ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

TBD

Mr. Phillip Cline
Site Manager
Stepan Company
4600 Highway 421 North
Wilmington, North Carolina 28401

SUBJECT: Air Quality Permit No. 00164T57
Facility ID: 6500083
Stepan Company
Wilmington
New Hanover County
Fee Class: Title V
PSD Class: Minor

Dear Mr. Cline:

In accordance with your completed Air Quality Permit Application for renewal of your Title V permit, we are forwarding herewith Air Quality Permit No. 00164T57 authorizing the construction and operation of the emission sources and associated air pollution control devices 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.

New Hanover County has triggered increment tracking under PSD for sulfur dioxide (SO_2), particulate matter of 10 microns in size or less (PM10), and nitrogen oxides (NOx). This renewal will not consume or expand any increments for any tracked pollutants.

This Air Quality Permit shall be effective from TBD until TBD+5 years, 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@ncdenr.gov.

Sincerely,

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

Enclosure

cc: Michael Sparks, EPA Region 4 (Permit and Review)
Laserfiche (6500083)
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 Air Permit No. 00164T56*:

Page No.	Section	Description of Changes
Throughout	Throughout	• Updated dates and permit numbers. • Updated formatting. Formatting changes are not intended to affect the Permittee's compliance requirements. • Removed "reserved" sections, and renumbered other sections as a result.
9	2.1 A.5	• Updated permit condition for avoidance of MACT Subpart JJJJJJ avoidance to match current DAQ standard.
11 - 13	2.1 B.3, 4, and 5	• Updated permit conditions for NSPS Subpart IIII and MACT Subpart ZZZZ to reflect regulatory updates.
18	2.1 C.2	• Updated monitoring requirements for 02D .0521 to match current DAQ standard.
22	2.1 E.2	• Removed requirement to perform a compliance assessment on the flare. Noted that the Permittee has applied for a waiver, and DAQ has granted that waiver.
33	2.2 A.5 (new)	• Added requirement regarding the disclosure of the use of PFAS compounds. This condition is state-enforceable only.
34	2.3	• Corrected the basis for the permit shield for 02D .0614.
35	3. (new)	• Created this section. • Moved list of insignificant activities to this section to match current DAQ format.

* 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
00164T57	00164T56	TBD	TBD+5 years

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than TBD+5 years – 6 months.

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: **Stepan Company**
Facility ID: **6500083**
Primary SIC Code: **2821**
NAICS: **325211**

Facility Site Location: **4600 Highway 421 North**
City, County, State, Zip: **Wilmington, New Hanover County, North Carolina 28401**
Mailing Address: **4600 Highway 421 North**
City, State, Zip: **Wilmington, North Carolina 28401**

Application Number: **6500083.22A**
Complete Application Date: **March 21, 2022**

Division of Air Quality, Regional Office Address: **Wilmington Regional Office**
127 Cardinal Drive Extension
Wilmington, North Carolina 28405-3845

Permit issued this the TBD.

