissions limitations.
  - 0.33 lb/million Btu (ID No. ES-33-BLR-B3)
  - 0.41 lb/million Btu (ID No. ES-33-BLR-B4)
  - 0.354 lb/million Btu (ID No. ES-33-BLR-B5)
  - 0.33 lb/million Btu (ID No. ES-33-BLR-TEMP)
  - 0.343 lb/million Btu (ID No. ES-36-BLR-B1)

  When heat input between any consecutive heat inputs of the sources above the allowable Particulate Matter emissions shall be calculated by equation:

$$E = 1.090 \times Q^{-0.2594}$$

  When: E=Allowable emission limit for PM in lb/million Btu
  Q= Maximum heat input in million Btu/hour

There are no monitoring, recordkeeping, or reporting requirements from firing natural gas or propane. Continued compliance is anticipated.

- 15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes – This rule applies to emission sources that exhaust through a stack and are not subject to another particulate matter (PM) emission limit. Emissions of particulate matter from these sources (ID Nos. ES-33-5-01, ES-33-5-FP, ES-33-6-02, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-09-02, ES-33-0-01, ES-PDI-CAL1, ES-33-COAT10, ES-36-CL-1, and ES-36-CL-2) shall not exceed an allowable emission rate as calculated by the following equation. No monitoring, recordkeeping, or reporting are required for these sources.

  Emissions of particulate matter from the source (ID No. ES-33-RS and ES-33-15-02) shall not exceed an allowable emission rate as calculated by the following equation. Emission sources (ID No. ES-33-RS and ES-33-15-02) are controlled by eight fabric filters delineated in the equipment list of the permit. These sources are subject to monitoring, recordkeeping, and reporting requirements in Sections 2.1 A.1. c. through f of permit.

  E = 4.10 x P 0.67 Where E = allowable emission rate in pounds per hour
  P = process weight in tons per hour

  Liquid and gaseous fuels and combustion air are not considered as part of the process weight. Continued compliance is anticipated.

- 15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources- This rule applies to combustion sources that are not subject to an $SO_2$ emission limit under NSPS or MACT. Emissions of sulfur dioxide from the coating line drying ovens (ID Nos. ES-33-5-01, ES-33-6-02, ES-33-07-02, ES-33-09-02, ES-36-CL-1, and ES-36-CL-2) and from boilers (ID Nos. ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-33-BLR-TEMP, and ES-36-BLR-B1) are limited to 2.3 lb/million Btu heat input. These sources only burn natural gas. In order to calculate $SO_2$ emissions from the combustion of natural gas, the emission factors published by EPA in AP-42 can be applied. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted:
  $SO_2$ from natural gas (AP-42 Chapter 1.4, Table 1.4-2; $SO_2$):

$$\left(0.6\ \frac{\text{lb}}{\text{million scf}}\right) \times \left(\frac{1}{1{,}020}\frac{\text{scf}}{\text{Btu}}\right) = 0.001\frac{\text{lb}}{\text{million Btu}}$$

  Therefore, natural gas is expected to comply with the $SO_2$ limit by a wide margin.

  No Monitoring/Recordkeeping/Reporting required. Continued compliance is anticipated.

- 15A NCAC 02D .0521, Control of Visible Emissions – This rule applies to sources of visible emissions (VE) that are not subject to another VE standard under 02D .0500.
  - Visible emissions from (ID Nos. ES-33-5-FP, ES-33-6-02, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-09-02, ES-33-0-01, ES-PDI-CAL1, ES-33-COAT10, ES-36-CL-1, ES-36-CL-2, ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-33-BLR-TEMP, ES-36-BLR-B1, ES-33-RS, ES-33-15-02) are subject to the 20% opacity limit.
  - Visible emissions from (ID No. ES-33-RS) shall not exceed 40% before vented to fabric filter (ID No. CD-33-0-11A) and shall not exceed 20% when vented from fabric filter.
  - Visible emissions from (ID Nos. ES-33-5-01) is subject to 40% opacity rule.

- Monitoring/Recordkeeping/Reporting of visual emissions from (ID No. ES-33-RS, ES-33-15-02, and ES-33-RS) are subject to requirements in sections 2.1 A.2. d. through f of permit.

Continued compliance is anticipated.

- 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions – This regulation is applicable facility-wide and requires the facility to operate in a manner which does not cause nor contribute to objectionable odors beyond the facility's property boundary. DAQ inspectors have not noted any odors when entering/existing the site. Continued compliance is expected.

