**NORTH CAROLINA DIVISION OF AIR QUALITY**

# Application Review

**Issue Date:** Date needed

**Region:** Raleigh Regional Office
**County:** Lee
**NC Facility ID:** 5300131
**Inspector's Name:** Sindy Huang
**Date of Last Inspection:** 07/31/2024
**Compliance Code:** 3 / Compliance - inspection

**Facility Data**

**Applicant (Facility's Name):** SCS Sanford - Plant 13

**Facility Address:**
SCS Sanford - Plant 13
917 J R Industrial Drive
Sanford, NC 27332

**SIC:** 3083 / Laminated Plastics Plate and Sheet
**NAICS:** 326130 / Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing

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

**Permit Applicability (this application only)**
**SIP:** 15A NCAC 02D .0515, .0516, and .0521
**NSPS:** IIII
**NESHAP:** MACT JJJJ (avoidance) and GACT ZZZZ
**PSD:**
**PSD Avoidance:** VOC
**NC Toxics:** .1100
**112(r):**
**Other:**

**Contact Data**

| Facility Contact | Authorized Contact | Technical Contact |
|---|---|---|
| Hien Nguyen<br>Env. Coordinator & Chem. Engineer<br>(919) 718-0000<br>926 J R Industrial Drive<br>Sanford, NC 27332 | Tommie Lee<br>Executive Manager<br>(919) 718-0000<br>926 J R Industrial Drive<br>Sanford, NC 27332 | Hien Nguyen<br>Env. Coordinator & Chem. Engineer<br>(919) 718-0000<br>926 J R Industrial Drive<br>Sanford, NC 27332 |

**Application Data**

**Application Number:** 5300131.24A
**Date Received:** 08/22/2024
**Application Type:** Renewal
**Application Schedule:** TV-Renewal

**Existing Permit Data**
**Existing Permit Number:** 09136/T13
**Existing Permit Issue Date:** 05/28/2020
**Existing Permit Expiration Date:** 04/30/2025

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

| CY | SO2 | NOX | VOC | CO | PM10 | Total HAP | Largest HAP |
|---|---|---|---|---|---|---|---|
| 2022 | --- | 0.0900 | 72.87 | 0.1300 | --- | 0.0011 | 0.0009 [Toluene, 2,4-diisocyanate] |
| 2020 | --- | 0.0800 | 73.43 | 0.1100 | --- | 0.0012 | 0.0009 [Toluene, 2,4-diisocyanate] |
| 2019 | --- | 0.0900 | 87.45 | 0.1200 | --- | 0.0013 | 0.0010 [Toluene, 2,4-diisocyanate] |
| 2018 | --- | 0.1300 | 96.80 | 0.1500 | --- | 0.0013 | 0.0011 [Toluene, 2,4-diisocyanate] |

**Review Engineer:** Jacob Larson

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

**Comments / Recommendations:**
**Issue**: 09136/T14
**Permit Issue Date:** Date needed
**Permit Expiration Date:** Date needed

## 1. Purpose of Application

SCS Sanford - Plant 13 (SCS) currently holds Title V Permit No. 09136T13 with an expiration date of April 30, 2025 for a laminated plastics manufacturing facility located in Sanford, Lee County, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on August 22, 2024, 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 remain in effect until the renewal permit has been issued or denied.

## 2. Facility Description

The SCS facility produces antistatic plastic packaging used to pack and ship sensitive electronic components. Plastic sheeting reeling off two different rolls is first coated with antistatic solution, and then fed through a natural gas-fired dryer. Adhesive is applied to one of the two sheeting lines, which is again dried. Both sheeting lines meet together in a laminator (ID No. C1) to form a single double-walled antistatic sheet. The double-walled sheeting is rerolled and sent to a nearby SCS building to be processed into bags of different size and shape, depending on the size and shape of the electronic components.

The packaging is produced using two main solvents: isopropyl alcohol, which is used with the antistatic coating, and methyl ethyl ketone (MEK), used with the adhesive.