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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
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 SOURCES AND ASSOCIATED AIR POLLUTION CONTROL DEVICES 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	Recovery/Control Device ID No.	Recovery/Control Equipment Description
Polyester Polyols Production (175,000 Metric Tons Per Year Maximum Possible Production Rate) Collection Header			
R-7100A A-7100-2A T-7100-4A R-7100B A-7100-2B T-7100-4B T-7105 R-7100C A-7100-2C T-7100-4C R-7100D A-7100-2D T-7100-4D T-7102 T-7100-12 **All Subject to GACT VVVVVV**	**Reactor System**: Polyester polyols reactor via reactor reflux column with vent condenser via reactor cooling vessel, and Polyester polyols reactor via reactor reflux column with vent condenser via reactor cooling vessel both via cooling tank Polyester polyols reactor via reactor reflux column with vent condenser via reactor cooling vessel, and Polyester polyols reactor via reactor reflux column with vent condenser via reactor cooling vessel Molten feed tank; 8,000 gallon capacity all via polyester polyols VOC catch tank	G-1955	Polyester polyols natural gas/propane-fired flare; 20 million Btu per hour heat input capacity
A-7230 **GACT VVVVVV**	**Water Distillation Operations:** Process water distillation column; 2,600 gallon capacity	G-1955	Polyester polyols natural gas/propane-fired flare; 20 million Btu per hour heat input capacity
T-7230-7 **GACT VVVVVV**	Process water distillation reflux tank; 1,175 gallon capacity		
A-6105 **GACT VVVVVV**	Process water distillation column; 3,600 gallon capacity		
T-6105-5 **GACT VVVVVV**	Process water distillation reflux tank; 620 gallon capacity		
T-6101-6 **GACT VVVVVV**	Polyester polyols process water tank; 22,000 gallon capacity	N/A	N/A
T-6516B **GACT VVVVVV**	Recycle tank; 20,000 gallon capacity	N/A	N/A

Emission Source ID No.	Emission Source Description	Recovery/Control Device ID No.	Recovery/Control Equipment Description
T-7001 **GACT VVVVVV**	Raw material fixed-roof storage tank; 30,000 gallon capacity	N/A, or S-7001-4	N/A, or Raw material scrubber tank; 100 gallon capacity for odor control
T-7002-A **GACT VVVVVV**	Raw material fixed-roof storage tank; 30,292 gallon capacity		
T-7002-B **GACT VVVVVV**	Raw material fixed-roof storage tank; 30,292 gallon capacity		
T-7002-C **GACT VVVVVV**	Raw material fixed-roof storage tank; 30,292 gallon capacity		
T-7003 **GACT VVVVVV**	Fixed-roof storage tank; 32,000 gallon capacity	NA	NA
T-1939AR **GACT VVVVVV**	Polyester polyols process water tank; 120,000 gallon capacity	NA	NA
Raw Material Storage			
T-7906	Raw material silo	S-7906-12	Bagfilter (94.8 square feet total filter area, four cartridges, each 23.7 square feet filter area)
T-6421	Fixed roof storage tank; 19,461 gallon capacity	N/A	N/A
Wastewater Treatment System (Onsite)			
T-1922C and T-1922D **GACT VVVVVV**	Two wastewater (sumps, spills, maintenance) equalization open top tanks; two million gallon capacity each	N/A	N/A
T-1922E **GACT VVVVVV**	Wastewater equalization fixed roof tank; two million gallon capacity	N/A	N/A
T-1941 **GACT VVVVVV**	#2 Aeration Basin	N/A	N/A
WW Truck Loading **GACT VVVVVV**	Wastewater submerged fill truck loading (for offsite treatment); 325 gpm	G-1955	Polyester polyols natural gas/propane-fired flare; 20 million Btu per hour heat input capacity
Utilities			
B7600	Hot oil medium polyester polyols heater; 22 million Btu per hour heat input, No. 2 fuel oil, natural gas, and propane-fired	N/A	N/A
BLR1	Boiler; 200 million Btu per hour heat input, No. 2 fuel oil, natural gas, and propane-fired	N/A	N/A
BLR5	Boiler; 246 million Btu per hour heat input, No. 2 fuel oil, natural gas, propane-fired	N/A	N/A
EG125 **NSPS IIII, GACT ZZZZ**	No. 2 fuel oil-fired emergency generator; 125 kW	N/A	N/A
EG20 **NSPS IIII, GACT ZZZZ**	No. 2 fuel oil-fired emergency generator; 20 kW	N/A	N/A