- 15A NCAC 02Q .0308(a); 15A NCAC 02Q .0309(b), Disclosure of Information Relating to Emissions of Fluorinated Chemicals (State-enforceable only condition): Permittee has ongoing duty to disclose the presence of material containing fluorinated chemicals that have the potential to emit fluorinated chemicals into the environment. Disclosers shall be submitted to the regional office supervisor within thirty days of facility becoming aware of such information. As part of the renewal process, the applicant was requested to respond to a series of PFAS related questions developed by the Department. These questions were developed to begin the creation of a database of potential sources of PFAS. Please see APPENDIX 2 for pfas questions and facility response.

## 6. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS

*NSPS Subpart Dc*

The three natural gas/propane fired boilers (ES-36-BLR-B1, ES-33-BLR-B5, and ES-33-BLR-Temp) are subject to the "NSPS for Small Industrial, Commercial, Institutional Steam Generating Units," 40 CFR Part 60 Subpart Dc. Boiler No. 1 will no longer burn No. 2 fuel oil, thus the NSPS $SO_2$ limit no longer applies. The Permittee is subject to recordkeeping of amounts of each fuel burned in boilers during each month and semiannual reporting requirements. This renewal does not affect the NSPS status of the facility.

*40 CFR 60 Subpart RR*

This rule applies to each coating line that manufactures pressure sensitive tape and labels and was constructed, reconstructed, or modified after December 30, 1980 (see 40 CFR 60.440). The rule defines a "coating line" at §60.441: Coating line means any number or combination of adhesive, release, or precoat coating applicators, flashoff areas, and ovens which coat a continuous web, located between a web unwind station and a web rewind station, to produce pressure sensitive tape and label materials. This rule includes emission standards for volatile organic compounds (VOC) at §60.442(a). However, per §60.440(b), any affected facility which uses less than 50 tons of VOC per year is not subject to §60.442(a). Note that the rule defines an "affected facility" as *each* coating line. Therefore, the new coating line will be a new affected facility, separate from the other coating lines already at the facility. According to the application, the new coating line will use less than 50 tons of VOC per year.In order to determine compliance with the emission standards (or the 50-ton limit), the rule includes methods of calculating the total amount of VOC used in the coating line. Shurtape uses a mass balance method to determine the amount of VOC applied in the coating lines. Although the coating lines are controlled by an RTO, Shurtape does not take credit for any VOC control and assumes that 100% of VOC used in the coating lines are emitted. Shurtape must keep records of material usage and VOC content in the coating lines on a monthly basis. Shurtape must submit a summary report twice per year. Sources listed below will be subject to this rule:

- Hickory Plant Coating Line No. 5 (ID No. ES-33-5-01) and Associated Carbon Adsorption System (ID No. CD-33-6-10) or Regenerative Thermal Oxidizer (ID No. CD-33-56-RTO)

- Hickory Plant Coating Line No. 5 Flexographic Printer (ID No. ES-33-5-FP)
- Hickory Plant Coating Line No. 8 (ID No. ES-33-8-02) and Associated Nitrogen Inert Solvent Recovery System (ID No. CD-33-8-10) or Carbon Adsorption Systems (ID No. CD-33-6-10)
- Hickory Plant Coating Line No. 8 (ID No. ES-33-8-04) and Associated Carbon Adsorption Systems (ID No. CD-33-6-10)
- Hickory Plant Coating Line No. 9 (ID No. ES-33-09-02)
- Hickory Plant Pilot Coater No. 1 (ID No. ES-33-0-01)
- Pilot-scale Research and Development Calender (ID No. ES-PD1-CAL1)
- Hickory Plant Adhesive Coating Line No. 10 (ID No. ES-33-COAT10)
- Highland Plant Coating Line (ID No. ES-36-CL-1) and Associated Regenerative Thermal Oxidizer (ID No. CD-36-RTO-1)
- Highland Plant Coating Line (ID No. ES-36-CL-2) and Associated Regenerative Thermal Oxidizer (ID No. CD-36-RTO-1)

The facility also has the compliance option

*40 CFR 60 Subpart JJJJ*
The two emergency engines (ID Nos. IES-GEN1 and IES-GEN2) will be rich burn engines that burn natural gas or propane (LPG). Each will be greater than 25 hp and less than 100 hp. Further, they will be manufactured after the applicability dates in the rule. As such they are subject to NSPS Subpart JJJJ. Shurtape has purchased EPA certified engines to ensure compliance with 40 CFR 60.4231(c) under NSPS Subpart JJJJ.

