ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

TBD

Mr. Elijah L. Williams, P.E.
Water Reclamation Manager
City of Greensboro – T. Z. Osborne Water Reclamation Facility
2350 Huffine Mill Road
McLeansville, NC 27301

SUBJECT: Air Quality Permit No. 04489T29
Facility ID: 4100923
City of Greensboro – T. Z. Osborne Water Reclamation Facility
McLeansville, Guilford County, North Carolina
Permit Class: Title V
PSD Class: Minor

Dear Mr. Williams:

In accordance with your completed Air Quality Permit Applications for modification of your Title V permit, and the reopen-for-cause application initiated by DAQ, we are forwarding herewith Air Quality Permit No. 04489T29 authorizing the continued operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

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

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

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

Guilford County has triggered increment tracking under PSD for PM_{10} and SO_2. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from TBD until June 30, 2026, 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 Russell Braswell at 919-707-8731 or russell.braswell@deq.nc.gov.

Sincerely yours,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Laserfiche (4100923)
Connie Horne (cover letter only)

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

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

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

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

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

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

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

* * *

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

Summary of Changes to Permit

The following changes were made to the Air Permit 04489T28:*

Page No.	Section	Description of Changes
Throughout	Throughout	• Updated dates and permit numbers. • Removed references to previous minor modifications. • Fixed formatting where appropriate.
4	1.	• Updated scrubber flow rates based on applications .22A and .22B. • Removed "when associated with ES-1" from the description of CD-21. CD-21 only controls emissions from ES-20.
6	2.1 A.2.i	• Updated parameters for scrubber pressure drop and incinerator oxygen content based on applications .22A and .22B. • Added requirement that all instances of deviations must be clearly identified when submitting reports.
8	2.1 A.3 (new)	• Added this specific condition for 15A NCAC 02D .0614 "Compliance Assurance Monitoring." • Renumbered subsequent sections.
10	2.1 A.5	• Updated parameters for incinerator operating temperature, scrubber pressure drop, and scrubber flow rate based on applications .22A and .22B. • Removed pH monitoring requirement because Permittee will operate an SO_2 CEMS instead, as allowed by 40 CFR 60.5190(a)(1). • Added SO_2 CEMS requirements based on application .21C. • Added allowable variance to operating limit table based on Title V permit issued to City of High Point – Eastside Wastewater Treatment Plant (permit 08074T16).
16	2.1 A.7 (new)	• Added specific condition for 40 CFR Part 62, Subpart LLL "Federal Plan Requirements for Sewage Sludge Incineration Units Constructed on or Before October 14, 2010." Although this rule is not directly included in NC's State Implementation Plan, this rule is enforceable by NC DAQ through a memorandum of agreement signed by NC DAQ and US EPA on April 2, 2018. • In general, the compliance requirements for this rule are the same as for 15A NCAC 02D .1204.
n/a	2.3 (former)	• Removed permit shield for 15A NCAC 02D .0614. The previous permit shield for this rule was based on the fact the Permittee is not a major source as defined by 40 CFR Part 70. However, major source status is not considered in the applicability of 15A NCAC 02D .0614, only that a facility is required to obtain a permit under 15A NCAC 02Q .0500 (i.e., a Title V permit).

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

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
04489T29	04489T28	TBD	June 30, 2026

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than December 31, 2025.

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:	**City of Greensboro – T.Z. Osborne Water Reclamation Facility**
Facility ID:	**4100923**
Primary SIC Code:	**4952**
NAICS Code:	**562213**
Facility Site Location:	**2350 Huffine Mill Road**
City, County, State, Zip:	**McLeansville, Guilford County, North Carolina 27301**
Mailing Address:	**2350 Huffine Mill Road**
City, State, Zip:	**McLeansville, North Carolina 27301**
Application Number:	**4100923.21C, 4100923.22A, 4100923.22B, 4100923.23A, 4100923.23B**
Complete Application Date:	**August 20, 2021; April 5, 2022; July 19, 2022; April 19, 2023; June 20, 2023**
Division of Air Quality, Regional Office Address:	**Winston-Salem Regional Office 450 West Hanes Mill Road, Suite 300 Winston-Salem, NC 27105**

Permit issued this the .

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

Table of Contents

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
CEMS	Continuous Emission Monitoring System
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
CSAPR	Cross-State Air Pollution Rule
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
NAICS	North American Industry Classification System
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_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

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:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1 **NSPS O, NESHAP C and E**	Natural gas/No. 2 fuel oil-fired fluidized bed sewage sludge incinerator (6,000 pounds of dry sludge per hour maximum charge rate; 8.61 million Btu per hour rated auxiliary heat input)	CD-22	One multiple Venturipak scrubber (461 gallons per minute minimum liquid injection rate)
ES-20 **NSPS O, NESHAP C and E**	Natural gas/No. 2 fuel oil-fired fluidized bed sewage sludge incinerator (6,500 pounds of dry sludge per hour maximum charge rate; 13.0 million Btu per hour rated auxiliary heat input)	CD-20 CD-21	One hydrosonic wet scrubber (minimum injection flow rate operating limits: 178 gpm upper and 110 gpm lower) One wet tray scrubber (259 gallons per minute minimum liquid injection rate)
ES-17	One sand storage silo	CD-11	One bagfilter (112 square feet of filter surface area)
ES-18 **GACT ZZZZ**	2,000 kW No. 2 fuel oil-fired emergency generator	N/A	N/A
ES-19 **GACT ZZZZ**	2,000 kW No. 2 fuel oil-fired emergency generator	N/A	N/A
ES-23 **NSPS IIII, GACT ZZZZ**	3,250 kW diesel-fired emergency generator	N/A	N/A

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

The emission sources 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/No. 2 fuel oil-fired-fluidized bed sewage sludge incinerator (ID No. ES-1) controlled by one multiple Venturipak scrubber (ID No. CD-22)

One natural gas/No. 2 fuel oil-fired-fluidized bed sewage sludge incinerator (ID No. ES-20) controlled by one hydrosonic wet scrubber (ID No. CD-20) in series with a wet tray scrubber (ID No. CD-21)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input each	15A NCAC 02D .0516
Particulate Matter	1.3 pounds per ton of dry sludge input and 20 percent opacity	15A NCAC 02D .0524 (40 CFR 60 Subpart O)
Beryllium Mercury	10 grams per 24-hour period 3,200 grams per 24-hour period	15A NCAC 02D .1110 (40 CFR 61 Subparts C and E)
Particulate Matter, Visible Emissions	Comply with CAM plan	15A NCAC 02D .0614
Various	Emission limits for subject pollutants Limit daily concentration of subject pollutants in sewage sludge Operate control devices and CEMS	15A NCAC 02D .1204
Lead, Arsenic, Cadmium, Chromium, Nickel	Limit daily concentration of subject pollutants in sewage sludge	40 CFR Part 503 Subpart E
Various	Emission limits for subject pollutants Limit daily concentration of subject pollutants in sewage sludge Operate control devices and CEMS	40 CFR Part 62, Subpart LLL
PM_{10}, $PM_{2.5}$, Sulfur Dioxide, Hazardous Air Pollutants	**See Section 2.2 A.1**	15A NCAC 02Q .0315 (Avoidance of 15A NCAC 02Q .0500)
Particulate Matter, PM_{10}, $PM_{2.5}$, and Sulfur Dioxide	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .0530)

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

a. Emissions of sulfur dioxide from these sources **(ID Nos. ES-1 and ES-20)** 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 2.1 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 burning of natural gas or No. 2 fuel oil in these sources **(ID Nos. ES-1 and ES-20)**.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS SUBPART O

a. For the sewage sludge incinerators (**ID Nos. ES-1 and ES-20)**, the Permittee shall comply with all applicable provisions for emissions standards, compliance and performance testing, emission monitoring, and reporting and recordkeeping, in accordance with 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart O "Standards of Performance for Sewage Treatment Plants," including Subpart A "General Provisions."

Emissions Standards [40 CFR 60.152]

b. The following permit limits shall not be exceeded:

Affected Source(s)	Pollutant	Emissions Limit
Fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**)	Particulate Matter	1.3 pounds per ton of dry sludge input (0.65 g/kg dry sludge input), and 20 percent opacity

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

c. 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 2.1 A.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [40 CFR 60.153]

d. The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the pressure drop of the gas flow through the wet scrubbing device. The device used to monitor scrubber pressure drop shall be certified by the manufacturer to be accurate within ±250 pascals (±1 inch water gauge) and shall be calibrated on an annual basis in accordance with the manufacturer's instructions. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the pressure drop of the gas flow through the wet scrubbing device is not continuously measured or recorded, or the monitoring device for the pressure drop is not calibrated annually.

e. The Permittee shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the oxygen content of the incinerator exhaust gas. The oxygen monitor shall be located upstream of any rabble shaft cooling air inlet into the incinerator exhaust gas stream, fan, ambient air recirculation damper, or any other source of dilution air. The oxygen monitoring device shall be certified by the manufacturer to have a relative accuracy of ±5 percent over its operating range and shall be calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the oxygen content of the incinerator exhaust gas is not continuously measured or recorded or the oxygen monitoring device is not calibrated according to method(s) prescribed by the manufacturer at least once each 24-hour operating period.