Emission Source ID No.	Emission Source Description	Recovery/Control Device ID No.	Recovery/Control Equipment Description
FP-1500-E, FP-1500-F, FP-1500-G, and FP-1500-H **GACT ZZZZ**	Four No. 2 fuel oil-fired fire pumps; 300 BHP each	N/A	N/A
G-1955 **GACT VVVVVV Control Device**	Polyester polyols natural gas/propane-fired flare; 20 million Btu per hour heat input capacity	N/A	N/A
Fugitive Emissions Sources			
RESEQLK **GACT VVVVVV**	Polyester polyols plant equipment leaks	N/A	N/A

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 Emission Sources and Control Devices Specific Limitations and Conditions

The emission sources and associated air pollution control devices 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. UTILITIES – INDIRECT-FIRED HEAT EXCHANGERS

Polyester Polyols Heater (No. 2 fuel oil/natural gas/propane-fired; ID No. B7600)
Boiler No. 1 (No. 2 fuel oil/natural gas/propane-fired; ID No. BLR1)
Boiler No. 5 (No. 2 fuel oil/natural gas/propane-fired; ID No. BLR5)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.22 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	**Boiler No. 1 (BLR1)** 40 percent opacity **Boiler No. 5 (BLR5) and Heater (B7600)** 20 percent opacity	15A NCAC 02D .0521
Sulfur dioxide	Fuel oil sulfur content 0.1 percent (%) by weight	15A NCAC 02D .0501(c)
Hazardous air pollutants	**Boiler No. 1 (BLR1) and Boiler No. 5 (BLR5)** See Section 2.1 A.5	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)
Toxic air pollutants	**State-enforceable Only** See Section 2.2 A.4	15A NCAC 02Q .0711

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas, propane and No. 2 fuel oil that are discharged from these sources **(ID Nos. BLR1, BLR5, and B7600)** into the atmosphere shall not exceed 0.22 pounds per million Btu of heat input.

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

b. If emissions testing is required, the testing shall be performed in accordance 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 .0503.

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas, propane or No. 2 fuel oil in these sources (**ID Nos. BLR1, BLR5, and B7600)**.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources **(ID Nos. BLR1, BLR5, and B7600)** 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.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from natural gas, propane or No. 2 fuel oil combusted in these sources (**ID Nos. BLR1, BLR5, and B7600)**.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from sources **(ID Nos. BLR5 and B7600)** 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.

b. Visible emissions from sources **(ID No. BLR1)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 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 90 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 respective limit given in Section 2.1 A.3.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

d. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas, propane or No. 2 fuel oil in these sources **(ID Nos. BLR1, BLR5, and B7600)**.

4. 15A NCAC 02D .0501(c): NATIONAL AMBIENT AIR QUALITY STANDARDS

a. The Permittee shall not combust any No. 2 fuel oil in these sources **(ID Nos. BLR1, BLR5, and B7600)** with a sulfur content greater than 0.1% by weight.

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

b. The Permittee shall monitor the sulfur content of the No. 2 fuel oil fired at the facility by collecting and retaining the fuel oil supplier certifications for each shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. The name of the fuel oil supplier;
   ii. The maximum sulfur content of the fuel oil received during the quarter;
   iii. The method used to determine the maximum sulfur content of the fuel oil; and
   iv. A certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the sulfur content of the oil is not monitored and recorded, or if the sulfur content exceeds the limit in Section 2.1 A.4.a above.

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

c. The Permittee shall submit a summary report of the fuel oil supplier certifications 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.

5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY and 40 CFR Part 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers"

a. In order to avoid the applicability of 40 CFR Part 63 Subpart JJJJJJ "National Emission Standards for Hazardous Air Pollutants for Area sources: Industrial, Commercial, and Institutional Boilers," the Permittee shall operate the emission sources **(ID Nos. BLR1 and BLR5)** as follows:
   i. Gaseous-fuels are not combined with any solid fuels.
   ii. Liquid fuels are burned only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel.
   iii. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.
   [40 CFR 63.11195(e), 63.11237]

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.11237 shall apply.