NESHAP/MACT

*40 CFR 63 Subpart KK*
Shurtape has elected to exclude the coating line 5 flexographic printer (ID No. ES-33-5-FP) and the Highland Plant coating/printing station (ES-36-CL1) from the NESHAP for the Printing and Publishing Industry, 40 CFR 63 Subpart KK, as allowed under 40 CFR 63.821(a)(2)(ii). To exclude these emission sources, the facility must ensure that the quantity of inks, coatings, etc. applied by these sources does not exceed five percent of the total amount of inks, coating, etc. applied on the associated coating line. The facility also must keep material usage records. No changes to the permit condition are required under this renewal.

*40 CFR 63 Subpart EEEE*
Numerous tanks and loading racks at the facility are subject to NESHAP for Organic Liquids Distribution (Non-Gasoline), 40 CFR 63 Subpart EEEE. Due to the size of the tanks (i.e., less than 5000 gallons) and/or the vapor pressure of the material stored in the tanks, the facility is not required to comply with the control requirements under MACT Subpart EEEE. Also, the loading racks are not subject to control requirements because none of the loading racks have a total actual annual facility-level liquid loading volume greater than or equal to 800,000 gallons. Shurtape is only required to comply with the notification, recordkeeping, and reporting requirements in sections 40 CFR 63.2343(a) through (d). Requirements to submit a Notice of Compliance Status (NOCS) have been met with the first compliance report submitted on June 7, 2006.

40 CFR 63 Subpart JJJJ
The facility is a major source for HAPs. The coating line emission sources (ID Nos. ES-33-5-01, ES-33-6-02, ES-33-07-02, ES-33-8-02, ES-33-8-04, ES-33-09-02, ES-33-COAT10, ES-36-CL-1,ES-36-CL-2) with associated carbon adsorption system (ID No. CD-33-6-10) and thermal oxidizers (ID

Nos. CD-33-56-RTO and CD-36-RTO-1), the flexographic printer (ID No. ES-33-5-FP), and pilot coater (ID No. ES-33-1-01) are subject to the applicable monitoring, testing, recordkeeping, and reporting requirements as set by NESHAP Subpart JJJJ. The facility has chosen to comply with the NESHAP by limiting organic HAP emissions to no more than 20% of the mass of coating solids applied for each month (0.2 kg HAP/kg solids). The facility is required to maintain monthly records of organic HAP content data, material usage, volatile matter usage, etc. in order to demonstrate compliance with the emission limit. The facility is also required to submit semi-annual summary reports of the data. If the facility decides to show compliance with the use of the thermal oxidizer, performance testing will be required to verify the destruction efficiency of the unit.

In addition, 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 a compliance option chosen by the Permittee), 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:

- Five-year testing cycle: The rule now requires 5-year periodic testing of the thermal oxidizers.
- Changes associated with the vacatur of the MACT startup, shutdown, and malfunction (SSM) provisions at 40 CFR 63.6. Starting July 9, 2020, 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.
- Electronic reporting: the rule revised the electronic reporting requirements.
- Revised temperature sensor validation procedures
- The use of a "Control Destruction Efficiency Curve" pursuant to §63.3360(c)(1),

These revisions were implemented in previous permits. And are reflected in this renewal.

*40 CFR 63 Subpart ZZZZ*

All three generators at the facility (ID Nos. IES-R&D-Gen, IES-GEN1 and IES-IGEN2) are subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR Part 63," MACT Subpart ZZZZ. The generators were constructed after June 12, 2006. As provided under in 40 CFR 63.6590(c), new stationary RICEs that are less than 500 hp and are subject to 40 CFR Part 60 Subpart JJJJ must meet the requirements of MACT Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart JJJJ. Emergency generator ES-R&D-Gen is not subject to NSPS Subpart JJJJ because of its manufacture date is May 2007. This emergency generator has no requirements to comply with MACT Subpart ZZZZ.

*40 CFR 63 Subpart DDDDD*

The boilers (ID Nos. ES-33-BLR-B3, ES-33-BLR-B4, ES-33-BLR-B5, ES-33-BLR-TEMP, and ES-36-BLR-B1) are subject to the requirements of the boiler MACT DDDDD as of May 20, 2019. The facility is required to perform an initial tune-up of each boiler and a one-time energy assessment. The facility is also required to conduct tune-ups annually for boilers (ID Nos. ES-33-BLR-B5, ES-33-BLR-TEMP, and ES-36-BLR-B1) and every two years for boilers (ID Nos. ES-33-BLR-B3 and ES-33-BLR-B4). The facility is required to maintain records of all notifications and reports, a report containing the concentrations of carbon monoxide measured before and after the tune-ups, any corrective actions taken as part of a tune-up, and fuel usage. The facility is also required to submit annual compliance reports for boilers (ID Nos. ES-33-BLR-B5, ES-33-BLR-TEMP, and ES-36-BLR-B1) and bi-annual compliance reports for boilers (ID Nos. ES-33-BLR-B3 and ES-33-BLR-B4).