## 3. History/Background/Application Chronology

History/Background

| | |
|---|---|
| May 28, 2020 | Air Permit No. 09136T13 permit renewal was issued with an expiration date of April 30, 2025. |

Application Chronology

| | |
|---|---|
| August 22, 2024 | DEQ received permit application 5300131.24A for Title V renewal. |
| September 01, 2024 | Sent acknowledgment letter indicating that the application for permit renewal was complete. |
| October 07, 2024 | Draft permit and review forwarded for comments to Permitting Supervisor. Final comments received from Joseph Voelker, Permitting Supervisor on December 10, 2024. |
| December 10, 2024 | Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received December 19, 2024. |
| December 10, 2024 | Draft permit and review forwarded to the Raleigh Regional Office for comments. Minor comments were received December 13, 2024. |
| December 10, 2024 | Draft permit forwarded to the applicant for comments. Minor comments were received December 17, 2024. |
| 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

**Table of Changes**

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

| Page No. | Section | Description of Changes |
|---|---|---|
| -- | Cover page and throughout permit | • Updated all dates and permit revision numbers. |
| 3 | Cover letter | • Added "Notice Regarding The Right To Contest A Division Of Air Quality Permit Decision" page |
| 2 | Table of Contents | • Added Section 2.2 as "Multiple Emission sources"<br>• Added Section 3.0 as "Insignificant Activities List"<br>• Added Section 4.0 as "General Permit Conditions" |
| 3 | List of Acronyms | • Added "List of Acronyms" |
| 5 | 2.1 A.1 | • Added 15A NCAC 02D .0515 condition to permit |
| 7 | 2.2 A | • Moved Toxics, PSD avoidance, and MACT avoidance conditions to Section 2.2 A. from 2.1 A |
| 7 | 2.2 A.1 | • Updated 02D .1100 condition to shell version<br>• Former 2.1 A.3<br>• Added CAS numbers to Toxics table |
| 7 | 2.2 A.2 | • MACT Avoidance condition<br>• Former Section 2.1 A.4<br>• Revised to address "facility-wide"<br>• Substantially revised to promote practical enforceability and consistency with other similar permitted facilities<br>• Added 5 year testing cycle for RTO<br>• Initial testing shall be completed, and the results submitted within 180 days of the issuance of permit no. 09136T14 unless an alternate date is approved by the DAQ.<br>• Added parameter revision mechanisms consistent with current DAQ policy |
| 9 | 2.2 A.3 | • PSD Avoidance condition<br>• Former Section 2.1 A.5<br>• Revised to address "facility-wide"<br>• Substantially revised to promote practical enforceability<br>• Streamlined to reference HAP avoidance condition at Section 2.2 A.2 |
| 11 | Section 3 | • Added Insignificant Activities as Section 3 of the Title V Permit |
| 12 | Section 4 | • Added General Conditions as Section 4 of the Title V Permit<br>• Updated General Conditions to version 8.0, 07/10/2024 from Version 7.0, 08/21/2023 |

## 5. Regulatory Review

SCS is subject to the following regulations. Per the facility inspection conducted by Sindy Huang on July 31, 2024 the facility's equipment has not changed since the last renewal in 2020. The permit was updated to reflect the most current conditions for all applicable regulations, where necessary.

- 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 Coater Laminator System (ID No. C-1) and RTO (ID No. CD-2) shall not exceed the emission rate as calculated by the following equations:

  $E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
  $E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

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

  The current permit does not address the applicability of this rule. Therefore, this rule will be added to the permit as a result of this renewal. PM is only expected from the combustion of VOCs and natural gas in the five internal ovens associated with the Coater Laminator System (ID No. C-1) and the RTO (ID No. CD-2). Given the large, expected margin of compliance, no monitoring, recordkeeping, or reporting will be required for PM emissions from these sources. Compliance is anticipated.

- 15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources – This rule requires emissions of sulfur dioxide from any source of combustion, including air pollution control devices, discharge from any vent, stack, chimney, or flare shall not exceed 2.3 pounds of sulfur dioxide per million Btu input. The facility burns only natural gas in its ovens.

  Natural Gas:
  The AP-42 (Table 1.4-2) emission factor for $SO_2$ from natural gas combustion is 0.6 lb sulfur dioxide per $10^6$ scf. The sulfur dioxide emission rate calculates as:

  (0.6 lb $SO_2$ / 1,000,000 scf) * (1 scf /1020 Btu) * 1,000,000 Btu /1 mmBtu = 0.0006 lb/mmBtu

  0.0006 pounds per million Btu < 2.3 pounds per million Btu

  No sulfur dioxide emission testing is required by the facility's air permit. Given the margin of compliance suggested in the calculation above and consistent with current DAQ permitting policy, no monitoring/record keeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these combustion units. Compliance with 2D .0516 is indicated for natural gas combustion based on the AP-42 emission factors.

