ROY COOPER
*Governor*

MICHAEL S. REGAN
*Secretary*

MICHAEL ABRACZINSKAS
*Director*

NORTH CAROLINA
*Environmental Quality*

XX

Adam Long
GM Pipeline Operations
Piedmont Natural Gas - Concord Compressor Station
4720 Piedmont Row Drive
Charlotte, NC 28210

SUBJECT: Air Quality Permit No. 09604T09
Facility ID: 1300155
Piedmont Natural Gas - Concord Compressor Station
Concord, Cabarrus County, North Carolina
Fee Class: Title V
PSD Class: Minor

Dear Mr. Long:

In accordance with your completed Air Quality Permit Application for renewal of a Title V permit received March 25, 2020 we are forwarding herewith Air Quality Permit No. 09604T09 to Piedmont Natural Gas - Concord Compressor, 2560 Derita Road, Concord, North Carolina 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 listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. 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 request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the 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 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from ***XX*** until ***XX***. This Air Quality Permit 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 Jim Hafner at 336-776-9634 or jim.hafner@ncdenr.gov.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Kelly Fortin, EPA Region 4
Mooresville Regional Office
Central Files

ATTACHMENT to Permit No. 09604T09

Insignificant Activities per 15A NCAC 02Q .0503(8)

| Emission Source ID No. | Emission Source Description |
|---|---|
| IDRT01 | distillate recovery tank (250 gallon storage capacity) |
| IDRT02 | distillate recovery tank (1,500 gallon storage capacity) |
| INOT01 | new oil storage tank (1,500 gallon storage capacity) |
| IUOT01 | used oil storage tank (500 gallon storage capacity) |
| INOT02 | new oil storage tank (1,000 gallon storage capacity) |
| IUOT02 | used oil storage tank (1,000 gallon storage capacity) |
| IAFT01 | antifreeze storage tank (2,500 gallon storage capacity) |
| IAFT02 | antifreeze storage tank (1,000 gallon storage capacity) |
| IAMT01 | antifreeze maintenance storage tank (2,500 gallon storage capacity) |
| IOS01 | miscellaneous oil drums (55 gallon drums) |
| IBD | blowdown operations for maintenance |

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
2. 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.”
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled “Specific Permit Conditions Regulatory Guide.” The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

# Summary of Changes to Permit

The following changes were made to the Piedmont Natural Gas - Concord Compressor Station Air Permit No. 09604T09:

| Page No. | Section | Description of Changes |
|---|---|---|
| Throughout | Throughout | • Updated permit/application numbers.<br>• Updated dates. |
| Throughout | Throughout | • Updated 15A NCAC 2D to15A NCAC 02D<br>• Updated 15A NCAC 2Q to15A NCAC 02Q |
| Pages 4 | Section 2.1 A | • Added 15A NCAC 02D .1806 |
| Pages 4 - 7 | Section 2.1.A.1 | • Revised standard language to be consistent with current shell standards. No changes in intent were made. |
| Page 6 | Section 2.1 A.1 | • Removed Paragraphs 2.1 A.1.m.(2)(ii) & (iii) |
| Page 8 | Section 2.1 B | • Added 15A NCAC 02D .1806 |
| Pages 8 - 12 | Section 2.1.B.1 | • Revised standard language to be consistent with current shell standards. No changes in intent were made. |
| Page 13 | Section 2.1 C | • Added 15A NCAC 02D .1806 |
| Pages 13 - 15 | Section 2.1.C.1 | • Revised standard language to be consistent with current shell standards. No changes in intent were made. |
| Page 17 | Section 2.2 A.3 | • Updated emission factors in Table 2.2 A.3 |
| Page 19 | Section 2.2 A.3.h | • Removed reporting requirement of emergency generator (ID No. EG01) hours of operation |
| Page 19 | Section 2.2 A.4 | • Updated emission factors in Table 2.2 A.4 |
| Page 21 | Section 2.2.5.A.c | • Removed reporting requirement of total monthly HAP emissions (individual and total combined) for each engine. |
| Page 21 | Section 2.2 A.6 | • Added 15A NCAC 02D .1806 |
| Page 22 | Section 2.2 B.1 | • Added 15A NCAC 02D .1418 |
| Page 22 | Section 2.2.B.2 | • Revised from Section 2.2.B.1 |
| Page 22 | Sction 2.2.B.2 | • Added paragraph 2.2 B.1.h.ii. |
| Page 25 | Section 3 | • Updated General Conditions (v5.5, 08/25/2020) |

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 |
|---|---|---|---|
| 09604T09 | 09604T08 | XXXX* | XXXX** |

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:** | **Piedmont Natural Gas - Concord Compressor Station** |
| **Facility ID:** | **1300155** |
| **Facility Site Location:** | **2560 Derita Road** |
| **City, County, State, Zip:** | **Concord, Cabarrus County, North Carolina 28027** |
| **Mailing Address:** | **4720 Piedmont Row Drive** |
| **City, State, Zip:** | **Charlotte, North Carolina 28210** |
| **Application Number:** | **1300155.20B** |
| **Complete Application Date:** | **March 25, 2020** |
| **Primary SIC Code:** | **SIC 4293** |
| **Division of Air Quality, Regional Office Address:** | **Mooresville Regional Office<br>610 East Center Avenue, Suite 301<br>Mooresville, North Carolina 28115** |

Permit issued this the XX day of XXXXX, XXXX

_____

William D. Willets, P.E., Chief, Air Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