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

c. The Permittee shall maintain, and make available upon request, the following records:
   i. types of fuels combusted during periods of gas curtailment, gas supply interruption, and startups;
   ii. date and duration of periods of gas curtailment, gas supply interruption and startups; and
   ii. date and duration of periods of testing with liquid fuel.

d. If the Permittee:
   i. fails to keep the records in Section 2.1 A.5.c above;
   ii. combusts any solid fuels;
   iii. burns liquid fuels outside the periods indicated in Section 2.1 A.5.a.ii above; or
   iv. tests the source burning liquid fuel for longer than 48 hours during any calendar year;
   the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111.

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

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

B. UTILITIES – INTERNAL COMBUSTION ENGINES

Emergency Generator; 125 kW (ID No. EG125)
Emergency Generator; 20 kW (ID No. EG20)
Four Fire Pumps; 300 BHP each (ID Nos. FP-1500-E to FP-1500-H)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Sulfur dioxide	Diesel sulfur content of 15 parts per million by weight (ppmw)	15A NCAC 02D .0501(c)
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous air pollutants	**Emergency Generators (ID Nos. EG125 and EG20)** Meet the requirements of the NSPS for new compression injection engines pursuant to 40 CFR 60, Subpart IIII **Fire Pumps (ID Nos. FP-1500-E to FP-1500-H)** Comply with work practices for existing compression injection emergency engines with a site rating no more than 500 hp	15A NCAC 02D .1111 (40 CFR 63, Subpart ZZZZ)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Particulate matter	**Emergency Generators (ID Nos. EG125 and EG20)** Certify engines meet the manufacturer's emissions limitations and limit operation for maintenance and readiness testing to no more than 100 hours per year.	15A NCAC 02D .0524 (40 CFR 60, Subpart IIII)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)

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

a. Emissions of sulfur dioxide from these combustion sources **(ID Nos. EG125, EG20, and FP-1500-E through FP-1500-H)** 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 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring/recordkeeping/reporting is required to demonstrate compliance with the sulfur dioxide emissions limitation when firing No. 2 fuel oil in these sources **(ID Nos. EG125, EG20, and FP-1500-E through FP-1500-H)**.

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

a. Visible emissions from these combustion sources **(ID Nos. EG125, EG20, and FP-1500-E through FP-1500-H)** 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 respective 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 to demonstrate compliance with the visible emissions standards when firing No. 2 fuel oil in these sources **(ID Nos. EG125, EG20, and FP-1500-E through FP-1500-H)**.

3. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

Applicability [40 CFR 60.4200(a)(2)(i)]

a. For these emergency engines **(ID Nos. EG20 and EG125)**, 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."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 60.4219 shall apply.

General Provisions

c. 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. [40 CFR 60.4218]

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

d. The Permittee shall comply with the emission standards 40 CFR 60.4202 for all pollutants, for the same model year and maximum engine power for this engine. [40 CFR 60.4205(b)]

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

e. The Permittee shall use diesel fuel in the engine that meets the requirements of 40 CFR 1090.305 including:
   i. a maximum sulfur content of 15 ppm; 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)]

f. If emissions testing is required, the testing shall be performed in accordance with 40 CFR 60.4212 and 60.4213. If the results of this test are above the limits given in Section 2.1 B.3.d and e above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

g. The engine has the following monitoring requirements:
   i. The engines 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)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these monitoring requirements are not met.

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

h. The Permittee shall:
   i. operate and maintain the engines 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.
   [40 CFR 60.4206 and 60.4211(a)]

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

j. In order for the engine to be considered an emergency stationary internal combustion engine (ICE) as defined in Section 2.1 B.3.b, 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) below 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)]

k. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the compliance requirements in Section 2.1 B.3.h through j are not met.

