ROY COOPER Governor ELIZABETH S. BISER Secretary MICHAEL ABRACZINSKAS Director



#### Enter XXXXX xx, 2023

Jason Byars Vice President Terreva Wayne County RNG, LLC 889 Howell Mill Road NW, Suite 4300 Atlanta, GA 30318

SUBJECT: Air Quality Permit No. 10054T07

Facility ID: 9600269

Terreva Wayne County RNG, LLC

Dudley

Wayne County Fee Class: Title V PSD Class: Minor

Dear Mr. Byars:

In accordance with your completed Air Quality Permit Application for renewal of your Title V permit, we are forwarding herewith Air Quality Permit No. 10054T07 authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to file a petition for contested case hearing in the North Carolina Office of Administrative Hearings. Information regarding the right, procedure, and time limit for permittees and other persons aggrieved to file such a petition is contained in the attached "Notice Regarding the Right to Contest A Division of Air Quality Permit Decision."

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to existing emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS



Jason Byars Enter XX or Calendar Date Page 2

143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Wayne County has triggered increment tracking under PSD for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and PM<sub>2.5</sub>. However, this permit renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from (*Enter Permit Issuance Date*) until (*Enter Permit Expiration Date*), is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Jacob Larson at (919) 707-8407 or Jacob.larson@deq.nc.gov.

Sincerely yours,

Mark J. Cuilla, EIT, CPM, Chief, Permitting Section Division of Air Quality, NCDEQ

#### Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review) Laserfiche [9600269] Connie Horne (cover letter only)

# NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION

Right of the Permit Applicant or Permittee to File a Contested Case: Pursuant to NCGS 143-215.108(e), a permit applicant or permittee who is dissatisfied with the Division of Air Quality's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 in the Office of Administrative Hearings within 30 days after the Division notifies the applicant or permittee of its decision. If the applicant or permittee does not file a petition within the required time, the Division's decision on the application is final and is not subject to review. The filing of a petition will stay the Division's decision until resolution of the contested case.

**Right of Other Persons Aggrieved to File a Contested Case:** Pursuant to NCGS 143-215.108(e1), a person other than an applicant or permittee who is a person aggrieved by the Division's decision on a permit application may commence a contested case by filing a petition under NCGS 150B-23 within 30 days after the Division provides notice of its decision on a permit application, as provided in NCGS 150B-23(f), or by posting the decision on a publicly available Web site. The filing of a petition under this subsection does not stay the Division's decision except as ordered by the administrative law judge under NCGS 150B-33(b).

General Filing Instructions: A petition for contested case hearing must be in the form of a written petition, conforming to NCGS 150B-23, and filed with the Office of Administrative Hearings, 1711 New Hope Church Road, Raleigh NC, 27609, along with a fee in an amount provided in NCGS 150B-23.2. A petition for contested case hearing form may be obtained upon request from the Office of Administrative Hearings or on its website at https://www.oah.nc.gov/hearings-division/filing/hearing-forms. Additional specific instructions for filing a petition are set forth at 26 NCAC Chapter 03.

**Service Instructions:** A party filing a contested case is required to serve a copy of the petition, by any means authorized under 26 NCAC 03 .0102, on the process agent for the Department of Environmental Quality:

William F. Lane, General Counsel North Carolina Department of Environmental Quality 1601 Mail Service Center Raleigh, North Carolina 27699-1601

If the party filing the petition is a person aggrieved other than the permittee or permit applicant, the party **must also** serve the permittee in accordance with NCGS 150B-23(a).

\* \* \*

Additional information is available at <a href="https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case">https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case</a>. Please contact the OAH at 984-236-1850 or oah.postmaster@oah.nc.gov with all questions regarding the filing fee and/or the details of the filing process.

# Summary of Changes to Permit

The following changes were made to Air Permit No. 10054T06:\*

\* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

Pages	Section	Description of Changes
	Cover page and	Updated all dates, permit revision numbers and mailing address
	Throughout	
	Cover Letter	Changed engineers name to Jacob Larson along with contact
		information
1	Mailing Address	Updated mailing address
3	Section 1 Table	Removed asterisk and descriptor from table
10	Section 2.1 C.2.d	Removed the alternate testing from the permit.
13	Section 2.2 A.1	Added styrene and ethyl acetate to the TPER table.