# 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:

| Page Nos. | Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|---|
| 4-7<br>15-20 | EG01<br>**(GACT ZZZZ)** | natural gas-fired, four-cycle rich burn emergency generator (770 horsepower maximum rating) | N/A | N/A |
| 8 - 12<br>15-22 | COMP01<br>**(RACT; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP01C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |
| 8 - 12<br>16 - 24 | COMP02<br>**(RACT; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP02C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |
| 8 - 12<br>16 - 24 | COMP03<br>**(RACT; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP03C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst |
| 13 - 15<br>16 - 24 | COMP04<br>**(RACT; NSPS JJJJ; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP04C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |
| 13 - 15<br>16 - 24 | COMP05<br>**(RACT; NSPS JJJJ; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP05C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |
| 13 - 15<br>16 - 24 | COMP06<br>**(RACT; NSPS JJJJ; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP06C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |
| 13 - 15<br>16 - 24 | COMP07<br>**(RACT; NSPS JJJJ; GACT ZZZZ)** | natural gas-fired, four-cycle lean burn internal combustion reciprocating engine (4,735 horsepower rating) powering a compressor | COMP07C | catalytic oxidizer (up to 28 cubic feet of oxidation catalyst) |

# 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 natural gas-fired four cycle rich burn emergency generator (ID No. EG01)

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

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Carbon monoxide (formaldehyde surrogate) | Work and Management Practices | 15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ) |
| Sulfur dioxide | See 2.2 A.1 | 15A NCAC 02D .0516 |
| Visible emissions | See 2.2 A.2 | 15A NCAC 02D .0521 |
| Carbon monoxide<br>Volatile organic compounds<br>Nitrogen oxides | See 2.2 A.3 | 15A NCAC 02Q .0317 (PSD and NAA/NSR Avoidance) |
| HAPs | See 2.2 A.5 | 15A NCAC 02Q .0317 (HAP Major Source Classification - Avoidance) |
| Odors | See Section 2.2 A.6<br>**State-enforceable Only** | 15A NCAC 02D .1806 |

**1. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**
(40 CFR Part 63, Subpart ZZZZ)

**Applicability** [40 CFR 63.6585, §63.6590(a)(1)(iii)]

a. For this engine, existing emergency stationary SI RICE located at an area source of HAP emissions, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .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." and Subpart A "General Provisions."

**Definitions and Nomenclature**

b. For the purposes of this permit condition, the definitions and nomenclature contained in §63.6675 shall apply.

**Applicability Date** [§63.6595(a)(1)]

c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013

**Notifications** [§63.6645(a)(5)]

d. The Permittee has no notification requirements.

**General Provisions** [§63.6665]

e. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ

**Operating and Maintenance Requirements** [15A NCAC 02Q .0508(b)]

f. During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [§63.6625(h)]

g. Except during periods of startup of the IC engine, the Permittee shall:
   i. Change oil and filter every 500 hours of operation or annually, whichever comes first;
   ii. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and
   iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary

   [§63.6603(a), Table 2d]

h. The Permittee shall have the option to utilize the oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in **Section 2.1.A.1.g**. [§63.6603(a), Table 2d, §63.6625(i)]

i. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in **Section 2.1.A.1.**g, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [§63.6603(a), Table 2d]

j. The permittee shall be in compliance with the emission limitations, operating limitations and other requirements that apply at all times. [§63.6605(a)]

k. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.6605(b)]

l. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [§63.6625(e) and §63.6640(a), Table 6]

m. In order for the engine to be considered an emergency stationary RICE as defined in **Section 2.1.A.1.b**, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs i through iii below, is prohibited.
   i. There is no time limit on the use of emergency stationary RICE in emergency situations.
   ii. The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in paragraph (A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph iii below counts as part of the 100 hours per calendar year allowed by this paragraph ii.
      (A) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
   iii. Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph ii above. Except as provided in paragraph (A) below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
      (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
         (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.
         (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
         (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
         (4) The power is provided only to the facility itself or to support the local transmission and distribution system.
         (5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[§63.6640(f)(1), (2) and (4)]

n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Sections 2.1.A.1.e through m** are not met.

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

o. The Permittee shall install a non-resettable hour meter on the IC engine if one is not already installed. [§63.6625(f)]

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

p. The Permittee shall keep the following:
   i. A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you

submitted, according to the requirement in §63.10(b)(2)(xiv).[§63.6655(a)(1)]

ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. [§63.6655(a)(2)]

iii. Records of all required maintenance performed on the air pollution control and monitoring equipment. [§63.6655(a)(4)]

iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with **Section 2.1.A.1.k**, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.6655(a)(5)]

v. Records of the maintenance conducted on the RICE pursuant to **Section 2.1.A.1.l**. [§63.6655(d) and (e)]

vi. (A) Records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(B) If the engine is used for the purposes specified in **Section 2.1 A.1.m.iii(A) above**, records of the notification of the situation, and the date, start time, and end time of engine operation for these purposes.

[§63.6655(f)]

vii. each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.6660(a), (b), (c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

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

q. The Permittee shall submit a summary report of monitoring and recordkeeping activities 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 noncompliance must be clearly identified. [§63.6640(b), (e), and §63.6650(f)] The summary report shall also include any reporting required under **Section 2.1.A.1.i**, as necessary. [§63.6603(a), Table 2d]

r. If the Permittee owns or operates an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in **Section 2.1.A.1.m.iii(A)** above, the Permittee shall submit an annual report according to the requirements at §63.6650(h). This report must be submitted to the Regional Supervisor and the EPA. [§63.6650(h)]

s. The Permittee shall be deemed in noncompliance with the reporting requirements of 15A NCAC 02D .1111 if the requirements in **Sections 2.1.A.1.q through r** are not met.