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

l. The following records shall be maintained:
   i. The results of inspection and maintenance made pursuant to Section 2.1 B.3.h 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:
      (A) the date and time of each recorded action;
      (B) the results of each inspection;
      (C) the results of any maintenance performed on the engine;

(D) any variance from manufacturer's recommendations, if any, and corrections made;
(E) 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)]; and
(F) 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 CFR 60.4214(c)];

ii. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 B.3.d; and
iii. records showing the fuel combusted meets the requirements in Section 2.1 B.3.e.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these recordkeeping requirements are not met.

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

m. The Permittee shall meet the following reporting requirements:
i. 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.
ii. If the Permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in Section 2.1 B.3.j.iii(A), the Permittee shall submit an annual report according to the requirements at 40 CFR 60.4214(d). This report must be submitted to the Regional Supervisor and directly to the EPA pursuant to 40 CFR 60.4214(d)(3). [40 CFR 60.4214(d)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if this reporting requirement is not met.

4. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.6585, 40 CFR 63.6590(a)(2)(iii)]

a. For these emergency generators **(ID Nos. EG125 and EG20)** (*new stationary RICE located at an area source of HAP emissions*) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

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

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

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

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

a. For these fire pumps **(ID Nos. FP-1500-E through FP-1500-H)** (*existing emergency stationary compression ignition [CI] reciprocating internal combustion engines[RICE] located at an area source of HAP emissions*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 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. During periods of startup of the engine, the Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63.6603(a), Table 2d to 40 CFR 60 Subpart ZZZZ and 63.6625(h)]

g. Except during periods of startup of the 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 to 40 CFR 63 Subpart ZZZZ]

h. 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 B.5.g. [40 CFR 63.6603(a), Table 2d to 40 CFR 63 Subpart ZZZZ, 63.6625(i)]

i. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Section 2.1 B.5.g, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable. [40 CFR 63.6603(a), Table 2d to 40 CFR 63 Subpart ZZZZ]

j. 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)]

k. The Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

l. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63.6625(e) and 63.6640(a), Table 6 to 40 CFR 63 Subpart ZZZZ]

m. In order for the engine to be considered an emergency stationary RICE as defined in Section 2.1 B.5.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)]

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

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

o. 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 B.5.m.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 2D .1111 if these requirements are not met.

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

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

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

q. 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 B.4.k, 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 B.5.l [40 CFR 63.6655(d) and (e)];

vi. 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 [40 CFR 63.6655(f)];

vii. if` the engine is used for the purposes specified in Section 2.1 B.4.m.iii(A) above, records of the notification of the situation, and the date, start time, and end time of engine operation for these purposes [40 CFR 63.6655(f)]; and

viii. 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), and (c)]

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

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

r. 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 63.6650(f)] The summary report shall also include any reporting required under Section 2.1 B.4.i, as necessary. [40 CFR 63.6603(a), Table 2d to 40 CFR 63 Subpart ZZZZ]

s. 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 B.4.m.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)]

6. 15A NCAC 02D .0501(c): NATIONAL AMBIENT AIR QUALITY STANDARDS

a. Emergency generators **(ID Nos. EG125 and EG20)** and fire pumps **(ID Nos. FP-1500-E through FP-1500-H)** shall only fire ultra-low sulfur diesel fuel with a sulfur content equal to or less than 15 parts per million by weight (ppmw).

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

b. The Permittee shall monitor the sulfur content of the diesel fuel fired at the facility by collecting and retaining the fuel oil supplier certifications for each shipment received. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. The name of the fuel oil supplier;
   ii. The maximum sulfur content of the fuel oil received during the quarter;
   iii. The method used to determine the maximum sulfur content of the fuel oil; and
   iv. A certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all the fuel oil fired during the period.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the sulfur content of the oil is not monitored and recorded, or if the sulfur content exceeds the limit in Section 2.1 B.6.a above.

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

c. The Permittee shall submit a summary report of the fuel oil supplier certifications 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.