f. The Permittee shall retain the following information and make it available for inspection by the DAQ Director for a minimum of 2 years.
   i. a record of the measured pressure drop of the gas flow through the wet scrubbing device as required by paragraph (b)(1) of 40 CFR 60.153.
   ii. a record of the measured oxygen content of the incinerator exhaust gas as required by paragraph (b)(2) of 40 CFR 60.153.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

g. RESERVED

h. Particulate matter emissions from the fluidized bed sewage sludge incinerators (**ID No. ES-1 and ES-20**) shall be controlled by the wet scrubbers (**ID Nos. CD-20, CD-21, and CD-22**) and the following inspection and maintenance of these wet scrubbers shall be performed:
   i. Inspection and Maintenance Requirements for Wet Scrubbers (**ID No. CD-20 and CD-21**) - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance (I&M) as recommended by the manufacturer. In addition, the Permittee shall perform an annual internal inspection of the wet scrubbers**.** As a minimum, the annual internal

inspection will include inspection of spray nozzles, packing material (if applicable), chemical feed system (if so equipped), and the cleaning/calibration of all associated instrumentation.

ii. Inspection Requirements for Wet Scrubber (**ID No. CD-22**) - As recommended by the equipment manufacturer, every three months, the Permittee shall visually examine the sorbent polymer composite (SPC) Modules. The visual examination shall consist of the following:
   (A) Turn off the system and operate the mist eliminator (ME) irrigator system for at least 20 minutes to reduce acid buildup.
   (B) Open the doors to the Mercury Scrubber.
   (C) Using a flashlight, inspect the individual modules to make sure that:
      (1) They are all seated on top of the perforated plates and have not moved from their original location.
      (2) The Grey chlorinated polyvinyl chloride (CPVC) side panels are still in place.
      (3) The SPC Media has not separated from the frame.
      (4) There are no gaps between modules.
      (5) There are no signs of fouling on the leading edges inside the corrugated media

iii. Maintenance Requirements for Wet Scrubber (**ID No. CD-22**) - As recommended by the equipment manufacturer, the following maintenance shall be performed on the wet scrubber at a frequency specified.

Component	Maintenance Description	Frequency
Tray Irrigator Spray Lances	Remove lances and check nozzles	Quarterly
Impingement trays	Check trays for excessive build-up	Annually
Venturi Inlet Lances	Remove lances and check nozzles	Quarterly
Venturi tube assembly	Check flange and Morris coupling hardware	Annually
Venturi tube assembly	Check throat nozzles	Quarterly
Venturi water pumps	See manufacturers recommendations	As required
Separator tray	Check trays for excessive build-up	Annually
Mesh pad mist eliminator	Inspect mesh pad for build up	Quarterly
Mesh Pad Irrigator Spray Lance	Remove lances and check nozzles	Quarterly
PC Mercury Modules	Check modules to ensure they have not shifted and the no gaps exist	Quarterly
	Rotate and document SPC modules Location	Typically at the midpoint of the warrantee period
	Remove and replace sample of media and send to analysis laboratory	Typically every 6 to 12 months (as needed)
SPC Mercury Backwash Spray Lance	Remove lances and check nozzles	Quarterly
Pressure gauges	Check for proper operating pressures	Daily
Y-strainers	Check and blow down	Weekly or as required
Basket strainers	Isolate, remove and clean	Weekly or as required

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

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the maintenance and inspection, as specified above for each scrubber, are not performed, or the records are not maintained.
[15A NCAC 02Q .0508(f)]

Reporting [40 CFR 60.155]

i. Submit semiannual reports to the Regional Supervisor, DAQ, by January 30 and July 30 of each year that include a summary of:
   i. Those periods of duration of at least 15 minutes during which the average pressure drop of the wet scrubbers is less than:
      (A) 48.0 inches of water column **(ID No. CD-20)** or
      (B) 8.1 inches of water column **(ID No. CD-21**) while sewage sludge is charged into the fluidized bed incinerator (**ID No. ES-20**) or

(C) 37 inches of water column **(ID No. CD-22**) while sewage sludge is charged into the fluidized bed incinerator (**ID No. ES-1**)

during the 6 prior calendar months.

ii. Those periods of duration of at least 1 hour during which the average oxygen content of the fluidized bed sewage sludge incinerators' exhaust gas is greater than 11.8% (**ID No. ES-1)** and 11.1% (**ID No. ES-20)**, respectively while sewage sludge is charged into the fluidized bed incinerators (**ID Nos. ES-1 and ES-20**) during the 6 prior calendar months.

iii. The parameter values in Sections 2.1 A.2.i.i and ii do not apply during performance testing.

(A) If, during performance testing, the parameter values are not adhered to, are more stringent, and are relied upon to demonstrate compliance, the Permittee shall submit a request to revise the pertinent value(s) in the permit within 60 days of conducting a test pursuant to 15A NCAC 02Q .0514.

(B) If, however, during performance testing, the parameter values are not adhered to and are less stringent, the Permittee may request to revise the pertinent value(s) in the permit pursuant to 15A NCAC 02Q .0515 within 60 days of conducting a test.

(C) If, during performance testing, the parameter values are not adhered to and are both more stringent and less stringent, the Permittee shall request only one permit modification to revise the pertinent values in the permit pursuant to 15A NCAC 02Q .0515 within 60 days of conducting a test.

vi. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. The Permittee shall comply with 15A NCAC 02D .0614 to ensure that the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) and associated scrubbers (**ID Nos. CD-22, CD-20, and CD-21**) comply with the emission limits of 15A NCAC 02D .0524 (40 CFR Part 60, Subpart O).

Background

b. Emission Units:

i. Fluidized bed sewage sludge incinerator (**ID No. ES-1**)

ii. Fluidized bed sewage sludge incinerator (**ID No. ES-20)**

Applicable Regulations, Emission Limit, Monitoring Requirements and Control Technology

c. i. Regulation: 15A NCAC 02D .0524 40 CFR Part 60, Subpart O

ii. Emission limits:

(A) Emissions of particulate matter shall not exceed an allowable emission rate of 1.3 lb/ton of dry sludge

(B) Visible emissions less than 20% opacity

iii. Control Technology:

(A) For Fluidized bed sewage sludge incinerator (**ID No. ES-1**): Venturipak scrubber **(ID No. CD-22)**

(B) For Fluidized bed sewage sludge incinerator (**ID No. ES-20**): hydrosonic wet scrubber **(ID No. CD-20)** and wet tray scrubber **(ID No. CD-21)**

iv. Monitoring Requirements (for each scrubber):

(A) Liquid injection flow rate

(B) Pressure drop for wet scrubber

Monitoring Approach

d. The key elements of the monitoring approach for each scrubber **(ID Nos. CD-22, CD-20, and CD-21)** for particulate matter, including parameters to be monitored, parameter ranges and performance criteria are presented in the following table:

	Indicator #1 Liquid injection flow rate	**Indicator #2** Pressure drop
Measurement Approach	Liquid injection flow rate	Pressure drop
Indicator Range	An excursion is defined as a 6-hour block average less than the minimum liquid injection flow rate established during most recent performance test:	An excursion is defined as a 6-hour block average less than the minimum drop established during most recent performance test:

	Indicator #1 Liquid injection flow rate	**Indicator #2** Pressure drop
	CD-22: 461 gallons per minute CD-20: 178 gallons per minute (upper) 110 gallons per minute (lower) CD-21: 259 gallons per minute Excursion triggers an inspection, corrective action and a reporting requirement.	CD-22: 37 inches of water column CD-20: 48 inches of water column CD-21: 8.1 inches of water column Excursion triggers an inspection, corrective action and a reporting requirement.
QIP Threshold	12-hour block average less than minimum liquid injection flow rate established during most recent performance test.	12-hour block average less than minimum pressure drop established during most recent performance test.
Performance Criteria: Data Representativeness	Liquid injection flow rate is measured using the Supervisory Control and Data Acquisition (SCADA) system.	Pressure drop is measured using the SCADA system.
QA/QC Practices and Criteria	QA/QC practices are followed as set forth in 40 CFR Part 62, Subpart LLL. At a minimum, the monitoring device is calibrated as per manufacturer's recommendation.	QA/QC practices are followed as set forth in 40 CFR Part 62, Subpart LLL. At a minimum, the monitoring device is calibrated as per manufacturer's recommendation.
Monitoring Frequency	Monitored Continuously	Monitored Continuously
Data Collection Procedure	As required by 40 CFR Part 62, Subpart LLL, data is recorded at a minimum of every 15 minutes.	As required by 40 CFR Part 62, Subpart LLL, data is recorded at a minimum of every 15 minutes.
Data Averaging Period	6-hour block average	6-hour block average

If the above monitoring is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614.

Recordkeeping/Reporting [15A NCAC 02Q .0508(f), 40 CFR 64.9]

e. The Permittee shall comply with the recordkeeping requirements of 40 CFR 64.9(b) and submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 A.3.d above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The reports shall comply with the reporting requirements of 40 CFR 64.9(a) and include, at a minimum the following information, as applicable:
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

If the above recordkeeping is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614.

4. 15A NCAC 02D .1110: NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS SUBPARTS C AND E

a. For the sewage sludge incinerators (**ID Nos. ES-1 and ES-20)**, the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental

Management Commission Standard 15A NCAC 02D .1110 "National Emissions Standards for Hazardous Air Pollutants" as promulgated in 40 CFR Part 61, Subparts C (National Emission Standard for Beryllium) and E (National Emission Standard for Mercury).

Emissions Standards [40 CFR 61.32 and 40 CFR 61.52]

b. The following permit limits shall not be exceeded:

Affected Source	Pollutant	Emission Limit
Fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**)	Beryllium	10 grams (0.022 lb) per 24-hour period
	Mercury	3.2 kg (7.1 lb) per 24-hour period

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

c. 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 limits given in Section 2.1 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

d. Continuous compliance (annual performance testing) with beryllium and mercury emissions in Section 2.1.A.4.k.i below shall ensure compliance with the standards of these pollutants in Section 2.1 A.4.b above. If the Permittee does not comply with the continuous compliance requirements in Section 2.1 A.5.k.i below or the results of any performance test for beryllium or mercury exceed the respective standards in Section 2.1 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1110.

e. Recordkeeping requirements in Section 2.1 A.5.u.v below on performance test reports shall be sufficient to ensure compliance with the beryllium and mercury standards in 15A NCAC 02D .1110 (Section 2.1 A.4.b above). If the Permittee does not comply with record keeping requirement in Section 2.1 A.5.t.v below, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1110.