# State of North Carolina Department of Environmental Quality Division of Air Quality

# AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
10054T07	10054T06	XXXX	XXXX

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than *lenter date six months prior to expiration date*].

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: Terreva Wayne County RNG, LLC

Facility ID: 9600269
Primary SIC Code: 4931
NAICS Code: 221122

Facility Site Location: 460B South Landfill Road

City, County, State, Zip: Dudley, Wayne County, North Carolina 28333

Mailing Address: 889 Howell Mill Road NW, Suite 4300

City, State, Zip: Atlanta, GA 30318

 Application Number(s):
 9600269.22A, 9600269.21A

 Complete Application Date(s):
 07/29/2022, 03/19/2021

Division of Air Quality, Washington Regional Office Regional Office Address: 943 Washington Square Mall

Washington, North Carolina 27889

Permit issued this the XX day of XXXXX, XXXX.

Mark J. Cuilla, EIT, CPM, Chief, Air Permitting Section By Authority of the Environmental Management Commission

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#### List of Acronyms

AOS Alternative Operating Scenario
Best Available Control Technology

BAE Baseline Actual Emissions
Btu British thermal unit
CAA Clean Air Act

CAM Compliance Assurance Monitoring
CEMS Continuous Emission Monitoring System

**CEDRI** Compliance and Emissions Data Reporting Interface

**CFR** Code of Federal Regulations

**CO** Carbon Monoxide

**COMS** Continuous Opacity Monitoring System

CSAPR Cross-State Air Pollution Rule
DAO Division of Air Quality

DEQ Department of Environmental Quality
EMC Environmental Management Commission
EPA Environmental Protection Agency

FR Federal Register

GACT Generally Available Control Technology

GHGs Greenhouse Gases
HAP Hazardous Air Pollutant

LAER Lowest Achievable Emission Rate

MACT Maximum Achievable Control Technology

NAA Non-Attainment Area

NAAQS National Ambient Air Quality Standards
NAICS North American Industry Classification System

NCAC North Carolina Administrative Code NCGS North Carolina General Statutes

**NESHAP** National Emission Standards for Hazardous Air Pollutants

NO<sub>X</sub> Nitrogen Oxides

NSPS New Source Performance Standard

**NSR** New Source Review

OAH Office of Administrative Hearings
PAE Projected Actual Emissions
PAL Plantwide Applicability Limitation

**PM** Particulate Matter

PM<sub>2.5</sub> Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less PM<sub>10</sub> Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less

**POS** Primary Operating Scenario

**PSD** Prevention of Significant Deterioration

PTE Potential to Emit

**RACT** Reasonably Available Control Technology

SIC Standard Industrial Classification SIP State Implementation Plan

SO<sub>2</sub> Sulfur Dioxide TAP Toxic Air Pollutant tpy Tons Per Year

VOC Volatile Organic Compound

# SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

<b>Emission Source</b>			
ID No.	Emission Source Description	ID No.	Control Device Description
ES-1	One Gas Upgrading System (1,750 standard cubic feet per minute design capacity) consisting of:	CD-ACT1	Activated Carbon H <sub>2</sub> S Removal System
	<ul> <li>one dual-tank media based H<sub>2</sub>S         Removal System</li> <li>one Pressure Swing Adsorption         System</li> </ul>	CD-TO1	One natural gas-fired thermal oxidizer (8.0 million Btu per hour heat input, 1,000 standard cubic feet per minute maximum gas flow rate)
		CD-Flare	One backup open type candlestick flare (2,100 standard cubic feet per minute maximum flow rate, 115.7 million Btu per hour heat input capacity)
ES-04	One landfill gas-fired open type backup flare (1600 standard cubic feet per minute maximum flow rate, 45.3 million Btu per hour heat input at 472 Btu per standard cubic feet of landfill gas)	None	None
ES-EG1 ES-EG2 ES-EG3 MACT ZZZZ NSPS JJJJ	Three landfill gas-fired, lean burn, spark ignition engine (each with 1468 hp output)/generator (each with 1060 kW output) units	None	None

#### **SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS**

#### 2.1 Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

#### A. One Gas Upgrading System (ES-1) controlled by:

- One natural gas-fired thermal oxidizer (8.0 million Btu per hour heat input, 1,000 standard cubic feet per minute maximum gas flow rate, ID No. CD-TO1)
- One backup open type candlestick flare (2,100 standard cubic feet per minute maximum flow rate, ID No. CD-Flare)
- Activated Carbon H<sub>2</sub>S Removal System (CD-ACT1)