*40 CFR 63 Subpart GGGGG*

The ground water remediation system (ID No. IES-33-GR) is a combined soil vapor extraction (SVE) and air sparging (AS) system. The SVE system, which is the portion of the system that generates point source air emissions, began operation in November 1994. The remediation system is subject to NESHAP for Site Remediation, 40 CFR Subpart GGGGG. The facility has determined that the quantity of HAPs contained in the remediated material is less than 1 Mg per year. As such, only the recordkeeping requirements of Subpart GGGGG apply to this source, as specified in 40 CFR 63.7881(c). Based on historical inventories and calculations, the source has been reclassified as an insignificant activity. No changes are needed under this permit renewal and minor modification.

PSD

This facility is a "major source" for PSD because it has actual emissions of a regulated NSR pollutant greater than 250 tons per year. Shurtape has previously applied for an "Actuals Plantwide Applicability Limitation" (Actuals PAL) for VOC and GHG, as allowed by 40 CFR 51.166(w). The initial PALs were included in the Title V permit with the T30 revision (VOC PAL, issued June 21, 2011) and T31 revision (GHG PAL, issued November 8, 2011). DAQ subsequently renewed both PALs with the T37 and T38 permit revisions.

- The Permittee submitted the PAL renewal for VOC on 09/25/2020 and was processed as significant modification. The Pal limit of 865 TPY for VOC was successfully revalidated as discussed in Permit 02218T37. The expiration date of the PAL for VOC is July 13, 2031.

- The Permittee had submitted the PAL renewal for GHGs PAL on 07/14/2021 and was processed as Significant Modification. The Permittee's 114,271 tons/yr for GHG was reduced to 106,205 TPY $CO_2e$ during the revalidation using emission factors and GWPs as discussed in permit 02218T38. The expiration date of the PAL for GHGs is November 22, 2031.

112(r)

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

CAM

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at major TV facilities that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre-November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

Coating line No. 5 and coating line No. 8 are subject to NSPS Subpart RR, which requires Shurtape to indicate compliance on the coating lines every month to determine VOC emission reduction or percentage reduction requirements. In particular, 40 CFR 60.443(f) specifies that "a separate compliance test is completed at the end of each calendar month after the initial compliance test." This requirement is included in the Title V permit. NC DAQ considers this NSPS requirement as a

continuous compliance determination method (CCDM) as per 64.2(b)(1)(vi). Therefore, coating line No. 5 and coating line No. 8 are exempt from CAM.

**7. Facility Wide Air Toxics**

*Applicability:* The rules for toxic air pollutants (TAP) under 15A NCAC 02D .1100 and 02Q .0700 apply to facilities that emit toxic air pollutants. In general, if a facility would emit a TAP at rates greater than the TAP permitting emission rates (TPER) listed in 02Q .0711, the facility must first conduct an air dispersion modeling demonstration under 15A NCAC 02D .1104 and .1106. Several types of sources are exempt from TAP requirements; exempt sources are listed in 02Q .0702.

*Background:* Shurtape previously conducted an air dispersion modeling analysis as part of application .05A and permit revision T24. According to DAQ's review of that modeling analysis, Shurtape examined 97 TAPs, and "maximum impacts were back calculated to 95-99% of their respective AALs." The emission rates that corresponded to these maximum impacts were included in the Title V permit as emission limits. It was determined that no monitoring, recordkeeping, or reporting would be required to demonstrate compliance with these emission limits because the modeled emission rates far exceeded the potential emission rates from the facility.[1]
As part of permit revision T32, Shurtape requested that all TAP emission limits be removed from the permit as allowed by NC Session Law 2012-91 because doing so would not present an unacceptable risk to human health.[2] Therefore, the existing permit does not include any specific TAP emission limits.

*Previous Modifications:* Shurtape added new coating line with previous permit T39. Based on the emission calculations included in Application ID:1800206.22A, the only source of TAP emissions from the new coating line will be from the natural gas-fired ovens associated with the coating line. Per 15A NCAC 02Q .0706, a facility must perform air dispersion modeling if a modification is not exempted per 15A NCAC 02Q .0702. Per 15A NCAC 02Q .0702(a)(27)(B), a source is exempt if it is subject to a rule under 40 CFR part 63.

- The new coating line will be subject to 40 CFR Part 63, Subpart JJJJ.
- Therefore, the new coating line is exempt per 15A NCAC 02Q .0702(a)(27)(B).
- Therefore, adding the new coating line is not a modification per 15A NCAC 02Q .0706(a)(2).