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

f. Reporting requirements in Sections 2.1 A.5.v.ii and iii below shall be sufficient to ensure compliance with the beryllium and mercury standards in 15A NCAC 02D .1110.

State-enforceable Only

5. 15A NCAC 02D .1204: SEWAGE SLUDGE INCINERATION UNITS

Emissions Standards [15A NCAC 02D .1204(e)]

a. The Permittee shall comply with the emissions standards specified below for the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) by March 21, 2016:

Pollutant	Emissions Standards
Particulate matter	18 milligrams per dry standard cubic meter, or 1.3 lb per ton of dry sludge input (0.65 g/kg dry sludge input), whichever is more restrictive
Fugitive emissions	Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) shall be no more than 5 percent of the hourly observation period
Hydrogen Chloride	0.51 parts per million by dry volume
Carbon Monoxide	64 parts per million by dry volume
Dioxin and Furan (total mass basis)	1.2 nanograms per dry standard cubic meter
Dioxin and Furan (toxic equivalency basis)	0.10 nanograms per dry standard cubic meter
Mercury	0.037 milligrams per dry standard cubic meter, or 3.2 kg (7.1 lb) per 24-hour period, whichever is more restrictive
Nitrogen Oxides	150 parts per million by dry volume
Sulfur dioxide	15 parts per million by dry volume
Cadmium	0.0016 milligrams per dry standard cubic meter

Pollutant	Emissions Standards
Lead	0.0074 milligrams per dry standard cubic meter
Beryllium	10 grams (0.022 lb) per 24-hour period
Total Hydrocarbons or Carbon Monoxide	100 parts per million monthly average (volumetric basis, corrected to 7% oxygen and 0% moisture)

Concentration Limits for Sewage Sludge [15A NCAC 02D .1204(e)]

b. The Permittee shall ensure that the sewage sludge fed into the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) meet the following limits by March 21, 2016.

Pollutant	Average Daily Concentration Limit (mg/kg)
Lead	1,382
Arsenic	513
Cadmium	7,231
Chromium	9,614
Nickel	2,051

Operating Limits and Requirements [15A NCAC 02D .1204(f)]

c. The Permittee shall comply with the following operating limits and requirements, established pursuant to 40 CFR 60.5170 including Subparagraphs (a) through (d) and (h), as applicable, by March 21, 2016.

Source or Control Device	Operating Parameter/Operating Requirement	Operating Limit	Data Averaging Period for Compliance[2]	Allowable Variance[3]
Sewage Sludge Incinerator (**ID No. ES-1**)	minimum combustion chamber operating temperature	1,289 °F (combustion chamber) 1,497 °F (freeboard area)	12-hour block	Accuracy percentage of ±1.0 percent of the temperature measured
Wet Scrubber [including Sorbent Polymer Composite Material Adsorbing Modules] (**ID No. CD-22**)[1]	minimum pressure drop across scrubber minimum scrubber liquid flow rate	37 inches of H_2O 461 gallons per minute	12-hour block	Accuracy percentage of ±5 percent
Sewage Sludge Incinerator (**ID No. ES-20**)	minimum combustion chamber operating temperature	1,275 °F (combustion chamber) 1,547 °F (freeboard area)	12-hour block	Accuracy percentage of ±1.0 percent of the temperature measured
Wet Scrubber (**ID No. CD-20**)	minimum pressure drop across scrubber minimum scrubber liquid flow rate	48.0 inches of H_2O 178 gallons per minute (upper) 110 gallons per minute (lower)	12-hour block	Accuracy percentage of ±5 percent
Wet Scrubber (**ID No. CD-21**)	minimum pressure drop across scrubber minimum scrubber liquid flow rate	8.1 inches of H_2O 259 gallons per minute	12-hour block	Accuracy percentage of ±5 percent

Source or Control Device	Operating Parameter/Operating Requirement	Operating Limit	Data Averaging Period for Compliance[2]	Allowable Variance[3]
Ash Handling Systems of Sewage Sludge Incinerators (**ID Nos. ES-1 and ES-20**)	site-specific fugitive emissions monitoring plan for operating requirements for ash handling system per 40 CFR 60.5200	To be established	n/a	n/a

[1] Additional and/or revised operating limits to be established upon U.S. EPA approval of an alternative monitoring procedure under 40 CFR 60.5175 and 40 CFR 62.15965
[2] See 40 CFR 60.5170 and Table 4 to 40 CFR Part 60, Subpart MMMM.
[3] Allowable variances are based on the documented accuracy of similar measurement devices. Any parametric value measurements that are within the defined allowable variance when compared to the operating limit will be considered equivalent to the defined operating limit.

d. The Permittee shall monitor the feed rate and moisture content of the sewage sludge fed to the sewage sludge incinerator, as specified in 40 CFR 60.5170(f)(1) and (f)(2).
e. For the operating requirements in 40 CFR 60.5170(a) through (d) and (h), as specified in Section 2.1 A.5.c above, the Permittee shall either confirm the operating limits or reestablish the operating limits, in accordance with 40 CFR 60.5210(d). This requirement shall also apply to the operating requirements for fugitive emissions monitoring plan for ash handling system, specified in 40 CFR 60.5170(d).
    i. The operating limits in Section 2.1 A.5.c above do not apply during any stack testing for confirmation or reestablishment of operating limits.
    ii. Any confirmation or reestablishment of operating limits specified in Section 2.1 A.5.c above may require a permit revision. If, during performance testing for confirmation or reestablishment, the parameter values in Section 2.1 A.5.c above are not adhered to, are more stringent (e.g., scrubber liquid flow rate is higher than the minimum value in Section 2.1 A.5.c above), and are relied upon to demonstrate compliance, the Permittee shall submit a request to revise the pertinent value(s) in the permit pursuant to 15A NCAC 02Q .0514, within 60 days of conducting a test.
    iii. If however, during performance testing for confirmation or reestablishment, the parameter values are not adhered to and are less stringent (e.g., combustion chamber operating temperature is less than the minimum value prescribed in Section 2.1 A.5.c above), the Permittee may request to revise the pertinent value(s) in the permit pursuant to 15A NCAC 02Q .0515, within 60 days of conducting a test.
    iv. If during performance testing for confirmation or reestablishment, the parameter values are not adhered to and are both more stringent (e.g., scrubber liquid flow rate is higher than the minimum value in Section 2.1 A.5.c above) and less stringent (e.g., combustion chamber operating temperature is less than the minimum value prescribed in Section 2.1 A.5.c above), the Permittee shall request only one permit modification to revise the pertinent values in the permit pursuant to 15A NCAC 02Q .0515 within 60 days of conducting a test.

General [15A NCAC 02D .1204(g)]

f. Emission standards and concentration limits in Section 2.1 A.5.a and b above shall apply at all times and during periods of malfunction. The operating limits in Section 2.1 A.5.c above shall apply at all times that sewage sludge is in the combustion chamber before the sewage sludge feed to the combustor is cut off for a period of time not less than the sewage sludge incineration residence time and during periods of malfunction as specified in 40 CFR 60.5180.

Initial Compliance [15A NCAC 02D .1204(h)]

g. The Permittee shall demonstrate compliance with the emissions standards and concentration limits in Section 2.1 A.4.a and b above by using the procedures specified in 40 CFR 60.5185(a) through (e).
h. The Permittee shall establish site-specific operating limits, specified in Section 2.1 A.5.c above, in accordance with the requirements specified 40 CFR 60.5190(a) through (e).
i. The Permittee shall conduct the initial air pollution control device inspection specified 40 CFR 60.5220(c) by the date established in accordance with 40 CFR 60.5195(a). The Permittee shall complete all necessary repairs in accordance with 40 CFR 60.5195(b).
j. The Permittee shall develop a site-specific monitoring plan for continuous monitoring, bag leak detection, ash handling systems, and an initial performance evaluation date, as applicable, in accordance with the requirements specified in 40 CFR 60.5200(a) and (d) through (h).

Continuous Compliance Requirements [15A NCAC 02D .1204(i)]

k. The Permittee shall demonstrate compliance with the emissions standards and concentration limits in Section 2.1 A.5.a and b above as following:
   i. By demonstrating continuous compliance as specified in 40 CFR 60.5205(a) through (f).
   ii. By demonstrating continuous compliance with the operating limits as specified in 40 CFR 60.5210(a)(1) and (b) through (d).
   iii. By demonstrating continuous compliance with the total hydrocarbon concentration of the incinerator stack exit gas according to 40 CFR 503.45(a) unless the requirements for continuously monitoring carbon monoxide as provided in 40 CFR 503.40(c) are satisfied.
   iv. By demonstrating continuous compliance with the oxygen content of the incinerator stack exit gas as provided in 40 CFR 503.45(b).
   v. By demonstrating continuous compliance with the moisture content of the incinerator stack exit gas as provided in 40 CFR 503.45(c).
   vi. By conducting an annual air pollution control device inspection as specified in 40 CFR 60.5215(a).
   vii. By making all necessary repairs within the time periods specified in 40 CFR 60.5215(b).
   viii. By monitoring the concentration of beryllium and mercury from the sewage sludge fed to the incinerator as frequently as specified in 40 CFR 503.46(a)(1).
   ix. By monitoring the concentrations of arsenic, cadmium, chromium, lead, and nickel in the sewage sludge fed to the incinerator as frequently as specified in 40 CFR 503.46(a)(2) and (3).