  15A NCAC 02D .0521, Control of Visible Emissions – Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. This regulation limits visible emissions to no more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in an hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

  The current permit requires no monitoring, recordkeeping, reporting with respect to this rule, as minimal visible emissions are expected for these sources. The most recent inspection conducted by Sindy Huang of the Raleigh regional office on July 31, 2024 confirmed that there were no visual

emissions during normal operations. Hence, no revisions are necessary to the existing monitoring, recordkeeping, reporting requirements with respect to this rule. Continued compliance is anticipated.

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

NSPS

**40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

Emission Source ID No. I-EG

This 37-horsepower diesel-fired generator, model year 2009 is used to power an exhaust fan during power outages. The facility complies with NSPS Subpart IIII by purchasing an engine certified to NSPS Subpart IIII for the model year and maximum engine power of the engine. As an insignificant activity defined pursuant to 15A NCAC 02Q .0503(8), the applicable requirements of this rule will not be placed into the permit. Note that because an activity is insignificant does not mean that the activity is exempted from an applicable requirement (Federal or State) or that the Permittee is exempted from demonstrating compliance with any applicable requirement. However, continued compliance is expected.

NESHAP/MACT/GACT

**15A NCAC 02Q .0317: AVOIDANCE CONDITIONS**
**for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY)**

The facility is a minor source of HAP emissions due to the 15A NCAC 02Q ,0317 avoidance condition at the existing Section 2.1 A.4. The existing condition specifically addresses avoidance of MACT JJJJ only.

However, the permit imposes a facility-wide limit to keep HAPs below the 10/25 tpy major source threshold. Thus, the intent is for the entire facility to avoid ANY major source MACT requirements not just MACT JJJJ. As a result of this renewal the avoidance condition will be revised to address avoidance of all major source MACT requirements under 15A NCAC 02D .1111 in general.

Note that the only difference between the existing permit and revising it to include “facility-wide” is the inclusion of the insignificant activity, the Diesel-fired emergency generator (37 horsepower, model year 2009) (ID No. I-EG) which effectively has little to no HAP emissions. As such no monitoring, recordkeeping or reporting will be required for the engine (ID No. I-EG).

SCS uses a natural gas-fired regenerative thermal oxidizer (ID No. CD-2) as necessary to reduce actual HAP emissions from the Coater Laminator system (ID No. C-1) to below the major source thresholds. Upon review it was determined that a performance test to validate the monitoring parameters in the permit has never been conducted. The existing monitoring parameters (i.e., RTO combustion chamber temperature, destruction efficiency and capture efficiency) are based off manufacturer recommendations.

Thus, a performance testing requirement will be added as a result of this renewal. Testing shall be completed within 180 days of issuance of permit no. 09136T14. Since the HAPS of concern are generally organic HAPs, testing based on total VOC will be required.

Consistent with current permitting policy, if the performance testing is conducted at any parameter values that are more stringent than those in the existing permit, the Permittee shall submit a request to revise 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 (i.e., TV administrative amendment procedures). If the performance testing is conducted such that all parameter values are less stringent than those in the existing permit, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515 (i.e., TV minor modification procedures)

For purposes of determining stringency, more stringent means any of the following:
(1) Capture efficiency is less than the value in the existing permit.
(2) Destruction efficiency is less than value in the existing permit.
(3) Oxidation chamber temperature is greater than value in the existing permit.

Note that "more stringent" here for Items 1 and 2 means the actual emissions will increase if either of these two parameters are less than those in the existing permit. Hence, if the parameters are not revised the Permittee would underestimate the actual emissions based on the existing values. Thus, the permit needs to be revised as quick as possible to ensure that no violations of the emission limits can occur as a result of underestimating the emissions by the methods specified in the TV permit. For item 3, more stringent is a higher oxidation chamber temperature than the value in the existing permit. Typically, destruction efficiency trends in the same direction as combustion temperature (all other factors held constant). Until the facility has established a history of temperature vs destruction efficiency, the permit should not reflect a combustion chamber temperature that corresponds to a destruction efficiency that has not been demonstrated.

The Permitee will be required to test once per permit term, basically every five years (i.e., within 61 months of the previous performance test).

The existing permit contains the following requirement:

> The Permittee must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the Permittee believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the DAQ to make a finding about the source's applicability status with regard to the relevant standard or other requirement

This language is based on 40 CFR 63.10(b)(3). Upon review, this requirement is somewhat redundant in the fact that the HAP major avoidance condition in itself defines how the Permittee is testing, monitoring recordkeeping and reporting to stay below HAP major source thresholds. As such, this requirement will be removed from the revised permit.