Per 15A NCAC 02Q .0706(c) and NCGS 143-215.107(a)(5)b, DAQ reviewed modifications that resulted in an increase in TAP emissions to determine if the proposed modification would present an unacceptable risk to human health.

As stated above, Shurtape has previously performed air dispersion modeling. The modeling was performed to determine the emission rates that correspond to an impact of approximately 95% of the AAL, and those rates have previously been included in the permit. See Appendix 1 for a comparison of actual emissions to the modeled emission rates. In each case, the post-modification emission rates of TAPs for Permit T39 are less than the modeled rate.

Based on the modeled emission rates and actual TAP emissions from this facility, the facility does not present an unacceptable risk to human health. Therefore, Permit T39 was not a modification under 15A NCAC 02Q .0706(b) or (c), and Shurtape does not have any specific requirements for TAP emissions.

[1] See DAQ's application review for permit revision T24 (issued July 25, 2005), page 21.
[2] See DAQ's application review for permit revision T32 (issued December 10, 2012), page 10.

## 8. Facility Emissions Review

The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2018 through 2022 are provided in the header of this permit review.

## 9. Compliance Status

DAQ has reviewed the compliance status of Shurtape Technologies. During the most recent inspection, conducted on April 06, 2023 by Joe Foutz of the MRO, the facility appeared to be in compliance with all applicable requirements. Further, the facility has had no air quality violations within the last five years. The facility's Annual Compliance Certification was received on February 22, 2023 and indicated compliance with all applicable requirements in 2018.

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

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

## 11. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A permit fee is NOT required for this renewal application.
- 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[3]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[4] 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

[3] NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

[4] 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).

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.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

**12. Recommendations**

The permit renewal application for Shurtape Technologies – Hickory/Highland Plant in Catawba County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. The DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 02218T40.

APPENDIX 1

| Pollutant | Modeled emission rate* | CY2022 emission inventory** | Proposed modification*** | Percent of modeled rate |
|---|---|---|---|---|
| | (lb/yr) | | | |
| Acetaldehyde | 152,424 | 4.49 | 1.49E-07 | 0.00% |
| Acetic acid | 21,024 | 2,203.47 | | 10.48% |
| Acrolein | 438 | | 1.76E-07 | 0.00% |
| Acrylonitrile | 294.04 | 16.00 | | 5.44% |
| Ammonia | 628,792.8 | 7,313.31 | 3.14E-02 | 1.16% |
| Aniline | 5,694 | | | n/a |
| Arsenic and inorganic arsenic compounds | 0.07 | | | n/a |
| Aziridine | 295.65 | | | n/a |
| Benzene | 761.81 | 22.93 | 2.06E-05 | 3.01% |
| Benzidine and salts | 0.004 | | | n/a |
| Benzo(a)pyrene | 9.8 | | 1.18E-08 | 0.00% |
| Benzyl chloride | 2,803.2 | | | n/a |
| Beryllium | 1.2 | | | n/a |
| Beryllium chloride | 1.2 | | | n/a |
| Beryllium fluoride | 1.2 | | | n/a |
| Beryllium nitrate | 1.2 | | | n/a |
| Bioavailable chromate pigments, as chromium | 0.025 | | | n/a |
| Bis-chloromethyl ether | 0.11 | | | n/a |
| Bromine | 1,138.8 | | | n/a |
| 1,3-Butadiene | 676.29 | 5.37 | | 0.79% |
| Cadmium | 1.6 | | | n/a |
| Cadmium acetate | 1.6 | | | n/a |
| Cadmium bromide | 1.6 | | | n/a |
| Carbon disulfide | 9,125 | | | n/a |
| Carbon tetrachloride | 1,999.8 | | | n/a |
| Chlorine | 5,080.8 | | | n/a |
| Chlorobenzene | 107,857.5 | | | n/a |
| Chloroform | 1,283.4 | | | n/a |
| Chloroprene | 21,571.5 | | | n/a |
| Cresol | 12,264 | | | n/a |
| p-dichlorobenzene | 373,176 | | | n/a |
| Dichlorodifluoromethane | 12,157,420 | | | n/a |
| Dichlorofluoromethane | 24,528 | | | n/a |
| Di(2-ethylhexyl)phthalate (117-81-7) | 1,460 | | | n/a |
| Dimethyl sulfate | 146 | | | n/a |
| Dioxane, 1,4- | 27,448 | 22.81 | | 0.08% |
| Epichlorohydrin | 24,773.2 | | | n/a |
| Ethyl acetate | 791,904 | 31,688.45 | | 4.00% |
| Ethylenediamine | 14,709.5 | | | n/a |