Performance Testing, Monitoring, and Calibration Requirements [15A NCAC 02D .1204(j)]

l. The Permittee shall demonstrate compliance with the emissions standards and concentration limits in Section 2.1 A.5.a and b above as follows:
   i. By meeting the performance testing requirements specified in 40 CFR 60.5220(a)(1) through (11), 40 CFR 61.53(d) or 40 CFR 61.54, 40 CFR 503.43(e), and 40 CFR 61.33.
   ii. By meeting the monitoring requirements specified in 40 CFR 60.5220(b)(1) through (7), 40 CFR 61.55, 40 CFR 503.45, 40 CFR 503.46; and 40 CFR 60.153.
   iii. By performing the air pollution control device inspection requirements specified in 40 CFR 60.5220(c)(1) through (3).
   iv. By meeting the bypass stack provisions specified in 40 CFR 60.5220(d).

Continuous Parameter Monitoring Systems [15A NCAC 02D .1204(k)]

m. The Permittee shall install, operate, calibrate, and maintain the continuous parameter monitoring systems to ensure compliance with the operational limits set forth in Section 2.1 A.5.c above, as specified in 40 CFR 503.45, 40 CFR 60.5225(a)(1) and (2), and 40 CFR 60.153.

Continuous Emission Monitoring Systems [15A NCAC 02D .1204(f)(1)]

n. As allowed by 40 CFR 60.5170(b), 40 CFR 60.5185(b), and 40 CFR 60.5190(a), the Permittee shall demonstrate compliance with the SO_2 and HCl limits in 2.1 A.5.a, above, by installing, operating, calibrating, and maintaining a continuous emission monitoring system (CEMS) for SO_2.
   i. When demonstrating initial compliance using the CEMS, the Permittee shall follow the procedure in 40 CFR 60.5185(b).
   ii. As allowed by 40 CFR 60.5190(a)(1), the Permittee is not required to establish an operating limit for scrubber liquid pH when demonstrating compliance using the SO_2 CEMS.
   iii. The Permittee shall demonstrate continuous compliance using the SO_2 CEMS as allowed by 40 CFR 60.5205(b)(1).
   iv. The Permittee shall operate the SO_2 CEMS according to the requirements in 40 CFR 60.5220(b):
      (A) The CEMS shall be installed, operated, and quality assured according to the requirements in 40 CFR 60.5220(b)(3).
      (B) The Permittee shall follow the relative accuracy test run procedures in 40 CFR 60.5220(b)(4).
      (C) The Permittee shall operate the CEMS and collect data using the CEMS as required in 40 CFR 60.5220(b)(6).

Operator Training and Qualification [15A NCAC 02D .1204(m)]

o. A sewage sludge incineration unit subject to 15A NCAC 02D .1204 shall not be operated unless a fully trained and qualified sewage sludge incineration unit operator is at the facility or can be at the facility within one hour. The trained and qualified sewage sludge incineration unit operator may operate the sewage sludge incineration unit

directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified sewage sludge incineration unit operators are temporarily not accessible, the procedures in 40 CFR 60.5155 shall apply.

p. Operator training and qualification shall be obtained by completing the requirements specified in 40 CFR 60.5130(c).
q. The Permittee shall complete an annual review or refresher course covering the five topics specified in 40 CFR 60.5145(a) through (e) to maintain an operator qualification.
r. The Permittee shall renew a lapsed operator qualification before he or she begins operation of the unit by one of the two methods specified in 40 CFR 60.5150(a) and (b).
s. When a qualified operator of a sewage sludge incineration unit subject to this Rule is not at the facility and cannot be at the facility within one hour, the Permittee shall meet the criteria specified in 40 CFR 60.5155.
t. The Permittee shall maintain and review the operator training documentation as specified in 40 CFR 60.5160 (a) and (b).

Recordkeeping [15A NCAC 02D .1204(l)]

u. The Permittee shall maintain on site in either paper copy or electronic format that can be printed upon request for a period of five years the following:
   i. the calendar date of each record as specified in 40 CFR 60.5230(a).
   ii. increments of progress as specified in 40 CFR 60.5230(b).
   iii. operator training records as specified in 40 CFR 60.5230(c)(1) through (4).
   iv. air pollution control device inspections as specified in 40 CFR 60.5230(d).
   v. performance test reports as specified in 40 CFR 60.5230(e)(1) through (4).
   vi. continuous monitoring data as specified in 40 CFR 60.5230(f)(1) through (3) and 40 CFR 60.153.
   vii. other records for continuous monitoring systems as specified in 40 CFR 60.5230(g)(1) through (3) and 40 CFR 60.153.
   viii. deviation reports as specified in 40 CFR 60.5230(h).
   ix. equipment specifications and operation and maintenance requirements as specified in 40 CFR 60.5230(i).
   x. inspections, calibrations, and validation checks of monitoring devices as specified in 40 CFR 60.5230(j).
   xi. monitoring plan and performance evaluations for continuous monitoring systems as specified in 40 CFR 60.5230(k).
   xii. records indicating use of the bypass stack as specified in 40 CFR 60.5230(m).
   xiii. malfunction occurrence records as specified in 40 CFR 60.5230(n).
   xiv. records showing compliance with standards for the use or disposal of sewage sludge listed in 40 CFR 503.47(b) through (n).

Reporting [15A NCAC 02D .1204(l) and 15A NCAC 02Q .0508(f)]

v. The Permittee shall submit to the Director in the format specified in 40 CFR 60.5235(h)(1) and by due dates established in Table 6 of 40 CFR Part 60 Subpart MMMM the following:
   i. the initial compliance report as specified in 40 CFR 60.5235(b).
   ii. the annual compliance report as specified in 40 CFR 60.5235(c).
   iii. the deviation reports (deviations from emission limits, emission standards, or operating limits, as specified in 40 CFR 60.5235(d)(1)) when it is required by 40 CFR 60.5235(d).
   iv. the notification of qualified operator deviation and notification of status of qualified operator deviation as specified in 40 CFR 60.5235(e)(1).
   v. the notification of resumed operation pursuant to 40 CFR 60.5155(b)(2)(i) following shutdown (due to qualified operator deviation) as specified in 40 CFR 60.5235(e)(2).
   vi. the notification of a force majeure as specified in 40 CFR 60.5235(f).
   vii. the notification of intent to start or stop use of a continuous monitoring system, notification of intent to conduct a performance test, and notification of intent to conduct a rescheduled performance test as specified in 40 CFR 60.5235(g).
   viii. the performance test relative accuracy audit data (test reference method) and performance test data in the manner specified in 40 CFR 60.5235(h)(2).
   ix. the semiannual reports as specified in 40 CFR 60.155.
   x. Those periods of duration of at least 15-minutes during which the average liquid injection flow rates of the wet scrubbers (**ID Nos. CD-20, CD-21, and CD-22**) are less than the applicable minimum rates specified in Section 2.1 A.5.c above, while sewage sludge is charged into the fluidized bed sewage sludge incinerators during the previous calendar year.
   xi. Those periods of duration of at least 15-minutes during which the average fluidized bed combustion temperatures in the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) exceed 1,572 °F and

1,545 °F, respectively, or the freeboard areas of the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) exceed 1,822 °F and 1,875 °F, respectively, while sewage sludge is charged into the fluidized bed sewage sludge incinerators during the previous calendar year.

w. The Permittee shall submit a summary report of the monitoring and recordkeeping activities included in Section 2.1 A.5.d and Sections 2.1 A.5.g through u above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

6. 40 CFR Part 503, SUBPART E – STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE: INCINERATION

a. For the sewage sludge incinerators (**ID Nos. ES-1 and ES-20**), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in 40 CFR Part 503, Subpart E.

Pollutant Limits [40 CFR 503.43]

b. The average daily lead concentration in the sewage sludge fed into the fluidized bed sewage sludge incinerators **(ID Nos. ES-1 and ES-20**) shall not exceed the maximum concentration shown below, calculated using the equation found in 40 CFR 503.43(c):

1,382 mg/kg

c. The average daily concentrations of arsenic, cadmium, chromium and nickel in the sewage sludge fed into the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) shall not exceed the maximum concentrations shown below, calculated using the equation found in 40 CFR 503.43(d):

513 mg/kg (arsenic)
7,231 mg/kg (cadmium)
9,614 mg/kg (chromium)
2,051 mg/kg (nickel)

Management Practices and Frequency of Monitoring [40 CFR 503.45 and 40 CFR 503.46]

d. The Permittee shall follow the following management practices:
   i. The Permittee shall install, calibrate, operate, and maintain continuous monitoring and recording devices for the carbon monoxide concentrations, oxygen concentration, and moisture content of the exhaust gas and the combustion temperature of the fluidized bed sewage sludge incinerators(**ID Nos. ES-1 and ES-20**).
   ii. The Permittee shall not operate the fluidized bed sewage sludge incinerators (**ID Nos. ES-1 and ES-20**) such that the combustion temperatures exceed the combustion temperatures achieved during the performance testing by more than 20%.
   iii. The monitoring and recording devices and the control devices installed on the fluidized bed sewage sludge incinerator (**ID Nos. ES-1 and ES-20**) to comply with this Subpart must be appropriate for the type of incinerator. The operating parameters of the control device must be adequate to indicate proper performance of the control device. The operation of the control device must not violate the control device requirements of 40 CFR Part 60, Subpart O.
   iv. The Permittee shall monitor concentrations of arsenic, cadmium, chromium, lead, and nickel in sewage sludge fed to a sewage sludge incinerators (**ID Nos. ES-1 and ES-20)** once per month (12 times per year).

The Permittee shall be deemed in noncompliance with 40 CFR 503 Subpart E if the requirements of this Section 2.1 A.6.d are not complied with.