**B. Three natural gas-fired, four-cycle lean burn internal combustion reciprocating engines powering three compressors (ID Nos. COMP01 through COMP03) each with an associated oxidation catalyst (ID Nos. COMP01C through COMP03C)**

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

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Carbon monoxide (formaldehyde surrogate) | • Maintain catalyst pressure drop in the range of 2 inches ± 10% as measured in initial test<br>• Maintain temperature inlet > 450°F and < 1350°F<br>• Limit concentration of CO 47 ppmvd @ 15% oxygen; or<br>• Reduce CO by 93% | 15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ) |
| Sulfur dioxide | See 2.2 A.1 | 15A NCAC 02D .0516 |
| Visible emissions | See 2.2 A.2 | 15A NCAC 02D .0521 |
| Carbon monoxide<br>Volatile Organic Compounds<br>Nitrogen oxide | See 2.2 A.3 | 15A NCAC 02Q .0317 (PSD and NAA/NSR Avoidance) |
| HAPs | See 2.2 A.5 | 15A NCAC 02Q .0317 (HAP-Major Source Classification - Avoidance) |
| Odors | See Section 2.2 A.6<br>**State-enforceable Only** | 15A NCAC 02D .1806 |
| Nitrogen oxides | See Section 2.2 B.1<br>Compliance with RACT requirements by meeting requirements of 15A NCAC 02D .1423 | 15A NCAC 02D .1418 |
| Nitrogen oxides | See 2.2 B.2<br>Compliance with RACT requirements was demonstrated using engine guaranteed emission rates | 15A NCAC 02D .1423 |

**1. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63, Subpart ZZZZ)**

**Applicability** [40 CFR 63.6585, §63.6590(a)(1)(iii)]

a. For these engines, existing four cycle lean burn non-emergency stationary RICE located at an area source of HAP emissions, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .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," and Subpart A "General Provisions."

**Definitions and Nomenclature**

b. For the purposes of this permit condition, the definitions and nomenclature contained in §63.6675 shall apply.

**Applicability Date** [§63.6595(a)(1)]

c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

**General Provisions** [§63.6665]

d. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ

**Notifications** [§63.6645(a)(2)]

e. i. The Permittee shall submit all of the notifications in the following regulations that apply by the dates specified:
(A) §63.7(b) [*performance testing*] and (c) [*quality assurance program*];
(B) §63.8(e) [*performance evaluation of CPMS*], (f)(4) and (f)(6) [*alternative monitoring methods*]; and
(C) §63.9(b) through (e), and (g) and (h) [*initial notifications*].

ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1). [§63.6645(g)]

iii. For each performance test, the Permittee shall submit a Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.9(h)(2)(ii) and§63.10(d)(2). [§63.6630(c), §63.6645(h)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

**General Compliance Requirements** [15A NCAC 02Q .0508(b)]

f. i. The permittee shall be in compliance with the emission limitations, operating limitations and other requirements that apply at all times. [§63.6605(a)]

ii. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.6605(b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

**Emissions and Operating Limitations** [15A NCAC 02Q .0508(b)]

g. i. The Permittee shall, using an oxidation catalyst:
(A) limit the concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent $O_2$; or
(B) Reduce CO emissions by 93 percent or more.
[§63.6603(a), Table 2d, Table 5]

ii. Except during periods of start-up, the Permittee shall maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[§63.6603(a), Table 6]

iii. During periods of startup of the IC engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[§63.6625(h), Table 2d]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if these requirements are not met.

**Testing Requirements** [15A NCAC 02Q .0508(b)]

h. i. The Permittee shall conduct initial and subsequent performance tests to demonstrate compliance with the limitations in **Section 2.1.B.1.g(i)**. [§63.6620(a)]
ii. The Permittee shall conduct the initial performance test by **April 14, 2014** and according to §63.6630(e). [§63.6612(a)] *This requirement was met November 12-14, 2013.*
iii. The Permittee shall conduct subsequent performance tests on an annual basis according to §63.6640(c) and Table 6.
iv. Each performance test shall be conducted according to the requirements of 40 CFR 63 Subpart ZZZZ Table 4. If a non-operational stationary RICE is subject to performance testing, the Permittee does not need to start up the engine solely to conduct the performance test. The Permittee can conduct the performance test when the engine is started up again. [§63.6620(a), (b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

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

i. i. The Permittee shall install, operate, and maintain continuous parameter monitoring systems (CPMS) to monitor the catalyst inlet temperature for each catalyst and reduce the temperature data to 4- hour rolling averages. The Permittee shall maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature in **Section 2.1.B.1.g(ii)** or install equipment to automatically shut down the engine if the inlet catalyst temperature exceeds 1350°F. [§63.6625(b), Table 5, §63.6640(a), Table 6]
ii. The Permittee shall install, operate, and maintain each CPMS according to the requirements in paragraphs (A) through (F):
(A) The Permittee shall prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of §63.6625 and in §63.8(d).
(B) The Permittee shall install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan.
(C) The CPMS must collect data at least once every 15 minutes (see also §63.6635).
(D) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
(E) The Permittee shall conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.
(F) The Permittee shall conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.
[§63.6625(b)]
iii. The Permittee shall monitor and collect data as follows:
(A) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the Permittee shall monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
(B) The Permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The Permittee shall, however, use all the valid data collected during all other periods.
[§63.6635]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

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

j. The Permittee shall:
   i. keep records of the catalyst(s) inlet temperature data including the 4-hour rolling averages. [§63.6655(d)]
   ii. keep the following:
      (A) A copy of each notification and report that was submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in §63.10(b)(2)(xiv).
      (B) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
      (C) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).
      (D) Records of all required maintenance performed on the air pollution control and monitoring equipment.
      (E) Records of actions taken during periods of malfunction to minimize emissions in accordance with **Section 2.1.B.1.f.ii,** including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
      [§63.6655(a)]
   iii. for each inlet catalyst temperature CPMS, keep the following records:
      (A) Records described in §63.10(b)(2)(vi) through (xi).
      (B) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
      (C) Requests for alternatives to the relative accuracy test for CPMS as required in §63.8(f)(6)(i), if applicable.
      [§63.6655(b)]
   iv. keep each record in a form suitable and readily accessible for expeditious review in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). [§63.6660]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