The following table provides a summary of limits and standards for the emission source(s) described above:

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Odorous Emissions	State-enforceable only	15A NCAC 02D .1806
	See Section 2.2 A.2	
Toxic Air Pollutants	State-enforceable only	15A NCAC 02Q .0711
	Emission rates requiring a permit	
	See Section 2.2 A.1	
PFAS	State-enforceable only	15A NCAC 02Q .0508(f)
	Disclosure of information relating to emissions of	
	fluorinated chemicals	
	See Section 2.2 A.3	

#### THERMAL OXIDIZER (CD-TO1)

#### 1. 15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"

a. Emissions of sulfur dioxide from the thermal oxidizer (CD-TO1) 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. [15A NCAC 02D .0516]

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

- c. The Permittee shall perform the following monitoring and recordkeeping requirements for the thermal oxidizer (CD-TO1):
  - i. Inspection and Maintenance Requirements To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance (I&M) as recommended by the manufacturer. As a minimum, the Permittee shall perform an annual (for each 12-month period following the initial inspection) internal inspection of each primary heat exchanger and associated inlet/outlet valves to ensure structural integrity.
  - ii. The Permittee shall ensure the proper performance of each thermal oxidizer by the following monitoring:
    - (A) The Permittee shall properly operate, inspect and maintain the control devices at all times.
    - (B) The combustion zone temperature in the thermal oxidizer (CD-TO1) shall be maintained at a minimum 3-hour rolling average of (To Be Determined) degrees Fahrenheit during operation.
    - (C) The Permittee shall continuously monitor and record the temperature in the thermal oxidizer.
    - (D) These approved parameters shall apply at all times except as noted in the following:

- (1) The Permittee may re-establish any parameter and/or factor during subsequent testing. Compliance with previously approved parameters and/or factors is not required during subsequent required testing or other tests undertaken to re-establish parameters and/or factors by the Permittee.
- (2) The Permittee shall comply with applicable emission standards at all times, including during periods of testing.

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

d. The results of all inspections and any variance from manufacturer's recommendations or from those given in this permit (when applicable) shall be investigated with corrections made and dates of actions recorded in a logbook. Records of all maintenance activities shall be recorded in the logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request.

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

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section(s) 2.1 A.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

#### **THERMAL OXIDIZER (CD-T01)**

#### 2. 15A NCAC 02D .0521: Control of Visible Emissions

a. Visible emissions from the thermal oxidizer (CD-TO1) shall not be 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 any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

#### Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of landfill gas or natural gas in the thermal oxidizer (CD-TO1).

#### **BACKUP FLARE (CD-Flare)**

#### 3. 15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"

a. Emissions of sulfur dioxide from the flare **(CD-Flare)** 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. [15A NCAC 02D .0516]

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

- b. The Permittee shall verify that the candlestick flare (CD-Flare) is designed and operated as below within 180 days of operation:
  - i. The flare shall be designed for and operated with no visible emissions as determined by Method 22 (40 CFR Part 60, Appendix A), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
  - ii. The flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be continuously monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
  - iii. The flare shall meet the following heat content and maximum tip velocity specifications as below:
    - (A) The flare shall be used only with the net heating value of the gas being combusted being 200 Btu/scf or greater if the flare is non-assisted.
    - (B) If the flare is a non-assisted flare, it shall be designed for and operated with an exit velocity less than 60 ft/sec with the exceptions as provided below in Sections A.3.b.iii.(C) and (D).
    - (C) If the flare is a non-assisted flare, it shall be designed for and operated with an exit velocity greater than 60 ft/sec but less than 400 ft/sec, provided the net heating value of the gas being combusted is greater than

1,000 Btu/scf.

- (D) A non-assisted flare designed for and operated with an exit velocity less than 400 ft/sec is permitted as long as the exit velocity is less than the velocity,  $V_{max}$ , as determined below in Section A.3.b.iii.(G) below.
- (E) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = k \sum_{i=1}^{n} C_i H_i$$

Where:

 $H_T =$ Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off-gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume

on combustion at 25 °C and 760 mm Hg, but the state corresponding to one mole is 20 °C;

K = Constant = 1.740 x 
$$10^{-7} \left(\frac{1}{ppm}\right) \left(\frac{g \ mole}{scm}\right) \left(\frac{MJ}{kcal}\right)$$

Where standard temperature for  $\frac{g \ mole}{scm}$  is 20°C

- C<sub>i</sub> = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994); and
- H<sub>i</sub> =Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 if published values are not available or cannot be calculated.
- (F) The actual exit velocity of the flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D of Appendix A to 40 CFR 60, as appropriate; by the unobstructed (free) cross sectional area of the flare tip.
- (G) The maximum permitted velocity, V<sub>max</sub>, for the flare shall be determined by the following equation.