Continuous Emission Monitoring (CEM) Quality Assurance Program [15A NCAC 02Q .0508(f)]

e. Pursuant to 15A NCAC 02D .0613 "Quality Assurance Program," the Permittee shall develop and implement a written quality assurance program containing information required by 40 CFR Part 60, Appendix F, Section 3, Quality Assurance Procedures. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0613 if the written quality assurance program containing information is not developed or implemented.
   i. **CEM Reporting:** The Permittee shall submit semiannually an excess emissions and monitoring systems summary report for CO. The report shall be calculated on a quarterly basis in a format as provided by the

Director. The report shall include any quality assurance assessments, as stated in the quality assurance program, and shall be submitted by July 30 for the period between January 1 and June 30 and by January 30 for the period between July 1 and December 31 of each year.

Recordkeeping Requirements [40 CFR 503.47]

f. The following recordkeeping requirements shall be followed:
   i. Maintain the following records for a period of five (5) years from the date of recording. This information shall be maintained on site and made available to DAQ personnel upon request.
      (A) The concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator.
      (B) Information that indicates the requirements in the National Emission Standard for beryllium in 40 CFR Part 61 Subpart C are met.
      (C) Information that indicates the requirements in the National Emission Standard for mercury in 40 CFR Part 61 Subpart E are met.
      (D) The operating combustion temperatures for the sewage sludge incinerator.
      (E) Values for the air pollution control device operating parameters.
      (F) The oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack.
      (G) The sewage sludge feed rate.
      (H) The stack height for the sewage sludge incinerator.
      (I) The dispersion factor for the site where the sewage sludge incinerator is located.
      (J) The control efficiency for lead, arsenic, cadmium, chromium, and nickel for each sewage sludge incinerator.
      (K) The risk specific concentration for chromium calculated using equation (6) of 40 CFR 503.43, if applicable.
      (L) A calibration and maintenance log for the instruments used to measure the oxygen concentration in the exit gas from the sewage sludge incinerator stack, the information needed to determine moisture content in the exit gas, and the combustion temperatures.

   The Permittee shall be deemed in noncompliance with 40 CFR 503 Subpart E if these records are not maintained.

Reporting Requirements [40 CFR 503.48 and 15A NCAC 02Q .0508(f)]

g. On or before February 19th of each year, the Permittee shall submit to the Regional Supervisor, Division of Air Quality, the following information:
   i. The concentration of lead, arsenic, cadmium, chromium, and nickel in the sewage sludge fed to the sewage sludge incinerator.
   ii. Information that indicates the requirements in the National Emission Standard for beryllium in 40 CFR Part 61 Subpart C are met.
   iii. Information that indicates the requirements in the National Emission Standard for mercury in 40 CFR Part 61 Subpart E are met.
   iv. The operating combustion temperatures for the sewage sludge incinerator.
   v. Values for the air pollution control device operating parameters.
   vi. The oxygen concentration and information used to measure moisture content in the exit gas from the sewage sludge incinerator stack.

   All instances of deviations from the requirements of this permit must be clearly identified.

7. 40 CFR 62 SUBPART LLL – FEDERAL PLAN REQUIREMENTS FOR SEWAGE SLUDGE INCINERATION UNITS CONSTRUCTED ON OR BEFORE OCTOBER 14, 2010

a. For the sewage sludge incinerators **(ID No. ES-1 and ES-20),** the Permittee shall comply by March 21, 2016, with all applicable provisions, including emission standards, monitoring and reporting requirements, maintenance requirements, notification and recordkeeping requirements, performance test requirements, test method and procedural provisions, and any other provisions, in accordance with 40 CFR 62 Subpart LLL.

Notifications [40 CFR 62.15885, 62.15890, 62.15990]

b. A notification of achievement of compliance must be submitted to the Administrator no later than 10 business days after the compliance date, March 21, 2016, and shall include the following:
   i. Notification that the final control plan has been submitted and final compliance has been achieved;
   ii. Any items required to be submitted with the final control plan and final compliance; and
   iii. Signature of the owner or operator of the sewage sludge incinerator (SSI) unit.

c. Submittal of a control plan must satisfy the following two requirements:
   i. Submit the final control plan to the EPA regional office and permitting authority. The control plan must include:
      (A) A description of the devices for air pollution control and process changes used to comply with the emission limits and standards and other requirements of this subpart;
      (B) The type(s) of waste to be burned, if waste other than sewage sludge is to be burned in the unit;
      (C) The maximum design sewage sludge burning capacity; and
      (D) A petition for site-specific operating limits under 40 CFR 62.15965, if applicable.
   ii. Maintain an onsite copy of the final control plan.

Operator Training and Qualification [40 CFR 62.15920 through 62.15950]

d. An SSI unit cannot be operated unless a fully trained and qualified SSI unit operator is available, either at the facility or can be at the facility within 1 hour. The trained and qualified SSI unit operator may operate the SSI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified SSI unit operators are temporarily unavailable, the procedures in 40 CFR 62.15945 must be followed.

Emission Limits and Emission Standards [40 CFR 62.15955]

e. The following emissions limits and standards must be met by the final compliance date, March 21, 2016, or upon startup of an SSI that has been out of service. These limits and standards apply at all times the unit is operating and during periods of malfunction. The limits and standards also apply to emissions from a bypass stack or vent while sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). [40 CFR 62.15955 and Table 2 to Subpart LLL of Part 62]

Air Pollutant	Emission Limit[1]
Particulate Matter	18 mg/dscm
Hydrogen Chloride	0.51 ppm dry volume
Carbon Monoxide	65 ppm dry volume
Dioxins/Furans (total mass basis) [2] or Dioxins/Furans (toxic equivalency basis)	1.2 ng/dscm Or 0.10 ng/dscm
Mercury	0.037 mg/dscm
Nitrogen Oxides	150 ppm dry volume
Sulfur Dioxide	15 ppm dry volume
Cadmium	0.0016 mg/dscm
Lead	0.0074 mg/dscm
Fugitive Emissions from Ash Handling	Visible emissions from combustion ash and from ash conveying system for no more than 5 percent of any compliance test hourly observation period.

[1] All emission limits are measured at 7-percent oxygen, dry basis at standard conditions.

[2] The Permittee has the option to comply with either the dioxin/furan emission limit on a total mass basis or the dioxin/furan emission limit on a toxic equivalency basis.

Operating Limits and Requirements [40 CFR 62.15960]

f. i. The following operating limits and requirements for SSIs must be met to maintain compliance. The operating limits apply at all times that sewage sludge is in the combustion chamber (i.e., until the sewage sludge feed to the combustor has been cut off for a period of time not less than the sewage sludge incineration residence time). [40 CFR 62.15960 and Table 4 to Subpart LLL of Part 62]

Source or Control Device	Operating Parameter/Operating Requirement	Operating Limit	Data Averaging Period for Compliance	Allowable Variance*
Sewage Sludge Incinerator (**ID No. ES-1**)	minimum combustion chamber operating temperature	1,289 °F (combustion chamber) 1,497 °F (freeboard area)	12-hour block	Accuracy percentage of ±1.0 percent of the temperature measured
Wet Scrubber (**ID No. CD-22**)	minimum pressure drop across scrubber	37 inches of H_2O	12-hour block	Accuracy percentage of ±5 percent
	minimum scrubber liquid flow rate	461 gallons per minute	12-hour block	Accuracy percentage of ±5 percent
Sewage Sludge Incinerator (**ID No. ES-20)**	minimum combustion chamber operating temperature	1,275 °F (combustion chamber) 1,547 °F (freeboard area)	12-hour block	Accuracy percentage of ±1.0 percent of the temperature measured
Wet Scrubber (**ID No. CD-20**)	minimum pressure drop across scrubber	48.0 inches of H_2O	12-hour block	Accuracy percentage of ±5 percent
	minimum scrubber liquid flow rate	178 gallons per minute (upper) 110 gallons per minute (lower)	12-hour block	Accuracy percentage of ±5 percent
Wet Scrubber (**ID No. CD-21**)	minimum pressure drop across scrubber	8.1 inches of H_2O	12-hour block	Accuracy percentage of ±5 percent
	minimum scrubber liquid flow rate	259 gallons per minute	12-hour block	Accuracy percentage of ±5 percent

* Allowable variances are based on the documented accuracy of similar measurement devices. Any parametric value measurements that are within the defined allowable variance when compared to the operating limit will be considered equivalent to the defined operating limit.

ii. Monitor the feed rate and moisture content of the sewage sludge fed to the SSI by implementing the following:
(A) Continuously monitor the sewage sludge feed rate and calculate a daily average for all hours of operation during each 24-hour period. Keep a record of the daily average feed rate, as specified in 40 CFR 62.16025(f)(3)(ii); and
(B) Take at least one grab sample per day of the sewage sludge fed to the incinerator. Calculate a daily average for the grab samples if more than one grab sample is taken per day. Keep a record of the daily average moisture content, as specified in 40 CFR 62.16025(f)(3)(ii).

Initial Compliance Requirements [40 CFR 62.15980, 62.15985, 62.15990, 62.15995]

g. Initial compliance with the emission limits and standards listed above in Section e can be demonstrated in one of two ways.
i. Conduct a performance test as required in 40 CFR 60.8. It must be demonstrated that the SSI unit meets the emission limits and standards specified in Table 2 of Subpart LLL for PM, HCl, CO, dioxins/furans (total mass basis or toxic equivalency basis), Hg, NOx, SO_2, Cd, Pb, and fugitive emissions from ash handling. The initial performance test must be conducted using the test methods, averaging methods, and minimum sampling volumes or durations specified in Table 2 and according to the testing, monitoring, and calibration requirements specified in 40 CFR 62.16015(a). A facility may use the results from a performance test conducted within the two previous years if it was conducted under the same conditions and demonstrated compliance with the emission limits and standards in Table 2, provided no process changes have been made since that performance test was conducted.
-OR-
ii. Demonstrate initial compliance using a continuous emissions monitoring system or continuous automated sampling system as specified in 40 CFR 62.15980.
iii. To demonstrate initial compliance with the dioxins/furans toxic equivalency emission limit, use the following:
(A) Measure the concentration of each dioxin/furan tertra- through octachlorinated-isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7.