C. Raw Material Silo (ID No. T-7906) and associated Bagfilter (ID No. S-7906-12)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions)	15A NCAC 02D .0521
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)
Toxic Air Pollutants	**State-enforceable Only** See Section 2.2 A.4	15A NCAC 02Q .0711

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

a. Emissions of particulate matter from this source (**ID No. T-7906**) shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or
$E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr

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 C.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. T-7906**) shall be controlled by the bagfilter (**ID No. S-7906-12**). To ensure that optimum control efficiency is maintained, 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 is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
   i. an annual internal inspection of the bagfilter's structural integrity; and
   ii. a monthly visual inspection of the system ductwork (if any) and material collection unit for leaks.

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of actions recorded;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the bagfilter; 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 the bagfilter within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of the observations 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. T-7906**) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) 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 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of this source (**ID No. T-7906**) for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source (**ID No. T-7906**) are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.4.a above.
   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring activities required by Section 2.1 C.2.c, above, 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 observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Sections 2.1 C.2.c and 2.1 C.2.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.

D. Polyester Polyols Flare (ID No. G-1955)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
HAPs	See Section 2.1 E.2 (control device for NESHAP)	15A NCAC 02D .1111 (40 CFR 63, Subpart VVVVVV)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)

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

a. Emissions of sulfur dioxide from the flare (**ID No. G-1955**) 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 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of natural gas in the flare **(ID No. G-1955)** to demonstrate compliance with 15A NCAC 02D .0516.

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

a. Visible emissions from the flare (**ID No. G-1955**) listed above 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 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the flare **(ID No. G-1955)** to demonstrate compliance with 15A NCAC 02D .0521.

E. One Chemical Manufacturing Process Unit (CMPU)

- Reactor **(ID No. R-7100A)** via reactor reflux column with vent condenser **(ID No. A-7100-2A)** via cooling vessel **(ID No. T-7100-4A)**
- Reactor **(ID No. R-7100B)** via reactor reflux column with vent condenser **(ID No. A-7100-2B)** via cooling vessel **(ID Nos. T-7100-4B/T-7105)**
- Reactor **(ID No. R-7100C)** via reactor reflux column with vent condenser **(ID No. A-7100-2C)** via cooling vessel **(ID No. T-7100-4C)**
- Reactor **(ID No. R-7100D)** via reactor reflux column with vent condenser **(ID No. A-7100-2D)** via cooling vessel **(ID No. T-7100-4D)**
- Evaporators **(ID Nos. E-7103 and A-7010/T-7010-4)**
- Molten feed tank **(ID No. T-7102)**

  All above via VOC catch tank **(ID No. T-7100-12)** and emissions controlled via a flare **(ID No. G-1955)**.

- Process water distillation columns and reflux tanks **(ID No. A-6105/ID No. T-6105-5 and ID No. A-7230/ ID No. T7230-7),** all via VOC catch tank **(ID No. T-7100-12)** and emissions controlled via a flare **(ID No. G-1955)**.
- Process water tanks **(ID Nos. T-6101-6 and T-1939AR)**
- Recycle tank **(ID No. T-6516B)**
- Fixed roof storage tank **(ID No. T-7003)**
- Raw material fixed-roof storage tanks **(T-7001, T-7002-A, T-7002-B, and T-7002-C)** venting to raw material scrubber tank **(ID No. S-7001-4)**
- Process equipment leaks **(ID No. RESEQLK)**
- Insignificant process equipment **(ID Nos. ICT-1, IH7905, IH7907, IR01, IR02, IR03, IR04, IR05, IRAW, IRESTRAN, IT12, IT1219, IT1220, IT130026R, IT19351, IT1955, IT1964, IT1991, IT5400, IT5420A-C, IT5700, IT6109R, IT6311, IT6409R, IT6417, IT64173, IT6419, IT6516A, IT6900, IT7000, IT70012, IT70013, IT70015, IT7004, IT7005, IT7006, IT7007, IT7008, IT7009, IT7011, IT7014, IT7016, IT7017, IT7019, IT7101, IT71024, IT71044, IT7104A-B, IT7200, IT7230-10, and ICLRMU)**