Other changes to the avoidance condition were also made to promote consistency with other similar permitted facilities and also to facilitate practical enforceability. However, with the exception of adding the testing requirement and the mechanism on how to revise the permit when testing occurs, no other changes in intent were made.

Based on the most recent inspection conducted by Sindy Huang of the Raleigh regional office on July 31, 2024 and the emission inventory data, SCS appears to be in compliance with the existing HAP avoidance condition. Continued compliance is expected.

**Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

Emission Source ID No. I-EG
This 37-horsepower diesel-fired generator, model year 2009 is considered a new source as it was constructed after June 12, 2006. Therefore, its only requirement is to comply with NSPS IIII as detailed above. Compliance is anticipated.

PSD

The existing permit contains a PSD avoidance condition at existing Section 2.1 A.5 which requires the VOC emissions from the coating/laminating system **(ID No. C-1)** shall be less than 250 tons per consecutive twelve-month period.

Upon review and concurrence with the Permittee, this avoidance condition will be revised to include all VOC emissions facility-wide. Note that the only difference between the existing permit and revising it to include "facility-wide" is the inclusion of the insignificant activity, the Diesel-fired emergency generator (37 horsepower, model year 2009) (ID No. I-EG) which effectively has little to no VOC emissions. As such no monitoring, recordkeeping or reporting will be required for the engine (ID No. I-EG).

The existing PSD avoidance condition makes numerous references to the HAP avoidance condition in some cases and in other instances duplicates the HAP avoidance condition language. To simplify the permit and to facilitate practical enforceability, the revised PSD permit condition will be streamlined to reference the revised HAP avoidance condition extensively, except the term "VOC" shall be substituted for the term "HAP" throughout. However, with the exception of adding the testing requirement and the mechanism on how to revise the permit when testing occurs, no other changes in intent were made.

Continued compliance with this avoidance condition is expected.

112(r)

40 CFR Part 68 requires stationary sources that hold more than threshold quantities of regulated substances to develop a risk management plan (RMP), in accordance with Section 112(r) of the Clean Air Act. The RMP identifies the potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures if an accident occurs.

This facility stores Toluene Diisocyanate which is a regulated substance under 112(r), however the facility does not store the regulated substance in quantities above the threshold in the rule. This permit renewal 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).

The facility operates the thermal oxidizer (ID No. CD-2) in order to comply with the emission limits in both the VOC PSD and MACT avoidance conditions only. Per 15A NCAC 02D .0614(b)(1)(E), a CAM demonstration is not needed for " an emissions cap that is approved under the rules of this subchapter and subchapter 15A NCAC 02Q and incorporated in a permit issued under 15A NCAC 02Q .0500." The avoidance limits represent "an emission cap". Therefore, CAM is not required for this facility. There will be no changes to CAM as a result of this renewal.

**7. 15A NCAC 02D .1100**

The Permittee had submitted a toxic air pollutant dispersion modeling analysis dated December 20, 2002 for the facility's toxic air pollutant emissions as listed in the table below. The modeling analysis was reviewed and approved by the AQAB on June 20, 2003. Placement of the emission sources, configuration

of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

| Emission Source(s) | Toxic Air Pollutant(s) (CAS No.) | Emission Limit(s) |
|---|---|---|
| Facility-wide | Ethyl acetate (141-78-6) | 1,000 pounds per hour |
| | Methyl ethyl ketone (78-93-3) | 1,000 pounds per hour and 12,000 pounds per day |
| | Toluene (108-88-3) | 700 pounds per hour and 10,000 pounds per day |
| | Toluene diisocyanate (26471-62-5) | 0.08 pounds per day |

The facility is required to maintain records in accordance with 2.2 A 1.b of the permit. There has been no changes to the permit regarding toxics since the last renewal. Therefore, no revisions are necessary with respect to this rule. Continued compliance is expected.

**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 SCS Sanford. During the most recent inspection, conducted by Sindy Huang on July 31, 2024 of the RRO, the facility appeared to be in compliance with all applicable requirements. The facility has had no air quality violations in the last 5 years. The facility's Annual Compliance Certification was received on January 05, 2024 and indicated compliance with all applicable requirements in 2023.

**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[1]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[2] 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.

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. Hence, General Condition J will be removed from the revised permit.

**12. Recommendations**

The permit renewal application for SCS Sanford - Plant 13. located in Sanford, lee County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources.

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

[2] 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).