(B) Multiply the concentration of each dioxin/furan (tetra- through octachlorinated) isomer by its corresponding toxic equivalency factor specified in Table 5 of this subpart.
(C) Sum the products to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

iv. Submit an initial compliance report, as specified in 40 CFR 62.16030(b).

h. Site-specific operating limits specified in Section f must be established during your initial performance test as required in 40 CFR 62.15980.

i. An initial air pollutant control device inspection must be conducted by the final compliance date. For air pollution control devices installed after the compliance date, an air pollution control device inspection must be conducted within 60 days after installation of the control device. All necessary repairs must be completed within 10 operating days following the air pollution control device inspection unless approval from the Administrator is given to establish a date whereby all necessary repairs of the SSI unit must be completed.

j. A site-specific monitoring plan for continuous monitoring and ash handling systems must be developed in accordance to the requirements of 40 CFR 62.15995.

Continuous Compliance Requirements [40 CFR 62.16000]

k. Continuous compliance with the emission limits and standards in Table 2 shall be demonstrated using either performance testing or the use of a continuous monitoring system.
   i. Annual performance testing must be conducted for each pollutant (between 11 and 13 calendar months following the previous performance test)
   ii. A repeat performance test may be conducted at any time to establish new values for the operating limits to apply from that point forward.
   iii. A performance test must be repeated within 60 days of a process change, as defined in 40 CFR 62.16045.
   iv. Performance testing can be conducted less often, as specified in 40 CFR 62.16000(a)(3).
   v. Rules for demonstrating continuous compliance with a continuous monitoring system are specified in 40 CFR 62.16000(b).

l. Continuous compliance with site-specific operating limits shall be achieved through continuously monitoring the operating parameters in accordance with 40 CFR 62.16005.

m. An annual air pollution control device inspection shall be conducted no later than 12 months following the previous annual air pollution control device inspection. All necessary repairs must be completed within 10 operating days following the air pollution control device inspection unless approval from the Administrator is given to establish a date whereby all necessary repairs of the SSI unit must be completed.

n. The performance testing, monitoring, and calibration requirements for compliance with the emission limits and standards are specified in 40 CFR 62.16015 and 40 CFR 62.16020.

Recordkeeping and Reporting [40 CFR 62.16025, 62.16030]

o. The following records shall be maintained onsite for a period of at least 5 years.
   i. Calendar date of each record;
   ii. Final control plan and associated notifications;
   iii. Operator training – documentation of training procedures and information, records showing names of SSI unit operators and other plant personnel who have completed training, and records showing periods when no qualified operators were accessible in accordance with 40 CFR 62.16025(c)(3) and (c)(4).;
   iv. Air pollution control device initial and annual inspections;
   v. Performance test reports including the initial, annual, and any subsequent test reports, including calculations. Maintain a record of the hourly dry sludge feed rate measured during performance test runs;
   vi. Continuous monitoring data as specified in 40 CFR 62.16025(f);
   vii. Deviation reports;
   viii. Equipment specifications and operations and maintenance requirements;
   ix. Inspections, calibrations and validation checks of monitoring devices;
   x. Monitoring plan and performance evaluations for continuous monitoring systems;
   xi. Less frequent testing;
   xii. Use of bypass stack; and
   xiii. Records of malfunctions.

p. The following reporting requirements shall be submitted to the Administrator. Table 6 of 40 CFR 60 Subpart LLL provides a summary of reporting requirements as well.
   i. Final control plan and final compliance report no later than 10 business days after the compliance date;
   ii. Initial compliance report no later than 60 days following the initial performance test;

iii. Annual compliance report no later than 12 months following the submission of the initial compliance report. Subsequent annual compliance reports must be submitted no more than 12 months following the previous annual compliance report;
iv. Deviations reports as specified in 40 CFR 62.16030(d);
v. Qualified operation deviation reports as specified in 40 CFR 62.16030(e);
vi. Notification of force majeure;
vii. Other notifications:
    (A) Notify the Administrator 1 month before starting or stopping use of a continuous monitoring system for determining compliance with any emission limit.
    (B) Notify the Administrator 30 days prior to any performance test, to afford the Administrator the opportunity to have an observer present.
    (C) Notify the Administrator at least 7 days prior to the date of a reschedule performance test for which notification was previously made.

B. One sand storage silo (ID No. ES-17) controlled by one bagfilter (ID No. CD-11)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$ (for process rates ≤ 30 tons per hour), or $E = 55.0 \times P^{0.11} - 40$ (for process rates > 30 tons per hour) Where: E = allowable emission rate in pounds per hour P = process weight in tons per year	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
PM_{10}, $PM_{2.5}$, Sulfur Dioxide, Hazardous Air Pollutants	**See Section 2.2 A.1**	15A NCAC 02Q .0315 (Avoidance of 15A NCAC 02Q .0500)
Particulate Matter, PM_{10}, $PM_{2.5}$, and Sulfur Dioxide	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .0530)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source **(ID No. ES-17)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from this source **(ID No. ES-17)** shall be controlled by a bagfilter (**ID No. CD-11**) as described above. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirements shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection units for leaks; and
   ii. an annual (for each 12-month period following initial inspection) internal inspection of the bagfilters' structural integrities.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.

f. The Permittee shall submit a summary report of 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 deviations from the requirements of this permit must be clearly identified.

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

a. Visible emissions from this source **(ID No. ES-17)** 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 2.1 B.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 this source **(ID No. ES-17)**.

C. Two No. 2 fuel oil-fired emergency generators (ID Nos. ES-18 and ES-19) One diesel fuel-fired emergency generator (ID No. ES-23)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input (**ID Nos. ES-18 and ES-19 only**)	15A NCAC 02D .0516
Visible Emissions	20 percent opacity (**ID Nos. ES-18, ES-19, and ES-23**)	15A NCAC 02D .0521
Various	See Section 2.1 D.3 (**ID No. ES-23 only**)	15A NCAC 02D .0524 (40 CFR Part 60 Subpart IIII)
Hazardous Air Pollutants	Purchase engine certified to meet the applicable engine emission limits (**ID Nos. ES-18, ES-19, and ES-23**)	15A NCAC 02D .1111 (40 CFR Part 63 Subpart ZZZZ)
PM_{10}, $PM_{2.5}$, Sulfur Dioxide, Hazardous Air Pollutants	**See Section 2.2 A.1**	15A NCAC 02Q .0315 (Avoidance of 15A NCAC 02Q .0500)
Particulate Matter, PM_{10}, $PM_{2.5}$, and Sulfur Dioxide	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .0530)

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

a. Emissions of sulfur dioxide from these emergency generators **(ID Nos. ES-18 and ES-19 only)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

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

b. If 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 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring/recordkeeping/Reporting is required for sulfur dioxide emissions from burning No. 2 fuel oil in these emergency generators.

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

a. Visible emissions from these emergency generators **(ID Nos. ES-18, ES-19, and ES-23)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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 2.1 C.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 diesel fuel in these emergency generators.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART IIII]

Applicability [15A NCAC 02Q .0508(f), 40 CFR 60.4200(a)(2)(i)]

a. For this engine **(ID No. ES-23)**, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," including Subpart A "General Provisions."

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

b. Pursuant to 40 CFR 60.4218, The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 of 40 CFR 60 Subpart IIII.

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

c. The Permittee shall comply with the emission standards in 40 CFR 60.4202 for all pollutants, for the same model year and maximum engine power for this engine (**ID No. ES-23**) as below:

NMHC and NOx (combined): 6.4 grams per kilowatt-hour (g/kW-hr) (4.77 grams per horsepower hour (g/HP-hr))
CO: 3.5 g/kW-hr (2.60 g/HP-hr)
PM: 0.20 g/kW-hr (0.15 g/HP-hr)
[40 CFR 60.4205(b)]

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

d. The Permittee shall use diesel fuel in the engine (**ID No. ES-23**) that meets the requirements of 40 CFR 1090.305 including:
   i. a maximum sulfur content of 15 parts per million; and
   ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
   [40 CFR 60.4207(b)]

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 limits given in Section 2.1 C.3.c and d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. The engine (**ID No. ES-23**) has the following monitoring requirements:
   i. The engine shall be equipped with a non-resettable hour meter prior to startup. [40 CFR 60.4209(a)]
   ii. The engine, if equipped with a diesel particulate filter, must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

   If the emergency generator is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

   If the diesel particulate filter is not equipped with a backpressure monitor or the Permittee is not monitoring the backpressure of the diesel particulate filter, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

g. The Permittee shall:
   i. operate and maintain the engine **(ID No. ES-23)** and control devices according to the manufacturer's emission related-written instructions over the entire life of the engine;
   ii. change only those emission-related settings that are permitted by the manufacturer; and
   iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this Section 2.1.D.3.g are not complied with, except as allowed under Section 2.1 C.3.j below.
   [40 CFR 60.4206 and 60.4211(a)]

h. The Permittee shall comply with the emission standards in Section 2.1 C.3.c by purchasing an engine certified to the emission standards in condition c for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications. [40CFR 60.4211(c)]

i. In order for the engine to be considered an emergency stationary internal combustion engine (ICE) under this condition, any operation other than emergency operation, maintenance and testing, and operation in non- emergency situations for 50 hours per year, as described below, is prohibited.
   i. There is no time limit on the use of emergency stationary ICE in emergency situations.
   ii. The Permittee may operate the emergency stationary ICE 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) of this condition counts as part of the 100 hours per calendar year allowed by this paragraph (ii).
      (A) Emergency stationary ICE 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 ICE beyond 100 hours per calendar year.
   iii. Emergency stationary ICE 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 calendar 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.