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

k. i. The permittee shall submit a compliance report semiannually 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 noncompliance with the requirements of this permit must be clearly identified. [§63.6650(a), (b)(5) and§63.6650(f)]
   ii. The compliance report must contain:
      (A) Company name and address;
      (B) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report; and
      (C) Date of report and beginning and ending dates of the reporting period.
      (D) If a malfunction occurred during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with **Section 2.1.B.1.f.ii**, including actions taken to correct a malfunction.
      (E) If there are no instances of noncompliance from any emission or operating limitations that apply, a statement that there were no instances of noncompliance from the emission or operating limitations during the reporting period.
      (F) If there were no periods during which the CPMS was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.
      [§63.6650(c)]

iii. For each instance of noncompliance from an emission or operating limitation that occurs for the stationary RICE where the Permittee is **not using a CMS (CPMS)** to comply with the emission or operating limitations, the compliance report must contain the information in paragraphs ii(A) through (D) above, and the following information:
   (A) The total operating time of the stationary RICE at which the instance of noncompliance occurred during the reporting period.
   (B) Information on the number, duration, and cause of instances of noncompliance (including unknown cause, if applicable), as applicable, and the corrective action taken.
   [§63.6650(d)]

iv. For each instance of noncompliance from an emission or operating limitation occurring for a stationary RICE where the Permittee **is using a CMS (CPMS)** to comply with the emission and operating limitations in this subpart, the Permittee shall include information in paragraphs ii(A) through (D) above and the following information:
   (A) The date and time that each malfunction started and stopped.
   (B) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
   (C) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).
   (D) The date and time that each instance of noncompliance started and stopped, and whether each instance of noncompliance occurred during a period of malfunction or during another period.
   (E) A summary of the total duration of the instances of noncompliance during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
   (F) A breakdown of the total duration of the instances of noncompliance during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
   (G) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
   (H) An identification of each parameter and pollutant that was monitored at the stationary RICE.
   (I) A brief description of the stationary RICE.
   (J) A brief description of the CMS.
   (K) The date of the latest CMS certification or audit.
   (L) A description of any changes in CMS, processes, or controls since the last reporting period.
   [§63.6650(e)]

The Permittee shall be deemed in noncompliance with the 15A NCAC 02D .1111 if these requirements are not met.

**C. Four natural gas-fired, four-cycle lean burn internal combustion reciprocating engines powering four compressors (ID Nos. COMP04 through COMP07) each with an associated catalytic oxidizer (ID Nos. COMP04C through COMP07C)**

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

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Nitrogen oxides<br>Carbon Monoxide<br>Volatile organic compounds | 1.0 g/HP-hr - 82 ppmvd @ 15% $O_2$<br>2.0 g/HP-hr - 270 ppmvd @ 15% $O_2$<br>0.7 g/HP-hr - 60 ppmvd @ 15% $O_2$ | 15A NCAC 02D .0524<br>(40 CFR Part 60, Subpart JJJJ) |
| Carbon monoxide (formaldehyde surrogate) | Comply with the applicable requirements of 40 CFR Part 60, Subpart JJJJ | 15A NCAC 02D .1111<br>(40 CFR Part 63, Subpart ZZZZ) |
| Sulfur dioxide | See 2.2 A.1 | 15A NCAC 02D .0516 |
| Visible emissions | See 2.2 A.2 | 15A NCAC 02D .0521 |
| Carbon monoxide<br>Volatile Organic Compounds<br>Nitrogen oxide | See 2.2 A.4 | 15A NCAC 02Q .0317<br>(PSD and NAA/NSR Avoidance) |
| HAPs | See 2.2 A.5 | 15A NCAC 02Q .0317<br>(HAP Major Source Classification- Avoidance) |
| Odors | See Section 2.2 A.6<br>**State-enforceable Only** | 15A NCAC 02D .1806 |
| Nitrogen oxides | See 2.2. B.1 and 2.2 B.2<br>Compliance with RACT requirements was demonstrated using engine guaranteed emission rates | 15A NCAC 02D .1423 |

**1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS**

**Applicability** [15A NCAC 2Q .0508(f), 40 CFR 60.4230(a)(4)(i)]

a. For these engines, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, 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 – "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines," including Subpart A "General Provisions."

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

b. Pursuant to §60.4246, The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 3 of 40 CFR 60 Subpart JJJJ.

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

c. The Permittee shall comply with the following emission standards: [§60.4233(e), 40 CFR 60 Subpart JJJJ Table 1]

| Engine type | Maximum engine power | Manufacture date *(after)* | Emission standards ppmvd @ 15% $O_2$ | | |
|---|---|---|---|---|---|
| | | | $NO_x$ | CO | VOC |
| Non-emergency SI natural gas | HP>=500 | 7/1/2010 | 82 | 270 | 60 |

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

d. i. If emissions testing is required:
(A) the testing shall be performed in accordance with General Condition JJ; and
(B) Each performance test shall follow the procedures in §60.4244.
ii. If the testing is not conducted as described above, or the results of this test are above the limits given in Section 2.1.C.1.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

e. The Permittee shall comply with the emission standards in Section 2.1.C.1.c by:
i purchasing an engine certified according to the procedures in 40 CFR 60 Subpart JJJJ for its respective model year; and
ii. operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, The Permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the Permittee.