| Pollutant | Modeled emission rate* | CY2022 emission inventory** | Proposed modification*** | Percent of modeled rate |
|---|---|---|---|---|
| | (lb/yr) | | | |
| Ethylene dibromide | 119.4 | | | n/a |
| Ethylene dichloride | 1,134.2 | | | n/a |
| Ethylene glycol monoethyl ether | 10,512 | | | n/a |
| Ethylene oxide | 8.1 | 6.97 | | 86.05% |
| Ethyl mercaptan | 525.6 | | | n/a |
| Formaldehyde | 33,883.68 | 73.58 | 7.35E-04 | 0.22% |
| Fluorides | 1,401.6 | | | n/a |
| Hexachlorocyclopentadiene | 87.6 | | | n/a |
| Hexachlorodibenzo-p-dioxin | 0.023 | | | n/a |
| n-Hexane | 983,153.6997 | 2,895.51 | 1.76E-02 | 0.29% |
| Hexane Isomers (except n-Hexane) | 102,003,589.7 | | | n/a |
| Hydrazine | 29.2 | | | n/a |
| Hydrogen chloride | 3,942 | | | n/a |
| Hydrogen cyanide | 6,862 | | | n/a |
| Hydrogen fluoride | 1,460 | | | n/a |
| Hydrogen sulfide | 12,264 | | | n/a |
| Maleic anhydride | 584 | | | n/a |
| Manganese and compounds | 1,533 | | | n/a |
| Manganese cyclopentadienyl tricarbonyl | 29.2 | | | n/a |
| Manganese tetroxide | 302.95 | | | n/a |
| Mercury, alkyl | 3.65 | | | n/a |
| Mercury, aryl and inorganic compounds | 29.2 | | | n/a |
| Mercury, vapor | 29.2 | | | n/a |
| Methyl chloroform | 1,386,708 | | | n/a |
| MEK | 29,697,626.4 | 327.10 | | 0.00% |
| Methylene chloride | 9,636 | | | n/a |
| Methyl isobutyl ketone | 169,944 | | | n/a |
| Methyl mercaptan | 262.8 | | | n/a |
| Nickel carbonyl | 29.2 | | | n/a |
| Nickel metal | 295.65 | | | n/a |
| Nickel, soluble compounds, as nickel | 29.2 | | | n/a |
| Nickel subsulfide | 0.63 | | | n/a |
| Nitric acid | 5,694 | | | n/a |
| Nitrobenzene | 2,956.5 | | | n/a |
| n-nitrosodimethylamine | 14.9 | | | n/a |
| Non-specific chromium (VI) compounds, as chromium (VI) equivalent | 0.02 | | | n/a |
| Pentachlorophenol | 175.2 | | | n/a |
| Perchloroethylene | 56,709.7 | | | n/a |
| Phenol | 5,343.6 | | | n/a |
| Phosgene | 124.1 | | | n/a |
| Phosphine | 700.8 | | | n/a |

| Pollutant | Modeled emission rate* | CY2022 emission inventory** | Proposed modification*** | Percent of modeled rate |
|---|---|---|---|---|
| | (lb/yr) | | | |
| Polychlorinated biphenyls | 24.8 | | | n/a |
| Soluble chromate compounds, as chromium | 29.2 | | | n/a |
| Styrene | 59,568 | 2,106.39 | | 3.54% |
| Sulfuric acid | 584 | | | n/a |
| Tetrachlorodibenzo-p-dioxin | 0.001 | | | n/a |
| 1,1,1,2-tetrachloro-2,2,-difluoroethane | 2,549,123.5 | | | n/a |
| 1,1,2,2-tetrachloro-1,2-difluoroethane | 2,549,123.5 | | | n/a |
| 1,1,2,2-tetrachloroethane | 1,880.4 | | | n/a |
| Toluene | 23,761,780.1 | 350,542.56 | 3.33E-05 | 1.48% |
| Toluene diisocyanate, 2,4-(584-84-9) and 2,6- (91-08-7) isomers | 10.95 | | | n/a |
| Trichloroethylene | 17,609.8 | | | n/a |
| Trichlorofluoromethane | 3,168,492 | | | n/a |
| 1,1,2-trichloro-1,2,2-trifluoroethane | 5,376,012 | | | n/a |
| Vinyl chloride | 113.4 | | | n/a |
| Vinylidene chloride | 5,876.5 | | | n/a |
| Xylene (mixed isomers) | 19,483,789.91 | 1,046.34 | | 0.01% |

* The modeled emission rates are based on the emission limits included in the T24 permit revision. Some of the emission limits were in units of pounds per hour or pounds per day. In those cases, for ease of comparison, those limits have been multiplied by 365 and 8,760, respectively, in order to obtain an annual amount. Some of the emission limits were based on individual emission sources. In those cases, for ease of comparison, those limits have been combined into a single facility-wide emission rate.
** Blank spaces indicate that no data was submitted for that pollutant. It is assumed that actual emissions of these pollutants are below the *de minimis* reporting level.
*** Blank spaces indicate that no emission factor is available for that pollutant.