Onsite Wastewater Treatment System for CMPU

- Wastewater equalization open top tanks **(ID Nos. T-1922C and T-1922D)**
- Wastewater equalization fixed roof tank **(ID No. T-1922E)**
- #2 Aeration Basin **(ID No. T-1941)**
- Wastewater treatment plant #2 clarifier **(ID No. IS19341)**
- Wastewater treatment plant #3 clarifier **(ID No. IS1959)**
- Wastewater treatment plant reactor clarifier **(ID No. IS1985)**

Wastewater Loading for Offsite Treatment for CMPU

- Wastewater submerged truck loading **(ID No. WW Truck Loading),** controlled via a flare **(ID No. G-1955)**.

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

Pollutant	Limits/Standards	Applicable Regulation
Benzene	**Benzene Waste Operations** The total annual benzene quantity in facility waste shall be maintained below 10 megagrams per year (11 tons per year).	15A NCAC 02D .1110 (40 CFR 61, Subpart FF)
HAPs	See Section 2.1 E.2	15A NCAC 02D .1111 (40 CFR 63, Subpart VVVVVV)
Odor	**State-enforceable Only** See Condition 2.2 A.1	15A NCAC 02D .1806
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)

1. 15A NCAC 02D .1110: NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
(40 CFR 61, SUBPART FF, NATIONAL EMISSION STANDARD FOR BENZENE WASTE OPERATIONS)

a. The Permittee shall maintain the total annual benzene quantity in the facility waste below 10 megagrams (Mg) per year (11 tons per year) to remain exempt from the standards in 40 CFR 61.342(b) and (c). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1110 if the total annual benzene quantity equals 10 megagrams per year (11 tons per year) or more unless the standards in 40 CFR 61.342(b) and (c) are followed.

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

b. The Permittee shall determine the total annual benzene quantity in the facility waste by January 30 of each year for the previous calendar year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more.

c. The Permittee shall maintain all measurements, calculations, and other documentation used to determine that the total annual benzene quantity in the facility waste for a period of two years and make records available to the DAQ on request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1110 if these records are not created and maintained.

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

d. The Permittee shall submit a summary report of the total annual benzene quantity in the facility waste postmarked on or before January 30 of each calendar year if the total annual benzene quantity from the facility waste is equal to or greater than 1 Mg/yr (1.1 ton/yr) but less than 10 Mg/yr.

e. The Permittee shall submit a report by January 30 of each year and whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr (11 ton/yr) or more.

f. Either the report required in Section 2.1 E.1.d or the report required in Section 2.1 E.1.e above shall include:
   i. the total annual benzene quantity from facility waste for the previous calendar year;
   ii. the identification of each waste stream including whether the benzene emissions are controlled; and information required in 40 CFR 61.357(a)(3), if any benzene emissions from any waste stream is controlled.

   The annual report may be combined with the semiannual report required in Section 2.1 E.1.d above provided it is postmarked by January 30 of each calendar year.

2. 15A NCAC 02D .1111: MAXIMUM ACHIVABLE CONTROL TECHNOLOGY

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, monitoring requirements in accordance with 15A NCAC 02D .1111, "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart VVVVVV, "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources" and Subpart A "General Provisions", consistent with 40 CFR 63.1(c)(6)(A).