   [40 CFR 60.4211(f)]

j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the requirements in Section 2.1 C.3.f through i are not met.

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

k. The results of inspection and maintenance made pursuant to Section 2.1 C.3.g shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the engine;
   iv. any variance from manufacturer's recommendations, if any, and corrections made;
   v. the hours of operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time; [40 CFR 60.4214(b)]
   vi. if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR60.4214(c)]; and
   vii. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 C.3.c.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

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. If the Permittee owns or operates an emergency stationary compression ignition (CI) ICE with a maximum engine power more than 100 HP that operates for the purposes specified in Section 2.1 C.3.i.iii(A), the Permittee shall submit an annual report according to the requirements at 40 CFR 60.4214(d). Thus report must be submitted to the Regional Supervisor and the EPA. [40 CFR 60.4214(d)]

4. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [40 CFR 63 SUBPART ZZZZ]

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

a. For these emission sources (**ID Nos. ES-18, ES-19, and ES-23**), 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" as promulgated in 40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)" and Subpart A "General Provisions."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.6675 shall apply.

Applicability Date [40 CFR 63.6595(a)(1)]

c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013.

Notifications [40 CFR 63.6645(a)(5)]

d. The Permittee has no notification requirements.

General Provisions [40 CFR 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. Pursuant to 40 CFR 63.6590(c)(1), this engine (**ID No. ES-23 only**) must meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart IIII. No further requirements apply for this engine (**ID No. ES-23 only**) 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. [40 CFR 63.6590(c)]

g. During periods of startup of the diesel fuel-fired emergency generators (**ID Nos. ES-18 and ES-19**), 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. [40 CFR 63.6603(a), Table 2d and 40 CFR 63.6625(h)]

h. 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 air cleaner 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

   [40 CFR 63.6603(a), Table 2d]

i. The Permittee shall have the option to utilize the oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in Section 2.1 C.4.h. [40 CFR 63.6603(a), Table 2, 40 CFR 63.6625(i)]

j. If an emergency engine (**ID Nos. ES-18 and ES-19**) 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 C.4.h, 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. [40 CFR 63.6603(a), Table 2d]

k. The permittee shall be in compliance with the emission limitations, operating limitations and other requirements that apply at all times. [40 CFR 63.6605(a)]

l. The Permittee shall operate and maintain any affected source (**ID Nos. ES-18 and ES-19**), 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. [40 CFR 63.6605(b)]

m. The Permittee shall operate and maintain the stationary RICE (**ID Nos. ES-18 and ES-19**) 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. [40 CFR 63.6625(e) and 40 CFR 63.6640(a), Table 6]

n. In order for the engine to be considered an emergency stationary RICE as defined in Section 2.1 C.4.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 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.

   [40 CFR 63.6640(f)(1), (2) and (4)]

o. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 C.4 f through n are not met.

Fuel Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.6604(b)]

p. Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates for the purpose specified in Section 2.1 C.4.n.iii(A) above, you must use diesel fuel that meets the requirements in 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

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

q. The Permittee shall install a non-resettable hour meter on the internal combustion engine if one is not already installed. [40 CFR 63.6625(f)]

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

r. 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 40 CFR 63.10(b)(2)(xiv)[40 CFR 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 [40 CFR 63.6655(a)(2)];
   iii. Records of all required maintenance performed on the air pollution control and monitoring equipment [40 CFR 63.6655(a)(4)];
   iv. Records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.1 C.4.l, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation [40 CFR 63.6655(a)(5)];
   v. Records of the maintenance conducted on the RICE pursuant to Section 2.1 C.4.m [40 CFR 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 C.4.n.iii(A) above, records of the notification of the situation, and the date, start time, and end time of engine operation for these purposes.
   [40 CFR 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 40 CFR 63.10(b)(1). [40 CFR 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)]

s. 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. [40 CFR 63.6640(b), (e) and 40 CFR 63.6650(f)] The summary report shall also include any reporting required under Section 2.1 C.4.j above, as necessary. [40 CFR 63.6603(a), Table 2d]

t. 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 C.4.n.iii(A) above, the Permittee shall submit an annual report according to the requirements at 40 CFR 63.6650(h). This report must be submitted to the Regional Supervisor and the EPA. [40 CFR 63.6650(h)]

u. The Permittee shall be deemed in noncompliance with the reporting requirements of 15A NCAC 02D .1111 if the requirements in Section 2.1 C.4.s through i are not met.

2.2 Multiple Emission Sources and Specific Limitations and Conditions

A. Facility-wide affected sources

The following provides a summary of limits and/or standards for the emission source(s) described above.

Pollutant	Limits/Standards	Applicable Regulation
PM_{10}, $PM_{2.5}$, Sulfur Dioxide, Hazardous Air Pollutants	Less than 100 tons per year of PM_{10}, $PM_{2.5}$, and SO_2, each. Less than 10 tons per year of any individual HAP. Less than 25 tons per year of total combined HAP.	15A NCAC 02Q .0315 (Avoidance of 15A NCAC 02Q .0500)
Particulate Matter, PM_{10}, $PM_{2.5}$, and Sulfur Dioxide	Less than 250 tons per year of PM, PM_{10}, $PM_{2.5}$, and SO_2, each.	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .0530)

1. 15A NCAC 02Q .0315: SYNTHETIC MINOR FACILITIES (Avoidance of 15A NCAC 02Q .0500: TITLE V PROCEDURES)

a. In order to avoid applicability of 15A NCAC 02Q .0500, PM_{10}, $PM_{2.5}$, and SO_2 emissions from the facility-wide sources shall each be less than 100 tons per consecutive 12-months period.
b. In order to avoid applicability of 15A NCAC 02Q .0500, single hazardous air pollutant (HAP) and aggregate HAPs emissions from the facility-wide sources shall be less than 10 tons and 25 tons per consecutive 12-months period, respectively.

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

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test demonstrate that the emissions exceed the limits given in Sections 2.2 A.1.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500.

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

d. The Permittee shall keep records on a monthly basis for the sewage sludge charged into each fluidized bed sewage sludge incinerator (SSI) (**ID Nos. ES-1 and ES-20**). The Permittee shall determine the annual charging rate for each of these incinerators for each month of the consecutive 12-months period. The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if the above monitoring is not performed or the records are not maintained.
e. The Permittee shall calculate and record emissions of PM_{10}, $PM_{2.5}$, and SO_2, single HAP, and aggregate HAPs on a monthly basis for the facility wide sources using the emissions factors and the default emission rates specified below, and the sewage sludge charge rate for each incinerator in Section 2.2 A.1.d above:

PM_{10} emissions, tons/month =
[emission factor (lb/dry ton) for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)]
+ [emission factor (lb/dry ton) for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)]
+ [default total emission rate (ton/month) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**)]

Where,
PM_{10} emission factor for SSI (**ES-1**) = 0.010 lb/dry ton
PM_{10} emission factor for SSI (**ES-20**) = 0.0045 lb/dry ton
Default PM_{10} emission rate (aggregate) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0.33 ton/month (3.94 tons/yr)

$PM_{2.5}$ emissions, tons/month =
[emission factor (lb/dry ton) for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)]
+ [emission factor (lb/dry ton) for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)]
+ [default total emission rate (ton/month) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**)]

Where,
$PM_{2.5}$ emission factor for SSI (**ES-1**) = 0.0079 lb/dry ton
$PM_{2.5}$ emission factor for SSI (**ES-20**) = 0.0037 lb/dry ton
Default $PM_{2.5}$ emission rate (aggregate) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0.33 ton/month (3.94 tons/yr)

SO_2 emissions, tons/month =
[emission factor (lb/dry ton) for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)]
+ [emission factor (lb/dry ton) for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)]
+ [default total emission rate (ton/month) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**)]

Where,
SO_2 emission factor for SSI (**ES-1**) = 0.98 lb/dry ton
SO_2 emission factor for SSI (**ES-20**) = 0.35 lb/dry ton
Default SO_2 emission rate (aggregate) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0.021 ton/month (0.25 ton/yr)

Single HAP, 1,4 dichlorobenzene emissions, tons/month =
[emission factor (lb/dry ton) for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)]
+ [emission factor (lb/dry ton) for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)]
+ [default total emission rate (ton/month) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**)]

Where,
1,4 dichlorobenzene emission factor for SSI (**ES-1, ES-20**) = 0.48 lb/dry ton
Default 1,4 dichlorobenzene emission rate (aggregate) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0 ton/month

Aggregate HAPs, tons/month =
[emissions factors (lb/dry ton) of 1,4 dichlorobenzene, naphthalene, and bis (2-ethylhexyl) phthalate for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)] + [emissions factors (lb/dry ton) of 1,4 ichlorobenzene, naphthalene, and bis (2-ethylhexyl) phthalate for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)] + [default total emission rate (ton/month) for 1,4 dichlorobenzene, naphthalene, and bis (2-ethylhexyl) phthalate for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**)]

Where,
1,4 dichlorobenzene emission factor for SSI (**ES-1, ES-20**) = 0.48 lb/dry ton
Naphthalene emission factor for SSI (**ES-1, ES-20**) = 0.19 lb/dry ton
Bis (2-ethylhexyl) phthalate emission factor for SSI (**ES-1, ES-20**) = 0.082 lb/dry ton
Default aggregate emission rate for 1,4 dichlorobenzene, naphthalene, and bis (2-ethylhexyl) phthalate for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0 ton/month

The Permittee shall total and record the emissions of PM_{10}, $PM_{2.5}$, SO_2, single HAP, and aggregate HAPs for the facility wide sources for each consecutive 12-months period, using the emissions for the current month and the previous 11-months period.