OR

iii. purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(e) and according to the requirements specified in §60.4244, as applicable, and
iv. keeping a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
v. The initial test shall be conducted within 60 days after achieving the maximum production rate at which the engine will be operated, but not later than 180 days after initial startup of the engine.
[§60.4243(a)(b), §60.8(a)]

f. The Permittee shall operate and maintain the stationary SI ICE that achieve the emission standards as required in Section 2.1.C.1.c over the entire life of the engine. [§60 .4234]

g. Pursuant to §60.4243(g), it is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

h. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the requirements in Section 2.1.C.1.e through g are not met.

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

i. The Permittee shall keep the following records:
i. All notifications submitted to comply with 40 CFR 60 and all documentation supporting any notification.
ii. Maintenance conducted on the engine.

iii. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.
iv. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.
[§60.4245(a), §60.4243(a), (b)]
v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the requirements in Section 2.1.C.1.i are not met.

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

j. For SI RICE that have not been certified by an engine manufacturer to meet the emission standards in §60.4231, the Permittee shall submit an initial notification as required in §60.7(a)(1). The notification must include the information in §60.4245(c). [§60.4245(c)]
k. The Permittee shall submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. [§60.4245(d)]
l. The Permittee shall submit a summary report of monitoring and recordkeeping activities 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 noncompliance with the requirements of this permit shall be clearly identified.
m. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the requirements in Sections 2.1.C.1.j through k are not met.

## 2. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

**Applicability** [40 CFR 63.6585, 6590(a)(2)(iii)]

a. For these engines, new stationary RICE located at an area source of HAP emissions, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart ZZZZ, “National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines” and Subpart A “General Provisions.”

**Stationary RICE subject to Regulations under 40 CFR Part 60** [15 A NCAC 02Q. 0508(f)]

b. Pursuant to 40 CFR 63.6590(c)(1), these sources must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart JJJJ. No further requirements apply for these engines under 40 CFR 63 Subpart ZZZZ and Subpart A. If these requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111

## 2.2 Multiple Emission Source(s) Specific Limitations and Conditions

**A. One natural gas-fired four cycle rich burn emergency generator (ID No. EG01)
Seven natural gas-fired, four-cycle lean burn internal combustion reciprocating engines powering three compressors (ID Nos. COMP01 through COMP07) with each with an associated oxidation catalyst (ID Nos. COMP01C through COMP07C)**

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

| Regulated 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 |
| Carbon monoxide<br>Nitrogen oxide<br>Volatile organic compounds | *For three 4SLB engines (ID Nos. COMP01 - COMP03) and one emergency 4SLB engine (ID No. EG01):*<br>Less than 250 tpy<br>Less than 100 tpy<br>Less than 100 tpy | 15A NCAC 02Q .0317 (PSD and NAA/NSR Avoidance) |
| Carbon monoxide<br>Nitrogen oxide<br>Volatile organic compounds | *For four 4SLB engines (ID Nos. COMP04 - COMP07):*<br>Less than 100 tpy<br>Less than 100 tpy<br>Less than 100 tpy | |
| HAPs | Facility-wide HAP emissions less than:<br>10 ton/yr any individual HAP; and<br>25 ton/yr total combined HAP. | 15A NCAC 02Q .0317 (HAP Major Source Classification - Avoidance) |
| Odors | See Section 2.2 A.6<br>**State-enforceable Only** | 15A NCAC 02D .1806 |

**1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES**

a. Emissions of sulfur dioxide from these emission sources (**ID Nos. COMP01 through COMP07 and EG01**) 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 emissions 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 2.2 A.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/reporting is required for sulfur dioxide emissions from the firing of natural gas in these emission sources.

**2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS**

a. Visible emissions from these emission sources (**ID Nos. COMP01 through COMP07 and EG01)** 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.

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

b. If emissions 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 2.2 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/reporting is required for visible emissions from the firing of natural gas in these emission sources.

**3. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS**

(Avoidance of "15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION", and "15A NCAC 02D .0531: SOURCES IN NONATTAINMENTAREAS")

a. i. In order to avoid applicability of 15A NCAC 02D .0530, these emission sources **(ID Nos. COMP01 through COMP03 and EG01)** shall discharge into the atmosphere less than 250 tons of CO per consecutive 12-month period.

ii. In order to avoid applicability of 15A NCAC 02D .0531, these emission sources **(ID Nos. COMP01 through COMP03 and EG01)** shall discharge into the atmosphere less than the following limits per consecutive 12-month period:

A. Less than 100 tons of NOx; and

B. Less than 100 tons of VOCs

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

b. i. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this testing are above the limits given in Section 2.2 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 and .0531 as applicable.

ii. Additional testing for after control emissions of VOCs and CO of one identical unit **(ID Nos. COMP01, COMP02 or COMP03)** is required to establish an emissions factor for VOCs and CO within 180 days of replacing each of the existing oxidation catalysts.

Table 2.2 A.3 below, contains the after-control emissions factors for VOCs and CO established by the stack tests conducted on July 29, 2019 on engine **(ID No. COMP03)** controlled by oxidation catalyst **(ID No. COMP03C)**. The test results are representative of engines **(ID Nos. COMP01, COMP02, and COMP03)** since they are identical natural gas-fired, four-cycle lean burn internal combustion engines.

Table 2.2 A.3: Average Performance Test Results

| Criteria Pollutant | Established Emission Factor (lb/hr) |
|---|---|
| VOC | 0.879 |
| CO | 0.470 |

iii. The Permittee shall confirm or reestablish the emission factors in Table 2.2 A.3 above during any subsequent performance test required after catalyst change.