 $Log_{10} (V_{max}) = (H_T + 28.8)/31.7$ 

 $V_{max}$  = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

 $H_T$  = The net heating value as determined above.

#### **BACKUP FLARE (CD-Flare)**

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

a. Visible emissions from the backup flare (CD-Flare) shall not be more than 20 percent opacity each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.4.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

#### Monitoring [15A NCAC 02O .0508(f)]

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of landfill gas or natural gas in the flare (CD-Flare).

#### ACTIVATED CARBON H2S REMOVAL SYSTEM (CD-ACT1)

As required by 15A NCAC 02Q .0508(f), CD-ACT1 shall perform the following monitoring and recordkeeping:

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

- The Permittee shall monitor weekly the hydrogen sulfide concentration at the exhaust of CD-ACT1 by use of a portable biogas analyzer.
- b. At a minimum the Permittee shall perform semi-annual calibrations of the biogas analyzer.
- Establish a pressure drop range across the carbon adsorber vessls (CD-ACT1) within 30 days after steady operation of the unit begins. Monitor on a daily basis the pressure drop across the carbon adsorber vessel to verify they remain within the established pressure drop range.

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

- d. The Permittee shall maintain the following records in a logbook (in written or electronic format). The records shall be kept on-site and made available to DAQ personnel upon request.
  - i. Daily carbon adsorber vessel pressure drop measurements,
  - ii. Weekly hydrogen sulfide concentration at the exhaust of the carbon adsorber (CD-ACT1).
  - iii. Dates and times that sulfur control device **CD-ACT1** is not in operation, what corrective actions were taken, and when corrective actions were completed,
  - iv. Calibration results for the biogas analyzer and pressure gauge(s), and
  - v. Instances when the pressure drop is outside of the established pressure range.

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

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 A.5.a above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

# B. One landfill gas-fired, open type, backup flare (1,600 scfm maximum flow rate, 45.3 million Btu per hour heat input at 472 Btu/scf of landfill gas, ID No. ES-04)

The following table provides a summary of limits and standards for the emission source described above:

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521

#### 1. 15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"

a. Emissions of sulfur dioxide from the flare (**ID No. ES-04**) 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. [15A NCAC 02D .0516]

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

#### Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of landfill gas in the flare (ID No. ES-04).

#### 2. 15A NCAC 02D .0521: Control of Visible Emissions

a. Visible emissions from the flare (**ID No. ES-04**) shall not be more than 20 percent opacity each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a, above, as applicable, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of landfill gas in the flare (ID No. ES-04).

# C. Three landfill gas-fired, lean burn, spark ignition engine/generator units (ID Nos. ES-EG1, ES-EG2, and ES-EG3) each with 1,468 hp engine output and 1,060 kW generator output

The following table provides a summary of limits and standards for the emission sources described above:

Pollutant(s)	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Carbon Monoxide (CO) Nitrogen Oxides (NOx) Volatile Organic Compounds (VOC)	5.0 grams (g) of CO per horsepower-hour (hp-hr) 3.0 g. NOx/hp-hr 1.0 g. VOC/hp-hr	15A NCAC 02D .0524 40 CFR 60, Subpart JJJJ
CO, NOx, Particulate Matter (PM <sub>10</sub> /PM <sub>2.5</sub> ), Sulfur Dioxide, VOC, Lead and Mercury	BACT Emission Limits 3.0 g. CO/ hp-hr 0.6 g. NOx/hp-hr 0.15 g. particulate matter/hp-hr  BACT Operational Standards Good combustion practices Burn landfill gas in engine	NCGS §62-133.8 (g) State BACT (SB-3), STATE ONLY
Hazardous Air Pollutants (HAP)	Operate in a manner that reasonable minimizing HAP emissions	15A NCAC 02D .1111 40 CFR 63, Subpart ZZZZ 40 CFR 60.4233(e), 40 CFR 60.4243

#### 1. 15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Combustion Sources"

a. Emissions of sulfur dioxide from these engines (**ID Nos. ES-EG1, ES-EG2, and ES-EG3**) 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.