Shurtape TECHNOLOGIES

22 February 2024

Mr. Jacob Larson
North Carolina Department of Environmental Quality
Division of Air Quality
VIA Email (Jacob.Larson@deq.nc.gov)

Subject: PFAS Screening Questions and Disclosure Responses
Shurtape Technologies, LLC
Hickory/Highland Plant, Catawba County
Facility ID No. 1800206
Permit No. 02218T39

Dear Mr. Larson:

Please find attached the response to the DEQ_DAQ PFAS Screening Questions and Discolosure originally requested in an email from 11 January, 2024, with an extension granted in an email from you dated 23 January 2024.

Please be advised that Dan Krueger, Director of US Manufacturing, is the Responsible Corporate Official for the Hickory Complex. The Delegation of Authority Letter (Dated 07 February 2024) from the Vice President of Global Manufacturing and Logistics is provided for your reference.

After review of this compliance report has been completed, if you or your staff have questions, please contact Kathleen Fortney at (828) 267-8050 or via email at kfortney@shurtape.com.

Respectfully,

Dan Krueger
Director of US Operations

Enclosures

cc: Dan Kreuger
Zach Lineberger
Matt Kulis
Rick Kilpatrick
Kathleen Fortney


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**DAQ Question 1:**
**Will your facility use any material or products in your operations that contain fluorinated chemicals? If so, please identify such materials or products and the fluorinated chemicals they contain.**

Based upon NC DAQ's guidance regarding exclusion of Fluorine containing materials such as incoming potable water, toilet paper, and other materials such as PTFE lined tubing and gasket materials, etc. that are present at the site but that are not processed or manipulated as part of the manufacturing process, Shurtape is not aware of any Fluorinated chemicals in raw materials that are processed as part of the manufacturing of pressure sensitive tape. Shurtape does engage the supply chain to evaluate chemical constituents as part of their material approval process; however, many of the materials of interest to this survey are not disclosed on SDSs. Additionally, many material suppliers have not updated SDSs to comply with the new "zero threshold" level for the disclosure of PFAS type materials. Shurtape will continue to engage the supply chain to identify if these materials may be present at levels that may be emitted through the manufacturing process.

Shurtape does operate HVAC equipment regulated under 40 CFR Part 82 that contains HCFC currently regulated by USEPA which include the reporting of leakage rates. Based upon guidance from NC DAQ, Shurtape believes this material is not in the scope of reporting for this questionnaire.

**DAQ Question 2:**
**Will your facility formulate/create products or byproducts (directly or indirectly) that contain fluorinated chemicals (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.**

See also the response to Question 1. Based upon NC DAQ's guidance regarding exclusion of Fluorine containing materials such as incoming potable water noted by NCDAQ's Gary Saunders as being inorganic and not in scope for this questionnaire; however, these materials are present at the site and utilized for cooling water as well as a dilutant in water-based coatings. Shurtape will not intentionally formulate or create products or byproducts that contain fluorinated chemicals.

**DAQ Question 3:**
**Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing fluorinated chemicals? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.**

In consideration of the guidance from NC DAQ as previously noted in Questions 1 & 2, Shurtape is not aware of SDS disclosures of quantifiable

amounts of Fluorinated chemicals in raw materials processed as part of the manufacturing of pressure sensitive tape that may be generated as a solid waste, discharged from the site, or emitted to the air.

**DAQ Question 4:**
**Do your facility's processes or operations use equipment, material, or components that contain fluorinated chemicals (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?**

Shurtape utilizes equipment common in industrial operations and infrastructure equipment and materials in common with industrial facilities across the State of North Carolina and the United States. As such, many common materials found in industrial operations may include PTFE gasket materials or PTFE lined tubing. These materials are present due to thermal and chemical stability. Shurtape's pressure sensitive tape manufacturing process does not operate at temperatures that would normally be expected to result in the release of these materials directly, or indirectly, through leaching, chemical processing, heat treatment, pressurization, etc.

Shurtape does operate HVAC equipment regulated under 40 CFR Part 82 that contains HCFC currently regulated by USEPA which include the reporting of leakage rates. Based upon guidance from NC DAQ, Shurtape believes this material is not in the scope of reporting for this questionnaire.