(A) If the emission factors established pursuant to the performance tests are more stringent ( i.e. greater) than the established emission factors, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted as required per General Condition JJ. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

(B) If emission factors established pursuant to the performance tests are less stringent (i.e., less) than the established emission factors, the Permittee may request to revise the values in the permit

pursuant to 15A NCAC 02Q .0515.

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

c. No monitoring/recordkeeping is required to demonstrate compliance with NOx emissions from these sources **(ID Nos. COMP01, COMP02, COMP03, and EG01)**.

d. The emissions of VOC shall be limited by tracking actual emissions; VOC actual emissions shall be calculated monthly, using Equations 1, 2, and 3, below:

$$\text{Total VOC Emissions} = \left(\sum \text{E}_n + \text{E}_{gen}\right) \quad \text{(Eq. 1)}$$

$$\text{E}n = \frac{(\text{Hr}_n)\ (\text{EF}_n)}{2000} \quad \text{(Eq. 2)}$$

$$\text{Egen} = \frac{(\text{Hr}_n)\ (\text{EF}_{gen})}{2000} \quad \text{(Eq. 3)}$$

Where:

| | | |
|---|---|---|
| E*n* | = | VOC emissions from ID No. COMP0*n*, calculated using Equation 2 (tons) |
| $\text{Hr}_n$ | = | hours of operation for ID No. COMP0*n* or EG01 (hours) |
| EFn | = | after control VOC emissions factor, established in Section 2.2 A.2.b above (lb/hr) |
| EFgen | = | before control VOC emissions factor, established by the manufacturer's specifications for Cummins model GTA28 (lb/hr) |
| Egen | = | VOC emissions from ID No. EG01, calculated using Equation 3 (tons) |

e. The emissions of CO shall be limited by tracking actual emissions; CO actual emissions shall be calculated monthly, using Equations 4, 5 and 6, below:

$$\text{Total CO Emissions} = \left(\sum \text{E}_n + \text{E}_{gen}\right) \quad \text{(Eq. 4)}$$

$$\text{E}n = \frac{(\text{Hr}_n)\ (\text{EF}_n)}{2000} \quad \text{(Eq. 5)}$$

$$\text{Egen} = \frac{(\text{Hr}_n)\ (\text{EF}_{gen})}{2000} \quad \text{(Eq. 6)}$$

Where:

| | | |
|---|---|---|
| E*n* | = | CO emissions from ID No. COMP0*n*, calculated by Equation 5 (tons) |
| $\text{Hr}_n$ | = | hours of operation for ID No. COMP0n or EG01 (hours) |
| EF1 | = | after control CO emissions factor established in Section 2.2 A.2.b above (lb/hr) |
| EF2 | = | before control CO emissions factor established by the manufacturer's specifications for Cummins model GTA28 (lb/hr) |
| Egen | = | CO emissions from ID No. EG01, calculated using Equation 6 (tons) |

f. The Permittee shall perform periodic inspections and maintenance (I &M) as recommended by the manufacturer of the catalytic oxidizer. No emissions reductions for the catalysts shall be claimed when the monitored parameters are out of range.

g. The Permittee shall ensure the proper performance of each catalytic oxidizer by monitoring the temperature of each catalyst, as required by Section 2.1 B.1.k above.

If the VOC or CO emissions are above the limits given in Section 2.2 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 and .0531 as applicable.

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

h. The Permittee shall submit a report of monitoring and recordkeeping activities given in 2.2 A.3.c through g 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. The report shall contain the VOC and CO emissions for the previous 17 months.

**4. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS**
(Avoidance of "15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION", and "15A NCAC 02D .0531: SOURCES IN NONATTAINMENTAREAS")

a. i. In order to avoid applicability of 15A NCAC 02D .0530, these emission sources **(ID Nos. COMP04 through COMP07)** shall discharge into the atmosphere less than 250 tons of CO per consecutive 12-month period.

ii. In order to avoid applicability of 15A NCAC 02D .0531, these emission sources **(ID Nos. COMP04 through COMP07)** shall discharge into the atmosphere less than the following limits per consecutive 12-month period:
A. Less than 100 tons of NOx; and
B. Less than 100 tons of VOCs

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

b. i. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this testing are above the limit given in Section 2.2 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 and .0531 as applicable.

ii. The Permittee shall conduct subsequent emission testing as required by Section 2.1 C.1.e.iv above.

iii. Table 2.2 A.4 below, contains the after control emissions factors (EF) for VOCs and CO established by stack tests conducted on August 1, 2019 for the source **(ID No. COMP05)** controlled by oxidation catalysts **(ID No. COMP05C)**. The test results are representative of engines **(ID Nos. COMP04 and COMP05)** since they are identical natural gas-fired, four-cycle lean burn internal combustion engines.

Table 2.2 A.4: Average Performance Test Results for COMP04 through COMP07

| Criteria Pollutant | Established Emission Factor (lb/hr) | | | |
|---|---|---|---|---|
| | COMP04* | COMP05* | COMP06**,*** | COMP07**,*** |
| VOC | 0.565 | 0.565 | n/a | n/a |
| CO | 0.997 | 0.997 | n/a | n/a |

***** Test results indicated a CO emission rate of 13.4 ppmv@15%$O_2$ and a VOC emission rate of 5.0 ppmv@15%$O_2$ for engine **(ID No. COMP05)**. Flow rate was not measured during the test. The conversions to pounds per hour is based on a stack flow rate from a previous test.
****** COMP06 and COMP07 have not been constructed as of the effective date of this permit.
******* In the event that the Permittee chooses to install "certified engines" as allowed by 40 CFR Part 60, Subpart JJJJ, the emission factors used shall be the manufacturer's certified emission factors.