The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if the above monitoring is not performed or the records are not maintained, or any consecutive 12-months PM_{10}, $PM_{2.5}$, SO_2, single HAP, or aggregate HAPs emissions exceed the limits in Section 2.2 A.1.a. or b above.

f. The Permittee shall reestablish the emission factor for SO_2 in Section 2.2 A.1.e above for fluidized bed incinerators (**ID Nos. ES-1 and ES-20**) using the data collected through the annual performance tests required in Section 2.1 A.4.k.i above.

The Permittee shall reestablish the emissions factors for PM_{10}, $PM_{2.5}$, 1,4 dichlorobenzene, naphthalene, and bis (2-ethylhexyl) phthalate for fluidized bed incinerators (**ID Nos. ES-1 and ES-20**) in Section 2.2 A.1.e above by conducting the performance tests on each of these incinerators, concurrent with the annual performance testing for SO_2 in Section 2.1 A.4.k.i above.

The Permittee shall request to revise the emissions factors for each of the pollutants in Section 2.2 A.1.e above in accordance with 15A NCAC 02Q .0515, within 60 days of conducting the annual test in Section 2.1 A.4.k.i above. After the first revision to the emissions factors for each pollutant in Section 2.2.A.1.e above for fluidized bed incinerators (**ID Nos. ES-1 and ES-20**), the subsequent revisions to the emissions factors shall occur once every five years from the previous revision.

If the Permittee does not reestablish the emission factors for each pollutant in Section 2.2 A.1.e above for each fluidized bed incinerator (**ID Nos. ES-1 and ES-20**) or the permit application is not submitted within the specified timeframe, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500.

g. Inspection and maintenance requirements for the wet scrubbers (**ID Nos. CD-20, CD-21, and CD-22**) installed on the fluidized incinerators (**ID Nos. ES-1 and ES-20**) in Section 2.1 A.2.h above shall be sufficient to ensure compliance with the requirements in 15A NCA 02Q .0315. The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if these inspection and maintenance requirements are not complied with for the wet scrubbers.

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

h. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, 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. The report shall contain:
   i. the monthly emissions of PM_{10}, $PM_{2.5}$, SO_2, single HAP, and aggregate HAPs for the previous 17 months for the facility wide sources and their total emissions for each of the 12-month periods over the previous 17 months;
   ii. the monthly charge rate for sewage sludge fed into each incinerator and their totals for each of the 12-month periods over the previous 17 months.

   All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
(Avoidance of 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION)

a. In order to avoid applicability of 15A NCAC 02D .0530(g), particulate matter (PM), PM_{10}, $PM_{2.5}$, and SO_2 emissions from the facility-wide sources shall each be less than 250 tons per consecutive 12-months period.

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 demonstrate that the emissions exceed the limit given in Section 2.2 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. The monitoring and recordkeeping requirements for sewage sludge fed into each of the fluidized bed incinerators (**ID Nos. ES-1 and ES-20**) in Section 2.2 A.1.d above shall be sufficient to ensure compliance with 15A NCAC 02Q .0317. If these monitoring and recordkeeping requirements are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

d. The Permittee shall calculate and record PM emissions on a monthly basis for the facility wide sources using the emissions factors and the default emission rate specified below, and the sewage sludge charge rate for each incinerator in Section 2.2 A.1.d above:

PM emissions, tons/month =
[emission factor (lb/dry ton) for SSI (**ES-1**) * amount of sewage sludge charged (tons/month)]
+ [emission factor (lb/dry ton) for SSI (**ES-20**) * amount of sewage sludge charged (tons/month)]
+ [default total emission rate (ton/month) for all other permitted sources **(ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20)**]

Where:
PM emission factor for SSI (**ES-1**) = 0.13 lb/dry ton
PM emission factor for SSI (**ES-20**) = 0.061 lb/dry ton
Default PM emission rate (aggregate) for all other permitted sources (**ES-17, ES-18, ES-19, ES-23, IES-16, IES-3, IES-4, and IES-20**) = 0.33 ton/month (3.94 tons/yr)

The Permittee shall total and record the PM emissions for the facility wide sources for each consecutive 12-months period, using the emissions for the current month and the previous 11-months period.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above monitoring is not performed or the records are not maintained, or any consecutive 12-months PM emissions exceed the limit in Section 2.2.A.2.a above.

e. The Permittee shall reestablish the emission factor for PM in Section 2.2.A.2.d above for fluidized bed incinerators (**ID Nos. ES-1 and ES-20**) using the data collected for filterable particulates through the annual performance tests required in Section 2.1 A.4.k.i above and conducting the concurrent performance tests on each of these incinerators for condensable particulates.

The Permittee shall request to revise the emissions factor for PM in Section 2.2 A.2.d above in accordance with 15A NCAC 02Q .0515, within 60 days of conducting the annual test in Section 2.1 A.4.k.i above. After the first revision to the emission factor for PM in Section 2.2 A.2.d above for fluidized bed incinerators (**ID Nos. ES-1 and ES-20**), the subsequent revisions to the emissions factors shall occur once every five years from the previous revision.

If the Permittee does not reestablish the emission factor for PM in Section 2.2 A.2.d above for each fluidized bed incinerator (**ID Nos. ES-1 and ES-20**) or the permit application is not submitted within the specified timeframe, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500.

f. Monitoring and recordkeeping requirements for PM_{10}, $PM_{2.5}$, and SO_2 in Sections 2.2 A.1.d through g above shall be sufficient to ensure compliance with the requirements in 15A NCAC 02Q .0317 for these pollutants. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these monitoring and recordkeeping are not performed.

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

g. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, 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. The report shall contain:
   i. the monthly PM emissions for the previous 17 months for the facility wide sources and their total emissions for each of the 12-month periods over the previous 17 months

All instances of deviations from the requirements of this permit must be clearly identified.

h. Reporting requirements in Section 2.2 A.1.h. above for both emissions of PM_{10}, $PM_{2.5}$ and SO_2, and sewage sludge charge rate for each fluidized bed incinerator shall be sufficient to ensure compliance with the requirements in 15A NCAC 02Q .0317.

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

Emission Source ID No.	Emission Source Description[1,2]
IES-16 **GACT ZZZZ**	60 kW diesel-fired emergency generator
IES-3 **GACT ZZZZ**	100 kW diesel-fired emergency generator
IES-4	Natural gas/No. 2 fuel oil-fired boiler (8.4 million Btu per hour maximum heat input)
IES-20	Natural gas/No. 2 fuel oil-fired boiler (8.4 million Btu per hour maximum heat input)
IES-5	One 15,000-gallon No. 2 fuel oil/diesel storage tank
IES-6	One 12,000-gallon diesel fuel storage tank
IES-23	One 11,000-gallon diesel fuel storage tank
IS-5	One mechanical screens and wastewater pump station with two associated wet scrubbers (ID Nos. CD-17 and CD-18, 240 gallons per minute liquid injection rate, each, arranged in parallel)
IES-6A through IES-6C	Three sludge centrifuges with two associated wet scrubbers (ID Nos. CD-9 and CD-10, 480 gallons per minute liquid injection rate, each, arranged in parallel)
IES-11A and IES-11B	Aerated grit chamber system (40 million gallons per day capacity) consisting of two grit chambers controlled by two wet scrubbers (ID Nos. CD-5A and CD-5B, 300 gallons per minute liquid injection rate, each, arranged in parallel)
IES-12A through IES-12F	Primary settling tank system (40 million gallons per day capacity) consisting of six settling tanks controlled by two wet scrubbers (ID Nos. CD-5A and CD-5B, 300 gallons per minute liquid injection rate, each, arranged in parallel)
IES-13A through IES-13R	Activated sludge tank system consisting of eighteen aeration tanks controlled by two wet scrubbers (ID Nos. CD-5A and CD-5B, 300 gallons per minute liquid injection rate, each, arranged in parallel)
IES-15A through IES-15D	Four sludge thickener tanks controlled by one wet scrubber (ID No. CD-6, 75 gallons per minute liquid injection rate)
IES-15E and IES-15F	Two sludge holding tanks controlled by one wet scrubber (ID No. CD-6, 75 gallons per minute liquid injection rate)
IES-22A and IES-22B	Two sludge receiving tanks controlled by one wet scrubber (ID No. CD-6, 75 gallons per minute liquid injection rate)

[1] Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement (Federal or State) or that the Permittee is exempted from demonstrating compliance with any applicable requirement.

[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."

SECTION 4 - GENERAL CONDITIONS (version 6.0, 01/07/2022)

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(s) and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

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

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

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

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

G. **Title V Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 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 [15A NCAC 02Q .0508(f)]
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.
2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   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** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

1. "Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*
2. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
3. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
    a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
        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).

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

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

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

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

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

J. **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 Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent;
4. the method(s) used for determining the compliance status of the source during the certification period;

5. each deviation and take it into account in the compliance certification; and
6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 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. **National Emission Standards Asbestos – 40 CFR Part 61, Subpart M** [15A NCAC 02D .1110]
The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

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

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

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or .1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        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 15A NCAC 02D .2600 if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the DAQ to conduct independent tests of any source subject to a rule in 15A NCAC 02D to determine the compliance status of that source or to verify any test data submitted relating to that source.

Any test conducted by the Division of Air Quality using the appropriate testing procedures described in 15A NCAC 02D .2600 has precedence over all other tests.

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

1. A permit shall be reopened and revised under the following circumstances:
   a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
   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 (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
   a. The written notification shall include:
      i. a description of the change at the facility;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.

b. In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permits modifications subject to 45-day review by the federal EPA, EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.