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

#### Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f) and 15A NCAC 02D. 2601]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of landfill gas in any engine.

## 2. 15A NCAC 02D .0524: New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines [40 CFR 60 Subpart JJJJ]

a. The Permittee shall comply with all applicable provisions for engines (**ID Nos. ES-EG1, ES-EG2, and ES-EG3**), including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart JJJJ, including Subpart A "General Provisions."

#### Emissions Standards [§60.4233 (e), Table 1 to Subpart JJJJ of 40 CFR Part 60]

b. The Permittee shall comply with the following emission standards for spark ignition, lean burn landfill gas-fired engines as specified in Table 1 of 40 CFR Part 60, Subpart JJJJ for stationary landfill gas-fired internal combustion engines that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

Pollutant	Emission Standard (g/hp-hr)	-or- Emission Standard (ppmvd at 15% O <sub>2</sub> )
NOx	3.0 g/hp-hr	220 ppmvd at 15% O <sub>2</sub>
CO	5.0 g/hp-hr	610 ppmvd at 15% O <sub>2</sub>
VOC	1.0 g/hp-hr	80 ppmvd at 15% O <sub>2</sub>

c. For each engine, the Permittee shall demonstrate compliance with the emissions standard in Section 2.1 C.2.b above by maintaining the engine as an emissions certified engine or by conducting performance testing as specified in Section 2.1 C.2.d. and e. [40 CFR §60.4243(b]

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

d. The Permittee shall demonstrate compliance with the emissions standard in Section 2.1.C.2.b above by conducting performance testing in accordance with General Condition JJ and 40 CFR §60.4244. The Permittee shall test engines (ID Nos. ES-EG1, ES-EG2, and ES-EG3) every 12-months unless engine is disabled or removed from site. If the results of the testing exceed an emissions limit listed in Section 2.1 B.2.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [40 CFR §60.4243(a)(2) and (b)(2)(ii)]

#### Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR §60.4243(b)(2)(ii)]
- f. The Permittee shall maintain maintenance records in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the records are not kept.

# 3. 15A NCAC 02D .1111, 40 CFR Part 63, Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

- a. The Permittee shall comply with all applicable provisions for the landfill gas-fired engines (**ID Nos. ES-EG1, ES-EG2 and ES-EG3**), including the requirements for notification, monitoring, recordkeeping, and reporting, contained in Environmental Management Commission Standard 15A NCAC 2D .1111 ""Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, "Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" for new stationary reciprocating internal combustion engine (RICE) with a site rating of more than 500 brake horsepower (hp) located at a major source of hazardous air pollutants (HAP) emissions, including Subpart A "General Provisions." [15A NCAC 02D .1111]
- b. The Permittee shall operate the engines in a manner which reasonably minizines HAP emissions. [40 CFR 63.6625(c)]

#### Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall monitor and record the daily fuel usage (i.e., the amount of landfill gas burned) for each engine. [40 CFR 63.6625(c)]
- d. Records of the daily fuel usage monitors shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

[40 CFR 63.6625(c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the fuel records are not kept.

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

- e. The Permittee shall submit an annual report by January 30 of each calendar year for the previous 12-month period ending December 31. The report shall include:
  - i. the annual and daily maximum flow rates and the heating values of each fuel fired in each engine;
  - ii. the operating limits provided in Section 2.1 C.1.a and 2.1 C.2.b and any deviations from these limits; and iii. any problems or errors suspected with the meters monitoring the fuel flow.

[40 CFR 63.6650g)]

#### State-enforecable only

4. State Best Available Control Technology (BACT) Analysis [North Carolina General Statute §62-133.8 (g)]

In accordance with North Carolina General Statute §62-133.7 (g) the Permittee shall limit the emissions of carbon monoxide, nitrogen oxides, particulate matter (PM10/PM2.5), sulfur dioxide, mercury, lead, and volatile organic compounds from the three engines (**ID Nos. ES-EG1, ES-EG2 and ES-EG3**) to the maximum degree that has been determined to be achievable for the facility. The Permittee shall control the emissions of air pollutants using Best Available Control Technology (BACT) and meet BACT emissions limits:

#### a. Best Available Control Technology

- i. Carbon monoxide (CO):
  - CO emissions shall be controlled using good combustion practices.
  - BACT emissions limit: 3.0 grams of CO per hp-hr engine output.
- ii. Nitrogen oxides (NOx):
  - NOx emissions shall be controlled using good combustion practices.
  - BACT emissions limit: 0.6 grams of NOx per hp-hr engine output.
- iii. Particulate Matter (PM<sub>10</sub>/PM<sub>2.5</sub>):
  - PM<sub>10</sub>/PM<sub>2.5</sub> emissions shall be controlled using good combustion practices.
  - BACT emissions limit: 0.15 grams of PM<sub>10</sub>/PM<sub>2.5</sub> per hp-hr engine output.
- iv. Sulfur dioxide (SO<sub>2</sub>):
  - SO<sub>2</sub> emissions shall be controlled from each engine using good combustion practices and the burning of landfill gas.
- v. Volatile organic compounds (VOC):
  - VOC shall be controlled from each engine using good combustion practices and the burning of landfill gas.
- vi. Mercury:
  - Mercury emissions shall be controlled from each engine using good combustion practices and the burning of landfill gas.
- vii. Lead:
  - Lead emissions shall be controlled from each engine using good combustion practices and the burning of landfill gas.

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test exceed a limit given in Section 2.1 C.4.a. above, the Permittee shall be deemed in noncompliance with NCGS §62-133.7(g).

#### Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, the Permittee shall purchase engines that meets the emissions limitations of BACT and perform inspections and maintenance as recommended by the manufacturer.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
  - i. The date and time of each recorded action;
  - ii. The results of each inspection;
  - iii. The results of any maintenance performed on the engines; and
  - iv. Any variance from manufacturer's recommendations, if any, and corrections made.
- e. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the fuel records are not kept.

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

f. The Permittee shall maintain a monthly summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping listed above and shall submit the results within 30 days of a written request by the DAQ.

# 2.2 Multiple Emission Source(s) Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

#### A. One Gas Upgrading System (ES-1) controlled by:

- One natural gas-fired thermal oxidizer (8.0 million Btu per hour heat input, 1,000 standard cubic feet per minute maximum gas flow rate, ID No. CD-TO1)
- One backup open type candlestick flare (2,100 standard cubic feet per minute maximum flow rate, 115.7 million Btu per hur heat input capacity, ID No. CD-Flare)
- Activated Carbon H<sub>2</sub>S Removal System (CD-ACT1)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Pollutant	Limits/Standards	Applicable Regulation
Odorous emissions	State-enforceable only	15A NCAC 02D .1806
	Apply suitable controls	
Toxic air pollutants	State-enforceable only	15A NCAC 02Q .0711
_	Emission rates requiring a Permit	
PFAS	State-enforceable only	15A NCAC 02Q .0518
	Disclosure information relating to the emissions of fluorinated	15A NCAC 02Q .0508(f)
	chemicals	

#### **State-enforceable only**

- 1. TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT Pursuant to 15A NCAC 02Q .0711 "Emission Rates Requiring a Permit," for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions, where all emission release points are unobstructed and vertically oriented, do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 02Q .0711(b). The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 02Q .0711(b).
  - a. A permit to emit any of the listed TAPs below shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.
  - b. <u>PRIOR</u> to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D .1100 "Control of Toxic Air Pollutants".
  - c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
1,1,1-Trichloroethane (Methyl chloroform)		505.4		257.98
1,1,2,2-Tetrachloroethane	581.110			
1,1-Dichloroethene (Vinylidene chloride)		5.1		
1,2-Dichloroethane (Ethylene dichloride)	350.511			
Acrylonitrile		1.3	1.05	
Benzene	11.069			
Carbon disulfide		7.8		
Carbon tetrachloride	618.006			
Chlorobenzene		92.7		

Chlorine		1.6		0.95
Chloroform	396.631			
Dichloromethane (Methylene chloride)	2213.752		1.79	
Ethyl acetate			36	
Ethylene dibromide	36.896			
Ethyl mercaptan (Ethanethiol)			0.11	
Hydrogen chloride				0.74
Hydrogen fluoride		1.3		0.26
Hydrogen sulfide		5.1		
Mercury		0.025		
Methyl ethyl ketone		155.8		93.19
Methyl isobutyl ketone		107.8		31.59
Methyl mercaptan			0.05	
Perchloroethylene (Tetrachloroethene)	17525.534			
Styrene			2.7	
Toluene		197.96		58.97
Trichloroethylene (Trichloroethene)	5442.140			
Vinyl Chloride	35.051			
Xylenes		113.7		68.44

#### State-enforceable only

#### 2. Odorous emissions – 15A NCAC 02D .1806

The owner or operator of a facility subject to this Rule 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. There are no uncontrolled vents into the atmosphere from this facility.