**DAQ Question 5:**
**List the fluorinated chemicals identified (i.e., through testing or desktop review) above in your response under the appropriate methods/approaches? If one is not, are they on any other known US or International target lists? OTM-45 (air emissions) Methods 533 & 537.1 (drinking water) SW-846: Method 8327 (water) Draft Method 1633 (water, solids, tissue) Total PFAS" Draft Method 1621 for Adsorbable Organic Fluorine (wastewater) Non targeted analytical methods Qualitative approach through suspect screening.**

Shurtape has not conducted any analytical sampling of materials utilized in the manufacturing processes. Based upon desktop review Shurtape is not aware of any quantifiable amounts of fluorinated materials reported in SDSs other than those NC DAQ notes as not being in the scope of this questionnaire, those present in tubing and gaskets as previously noted in Question 4 and refrigerants currently regulated under 40 CFR Part 82 that are present on site.

**DAQ Question 6:**
**Are there other facilities or operations in the U.S. or internationally engaged in the same or similar activities involving fluorinated chemicals addressed in your response to the above questions? If so, please provide facility identification information? In addition, are there any ISO (International Organization for Standardization) certification requirements?**

Shurtape cannot comment on operations that are not a part of Shurtape Technologies. Shurtape believes this to be not applicable, owing to the responses previously. There are no ISO certification requirements.

**DAQ Question 7:**
**Do you plan to store AFFF on site, use it in fire training at the site, use it for fighting fires at the facility, or include it in a fire fighting system at the site?**

Shurtape does not utilize AFFF that contains PFAS, PFOA, PFOS, or GenX materials. Shurtape does utilize and store Universal Green 3% Alcohol Resistant Synthetic Foam Concentrate on site and has worked with local emergency response agencies to employ similar materials that do not contain these listed materials.

**DAQ Question 8:**
**Are other emerging contaminants (e.g., 1,4-dioxane, brome, perchlorate, 1,2,3-Trichloropropane) used in some capacity within your facility or operations?**

Shurtape has utilized coating raw materials that have listed the potential presence of 1,4 Dioxane. Shurtape previously submitted air dispersion modeling to the NC DAQ that demonstrated compliance with the AAL established for 1,4 Dioxane.

Shurtape utilizes nanopowders (TiO2 for example) in some products. Otherwise, Shurtape is not aware of the presence of other materials that may be listed on the emerging contaminants list.

**DAQ Question 9: Do you need technical assistance to answer the questions above.**

Shurtape sought guidance from NC DAQ prior to responding to this questionnaire. That guidance was used to provide the responses herein.

Shurtape
TECHNOLOGIES

07 February 2024

Subject: **Responsible Corporate Official - Delegation of Authority**
Shurtape Technologies, LLC

To: Whom It May Concern

As the Responsible Corporate Official, I am designating the following personnel as the duly authorized representatives of the Responsible Corporate Official for the referenced facilities. As the duly authorized representatives of the Responsible Corporate Official, signature authority for all environmental and safety requirements and regulations is delegated. The following table presents the delegations by facility:

| AUTHORIZED REPRESENTATIVE | TITLE | FACILITY |
|---|---|---|
| Matt Kulis | VP – Global Manufacturing Logistics | All Facilities |
| Richard Kilpatrick | Director, EHS/Compliance | All Facilities |
| Todd Poling | Director, Global Logistics and Transportation | All Logistics Facilities |
| Dan Krueger | Director of US Manufacturing | All US Manufacturing Facilities |
| Dave Neff | Plant Manager | Hudson, NC Plant 24 |
| Taylor Ward | Plant Manager | Catawba, NC – Plant 27 |
| Austin Gryder | Manager, Logistics | Catawba, NC Distribution Logistics – Plant 30 |
| Troy McKasson | Plant Manager | Stony Point, NC Plant 31 |
| Dan Krueger | Director of US Manufacturing | Hickory, NC Plant 33 |
| Zachary Lineberger | Plant Manager | Hickory, NC Plant 36 |
| Daniel P. Higgins | Plant Manager | New Hartford, CT Facility, Plant 85 |
| Scott Steinmetz | Plant Manager | Avon, OH, Plant 90-Manufacturing |
| David Alten | Manager, Facility & Security | Avon, OH Plant 90 & Logistics |

Delegation as the duly authorized representatives of the Responsible Corporate Official, including signature authority, shall be in effect until such time as I revoke this authority. Should you or a member of your agency have any questions concerning this delegation of authority, please contact Rick Kilpatrick, or the duly authorized representatives above at (828) 322-2700.

Respectfully,

Vuk Trivanovic
CEO

cc: Each Duly Authorized Representative