iv. The Permittee shall confirm or reestablish the emission factors in Table 2.2 A.4 above during any subsequent subsequent performance test required after catalyst change
(A) If the emission factors established pursuant to the performance tests are more stringent (i.e., greater)

than the established emission factors, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted as required per General Condition JJ. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

(B) If emission factors established pursuant to the performance tests are less stringent (i.e., less) than the established emission factors, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

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

c. The emissions of NOx shall be limited by limiting the total hours the four engines **(ID Nos. COMP04 through COMP07)** are operated. The total hours of operation shall be limited to 27,353 combined total engine hours/year for all four of these engines. If the hours of operation exceed the limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 and .0531 as applicable.

d. The emissions of VOC shall be limited by tracking actual emissions; VOC actual emissions shall be calculated monthly, using Equations 1 and 2, below:

$$\text{Total VOC Emissions} = \left(\sum \text{E}_n\right) \quad \text{(Eq. 1)}$$

$$\text{E}n = \frac{(\text{Hr}_n)\ (\text{EF}_n)}{2000} \quad \text{(Eq. 2)}$$

Where:

E*n* = VOC emissions from ID No. COMP0*n*, calculated using Equation 2 (tons)
$\text{Hr}_n$ = hours of operation for ID No. COMP0*n* (hours)
EFn = after control VOC emissions factor, established in Section 2.2 A.4.b above (lb/hr)

e. The emissions of CO shall be limited by tracking actual emissions; CO actual emissions shall be calculated monthly, using Equations 3 and 4, below:

$$\text{Total CO Emissions} = \left(\sum \text{E}_n\right) \quad \text{(Eq. 3)}$$

$$\text{E}n = \frac{(\text{Hr}_n)\ (\text{EF}_n)}{2000} \quad \text{(Eq. 4)}$$

Where;

E*n* = CO emissions from ID No. COMP0*n*, calculated by Equation 5 (tons)
$\text{Hr}_n$ = hours of operation for ID No. COMP0*n* (hours)
EFn = after control CO emissions factor, established in Section 2.2 A.4.b above (lb/hr)

f. The Permittee shall perform periodic inspections and maintenance (I &M) as recommended by the manufacturer of the catalytic oxidizer. No emissions reductions for the catalysts shall be claimed when the monitored parameters are out of range.

g. The Permittee shall operate the engines and their respective catalytic oxidizers according to Sections 2.1 C.1.e.ii or 2.1 C.1.e.iv above, as they apply to the engines.

If the VOC or CO emissions are above the limits given in Section 2.2 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 and .0531 as applicable.

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

h. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2 A.4.c through g 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. The report shall contain the combined hours of operation for ID Nos. COMP04 through COMP07, the VOC, and CO emissions for the previous 17 months.

**5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS**
(Avoidance of 15A NCAC 02D .1111 "MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY)

a. In order to avoid applicability of 15A NCAC 02D .1111 for major sources, facility-wide emissions of hazardous air pollutants (HAPs) shall be less than the following, per consecutive 12-month period:
   i. Less than 10 tons of any individual HAP; and
   ii. Less than 25 tons of total combined HAP.

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

b. If emissions 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 2.2 A.5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

c. At the end of each calendar month, the Permittee shall calculate the following:
   i. the facility-wide HAP emissions (individual and total combined); and
   ii. the combined facility-wide HAP emissions for the previous 12-month period ending on that month.

d. When calculating HAP emissions from each engine, the Permittee shall use:
   i. Emission factors established during the most recent DAQ-approved emissions testing;
   ii. For HAPs for which there has been no DAQ-approved testing, the Permittee shall use emission factors as specified by the engine's manufacturer; and
   iii. For HAPs for which there are no approved test results or manufacturer's specifications, the Permittee shall use emission factors established by the most recent edition of AP-42 for large natural gas-fired stationary internal combustion engines.

If the Permittee does not keep the records specified by Section 2.2 A.5.c above, or perform calculations as required by Section 2.2 A.5.d above, then the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

e. Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.2 A.5.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. The report shall contain each item listed in Section 2.2 A.5.a above for the 17-month period ending with the report.

**State-enforceable only**
**6. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**

a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

**B. Seven natural gas-fired engines (ID Nos. COMP01 through COMP07) and associated catalytic oxidizers (ID Nos. COMP01C through COMP07C)**

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

| RegulatedPollutant | Limits/Standards | Applicable Regulation |
|---|---|---|
| Nitrogen oxides | Compliance with RACT requirements by meeting requirements of 15A NCAC 02D .1423 | 15A NCAC 02D .1418 |
| Nitrogen oxides | 125 ppm nitrogen dioxide, corrected to 15 percent ppmv stack gas oxygen on a dry basis. | 15A NCAC 02D .1423 |

**1. 15A NCAC 02D .1418: NEW ELECTRIC GENERATING UNITS, LARGE BOILERS, AND LARGE I/C ENGINES**

**Applicability 15A NCAC 02D .1418(c)(2)]**

a. These emission sources, lean burn stationary internal combustion engines rated at equal to or greater than 2,400 brake horsepower permitted after October 31, 2000 but are not subject to 15A NCAC 02D .0530 or .0531, must meet the requirements of 15A NCAC 02D .1418 by meeting the requirements of 15A NCAC 02D .1423. No further requirements apply to these sources under 15A NCAC 02D .1418.

b. **Monitoring** [15A NCAC 02D .1418(d)]

Internal combustion engines shall comply with the monitoring requirements in 15A NCAC 02D..1423.

**2. 15A NCAC 02D .1423: LARGE INTERNAL COMBUSTION ENGINES**

a. For these emission sources (lean burn internal combustion engines with a capacity of 2,400 or more brake horsepower, permitted after October 30, 2000, and that are subject to 15A NCAC 02D .1418 but are not subject to 15A NCAC 02D .0530 or .0531), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1423, "Large Internal Combustion Engines.