#### State-enforceable only

### 3. Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0508(f); 15A NCAC 02D .0518]

- a. The Permittee shall have an ongoing duty to disclose the presence of materials containing fluorinated chemicals at the facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Office Supervisor within thirty days of the Permittee becoming aware of such information, unless such information has already been disclosed to DAQ by the Permittee.
- b. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct an <u>additional</u> analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term "fluorinated chemicals" includes but is not limited to per- and polyfluoroalkyl substances (PFAS).

- c. <u>TESTING REQUIREMENT</u> As required by 15A NCAC 02Q .0508(f), the Permittee shall conduct an initial performance test for per- and polyfluoroalkyl substances (PFAS) at the inlet where the landfill gas enters the Gas Upgrading System (ES-1).
  - i. The Permittee shall utilize a DAQ approved reference test method in accordance with the testing protocol submittal form.
  - ii. The Permittee shall submit a protocol to DAQ at least 45 days prior to initial testing and shall submit a notification of initial compliance testing at least 15 days in advance of the testing. The protocol must be approved by DAQ in advance of the testing.
  - iii. Testing shall be completed within 180 days of achieving steady operation at typical operating capacity of the RNG Plant unless unless an alternate date is approved in advance by DAQ.
  - iv. The Permittee shall submit a written report of the test results to the Regional Supervisor, DAQ, no later than 30 days following sample collection test in accordance with 15A NCAC 02D .2602(f), unless an alternative date is approved in advance by DAQ.

#### 2.3 Permit Shield for Nonapplicable Requirements

The Permittee is shielded from the following nonapplicable requirements [15A NCAC 02Q .0512(a)(1)(B)].

- A. New Source Performance Standards, 40 CFR 60, Subpart OOOOa "Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015" is not applicable because the facility does not meet the definition for Crude Oil and Natural Gas Production source category.
- B. New Source Performance standards, 40 CFR 60, Subpart XXX "Standards of Performance for Municipal Solid Waste Landfills" applies to owners and operators of municipal solid waste landfills that commence construction after July 17, 2014. This regulation does not apply to this Renewable Natural Gas facility since the facility is not a municipal solid waste landfill.
- C. Maximum Achievable Control Technology, 40 CFR 63, Subpart HHH "National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities" is not applicable because the facility does not meet the definition for natural gas transmission.

### **SECTION 3 - INSIGNIFICANT ACTIVITIES PER 15A NCAC 02Q .0503(8)**

Emission Source ID No.	Emission Source Description <sup>1,2</sup>
IES-Drums	Storage drums
IES-CondTk	Condensate storage tank
IES-Main	Engine maintenance shop

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.

<sup>&</sup>lt;sup>2</sup>When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."

#### SECTION 4 - GENERAL CONDITIONS (version 7.0, 08/21/2023)

This section describes terms and conditions applicable to this Title V facility.

#### A. General Provisions [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

- Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
- 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
- 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
- 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
- 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
- 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

#### B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application(s) and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

#### C. Severability Clause [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

#### D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance North Carolina Division of Air Quality 1641 Mail Service Center Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

#### E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

#### F. Circumvention - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

#### G. Title V Permit Modifications

- 1. Administrative Permit Amendments [15A NCAC 02O .0514]
  - The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
- Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
   The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505
- 3. Minor Permit Modifications [15A NCAC 02Q .0515]
  - The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
- 4. Significant Permit Modifications [15A NCAC 02Q .0516]
  - The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
- 5. Reopening for Cause [15A NCAC 02Q .0517]
  - The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

#### H. Changes Not Requiring Permit Modifications

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

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

- 2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
  - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
  - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
    - i. the changes are not a modification under Title I of the Federal Clean Air Act;
    - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
    - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
    - iv. the Permittee shall attach the notice to the relevant permit.
  - c. The written notification shall include:
    - i. a description of the change;
    - ii. the date on which the change will occur;
    - iii. any change in emissions; and
    - iv. any permit term or condition that is no longer applicable as a result of the change.
  - Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
- 3. Off Permit Changes [15A NCAC 02Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

- a. the change affects only insignificant activities and the activities remain insignificant after the change; or
- b. the change is not covered under any applicable requirement.
- 4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

#### I.A Reporting Requirements for Excess Emissions [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

- 1. "Excess Emissions" means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)
- 2. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
- 3. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
  - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
    - notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
      - name and location of the facility;
      - nature and cause of the malfunction or breakdown;
      - time when the malfunction or breakdown is first observed;
      - expected duration; and
      - estimated rate of emissions;
    - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
    - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

#### I.B Reporting Requirements for Permit Deviations [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

- "Permit Deviations" for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.
- 2. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) quarterly by notifying the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

#### I.C Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

- 1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
- 2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

#### J. RESERVED

#### K. Permit Renewal [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

#### L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

#### M. <u>Duty to Provide Information (submittal of information)</u> [15A NCAC 02Q .0508(i)(9)]

- 1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
- 2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

#### N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

#### O. Retention of Records [15A NCAC 02Q .0508(f) and 02Q .0508(l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

#### P. Compliance Certification [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

- 1. the identification of each term or condition of the permit that is the basis of the certification;
- 2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
- 3. whether compliance was continuous or intermittent;
- 4. the method(s) used for determining the compliance status of the source during the certification period;
- 5. each deviation and take it into account in the compliance certification; and
- 6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

#### Q. Certification by Responsible Official [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

#### R. Permit Shield for Applicable Requirements [15A NCAC 02Q .0512]

- 1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
- 2. A permit shield shall not alter or affect:
  - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
  - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
  - c. the applicable requirements under Title IV; or

- d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
- 3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02O .0523.
- 4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

#### S. Termination, Modification, and Revocation of the Permit [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

- 1. the information contained in the application or presented in support thereof is determined to be incorrect;
- 2. the conditions under which the permit or permit renewal was granted have changed;
- 3. violations of conditions contained in the permit have occurred;
- 4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
- 5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

#### T. <u>Insignificant Activities</u> [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

#### U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

#### V. <u>Inspection and Entry</u> [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

- 1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
  - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
  - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
  - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

#### W. Annual Fee Payment [15A NCAC 02Q .0508(i)(10)]

- 1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
- 2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
- 3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

#### X. Annual Emission Inventory Requirements [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

#### Y. Confidential Information [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

#### Z. Construction and Operation Permits [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

#### AA. Standard Application Form and Required Information [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

#### BB. Financial Responsibility and Compliance History [15A NCAC 02Q .0507(d)(3)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

#### CC. Refrigerant Requirements (Stratospheric Ozone and Climate Protection) [15A NCAC 02Q .0501(d)]

- 1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
- 2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
- 3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

#### DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

#### EE. National Emission Standards Asbestos – 40 CFR Part 61, Subpart M [15A NCAC 02D .1110]

The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

#### FF. Title IV Allowances [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

#### GG. Air Pollution Emergency Episode [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

#### HH. Registration of Air Pollution Sources [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

#### II. Ambient Air Quality Standards [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of

the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

#### JJ. General Emissions Testing and Reporting Requirements [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or .1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

- 1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
- 2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
- 3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
- 4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
  - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
    - Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
    - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
    - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in 15A NCAC 02D .2600 if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
  - b. The Director may authorize the DAQ to conduct independent tests of any source subject to a rule in 15A NCAC 02D to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in 15A NCAC 02D .2600 has precedence over all other tests.

#### KK. Reopening for Cause [15A NCAC 02Q .0517]

- 1. A permit shall be reopened and revised under the following circumstances:
  - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
  - additional requirements (including excess emission requirements) become applicable to a source covered by Title
     IV:
  - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
  - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
- 2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
- 3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.

- 4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
- 5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

#### LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

#### MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

#### NN. Specific Permit Modifications [15A NCAC 02Q .0501 and .0523]

- 1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
- 2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
- 3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
  - a. The written notification shall include:
    - i. a description of the change at the facility;
    - ii. the date on which the change will occur;
    - iii. any change in emissions; and
    - iv. any permit term or condition that is no longer applicable as a result of the change.
  - b. In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

#### OO. Third Party Participation and EPA Review [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal EPA, EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.