**Emission Limitation** [15A NCAC 02D .1423(b) and (g)]

b. Except as allowed by Section 2.2 B.1.c and d below, the Permittee shall not allow an engine subject to this Rule to emit more than 125 ppm of nitrogen dioxide ($NO_2$), corrected to 15% ppmv stack gas oxygen on a dry basis and averaged over a rolling 30-day period. If the Permittee operates subject engine such that they exceed this emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1423.

c. The emission standards do not apply during periods of:
   i. start-up and shut-down periods and periods of malfunction, not to exceed 36 consecutive hours; and
   ii. regularly scheduled maintenance activities

**Adjustment** [15A NCAC 02D .1423(c)]

d. The emission limit in Section 2.2 B.1.b above, may be multiplied by X, where X equals the engine efficiency (E) divided by a reference efficiency of 30 percent. Engine efficiency (E) shall be determined using one of the methods specified below, whichever provides a higher value. In cases where E is calculated to be less than 30%, a value of 30% will be used for E.

i. $E = \frac{(\text{Engine output}) \times (100)}{\text{Energy input}}$,
where energy input is determined by a fuel measuring device accurate to plus or minus 5 percent and is based on the higher heating value (HHV) of the fuel. E shall be averaged over 15 consecutive minutes and measured at peak load for the applicable engine.

ii. $E = \frac{(\text{Manufacturer's Rated Efficiency [continuous] at LHV}) \times (\text{LHV})}{\text{HHV}}$,
where LHV is the lower heating value of the fuel; and HHV is the higher heating value of the fuel.

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

e. If emissions 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 2.2 B.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1423.

**Compliance Determination and Monitoring** [15A NCAC 02D .1423(d)]

f. As an alternative to the CEMS required by 15A NCAC 02D .1423(d)(1), the Permittee shall develop and implement an alternate calculation and recordkeeping procedure to demonstrate compliance with this Rule. The procedure shall be approved by the Director before it may be used. The current plan[1] requires that the Permittee:
   i. Operate and maintain the engines according to the manufacturer's specifications;
   ii. Maintain a copy of the manufacturer's requirements on file; and
   iii. Keep records of maintenance performed on the engines.

   If the Permittee does not meet the requirements of the procedure, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1423.

**Recordkeeping** [15A NCAC 02D .1423(f)]

g. The Permittee shall maintain all records necessary to demonstrate compliance with this Rule for two calendar years at the facility at which the engine is located. The records shall be made available to the Director upon request. The owner or operator shall maintain records of the following information for each day the engine operates:
   i. identification and location of the engine;
   ii. calendar date of record;
   iii. the number of hours the engine operated during each day, including startups, shutdowns, and malfunctions, and the type and duration of maintenance and repairs;
   iv. date and results of each emissions inspection;
   v. a summary of any emissions corrective maintenance taken;
   vi. the results of all compliance tests; and
   vii. if a unit is equipped with a continuous emission monitoring system:
      A. identification of time periods during which nitrogen oxide standards are exceeded, the reason for the excess emissions, and action taken to correct the excess emissions and to prevent similar future excess emissions; and
      B. identification of the time periods for which operating conditions and pollutant data were not obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

   If the Permittee does not keep these records the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1423.

**Reporting** [15A NCAC 02D .1423(e)]

h. The following reporting requirements apply.

[1] The current plan was submitted and approved with the R03 permit, issued September 1, 2010

i. A report documenting the each engine's total nitrogen oxide emissions beginning May 1 and ending September 30 of each year to the Director postmarked on or before October 31 of each year, beginning with the year of first ozone season that an engine operates.
ii. An excess emissions and monitoring systems performance report, according to the requirements of 40 CFR 60.7(c) and 60.13, if a continuous emissions monitoring system is used.

# SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

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)]
1. 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 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. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. 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
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.

d. 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 and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"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.)*

"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.

Excess Emissions

1. 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.
2. 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:
i. 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).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
   a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. 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.B **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. **Emergency Provisions** [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

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. **Duty to Provide Information (submittal of information)** [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 and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. 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; and
4. the method(s) used for determining the compliance status of the source during the certification period.

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 02Q .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. **Insignificant Activities** [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. **Inspection and Entry** [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. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) –** FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

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:
        i. 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 this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter 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 Section 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;
    b. 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 (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
    a. a description of the change at the facility;
    b. the date on which the change will occur;
    c. any change in emissions; and
    d. any permit term or condition that is no longer applicable as a result of the change.

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 Environmental Protection Agency (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.

ATTACHMENT

**List of Acronyms**

| | |
|---|---|
| **AOS** | Alternative Operating Scenario |
| **BACT** | Best Available Control Technology |
| **BAE** | Baseline Actual Emissions |
| **Btu** | British thermal unit |
| **CAA** | Clean Air Act |
| **CAM** | Compliance Assurance Monitoring |
| **CEM** | Continuous Emission Monitor |
| **CFR** | Code of Federal Regulations |
| **CSAPR** | Cross-State Air Pollution Rule |
| **DAQ** | 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 |
| **NCAC** | North Carolina Administrative Code |
| **NCGS** | North Carolina General Statutes |
| **NESHAP** | National Emission Standards for Hazardous Air Pollutants |
| **$NO_X$** | 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 |
| **$PM_{2.5}$** | Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less |
| **$PM_{10}$** | 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 |
| **$SO_2$** | Sulfur Dioxide |
| **TAP** | Toxic Air Pollutant |
| **tpy** | Tons Per Year |
| **VOC** | Volatile Organic Compound |