Management Practices and Other Requirements [40 CFR 63.11495]

b. The Permittee shall equip each process vessel in the Chemical Manufacturing Process Unit (CMPU) with a cover or lid that must be closed at all times when it is in organic HAP service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the process vessels are not equipped with covers or lids, or process vessels are operated as described above.

c. The Permittee shall use any of the methods listed below in Section 2.1 E.2.c.i through iv to control total organic HAP emissions from transfer of liquids containing Table 1 of the Subpart organic HAP to the tank trucks or railcars.
   i. Use submerged loading or bottom loading.
   ii. Route emissions to a fuel gas system or process in accordance with 40 CFR 63.982(d) of subpart SS.
   iii. Vapor balance back to the storage tank or another storage tank connected by a common header.
   iv. Vent through a closed-vent system to a control device.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements of this Section 2.1 E.2.c are not complied with.

d. The Permittee shall conduct inspections of process vessels and equipment for each CMPU in organic HAP service to demonstrate compliance with Section 2.1 E.2.d.i through v below and to determine that the process vessels and equipment are sound and free of leaks.
   i. The Permittee shall conduct inspections at least once each quarter.
   ii. The Permittee may use detection methods incorporating sight, sound, or smell for these inspections.
      (A) Indications of a leak identified using sight, sound, or smell shall constitute a leak unless the Permittee demonstrates that the indications of a leak are due to a condition other than loss of HAP.
      (B) The Permittee may use Method 21 with a leak definition of 500 ppmv to determine if indications of a leak identified during an inspection are due to a condition other than loss of HAP.
      (C) If indications of a leak are determined not to be HAP in one quarterly monitoring period, the Permittee shall still perform the inspection and demonstration in the next quarterly monitoring period.
   iii. As an alternative to conducting inspections, the Permittee may use Method 21 of 40 CFR part 60, Appendix A-7, with a leak definition of 500 ppmv to detect leaks.
   iv. The Permittee shall conduct inspections while the CMPU is operating.
   v. An inspection is not required in a calendar quarter during which the CMPU does not operate for the entire calendar quarter and is not in organic HAP service. If the CMPU operates at all during a calendar quarter, an inspection is required.
   vi. As an alternative to paragraphs (i) through (v), above, the Permittee may conduct inspections while the process vessels and equipment in the CMPU are in VOC service, provided that leaks can be detected when in VOC service.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the process vessels and equipment in the CMPU are not inspected as required above.

e. The Permittee shall repair any leak within 15 calendar days after detection of the leak or document the reason for any delay of repair. For the purposes of this condition, a leak will be considered "repaired" if a condition specified in one of the following is met.
   i. The visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated, or
   ii. No bubbles are observed at potential leak sites during a leak check using soap solution, or
   iii. The system will hold a test pressure.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if leaks are not repaired as required above.

f. At all times, the Permittee shall operate and maintain each CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. 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 CMPU. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if each CMPU is not operated or maintained as required above.

Standards and Compliance Requirements for Process Vents [40 CFR 63.11496 and Table 3 to the Subpart VVVVVV]

g. The Permittee shall comply with the requirements in 40 CFR 63.11496(b) for organic HAP emissions from the continuous process vents for each CMPU subject to this Subpart using Table 1 organic HAP.
h. For continuous process vent with a total resource effectiveness (TRE) index of ≤1.0, the Permittee shall reduce emissions of total organic HAP by routing all emissions through a closed-vent system to a flare (except that a flare may not be used to control halogenated vent streams) in accordance with the requirements of 40 CFR 63.982(b) and the requirements referenced therein. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the requirements of this Section 2.1 E.2.h are not met.
i. Consistent with 40 CFR 63.982(b), the Permittee shall comply with the requirements in 40 CFR 63.983 for closed vent systems; 40 CFR 63.987 for flares; 40 CFR 63.997(a), (b) and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 40 CFR 63.998 and 40 CFR 63.999. No other provisions under 40 CFR Part 60 Subpart SS shall apply to emissions vented through a closed vent system to a flare. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the requirements of this Section 2.1 E.2.i are not met.
j. If the Permittee combines organic HAP emissions from batch process vents and continuous process vents, he/she shall comply with the more stringent standard in Table 2 or Table 3 to this Subpart VVVVVV that applies to any portion of the combined stream, or he/she shall comply with Table 2 for the batch process vents and Table 3 for the continuous process vents. The TRE index value for continuous process vents and the annual emissions from batch process vents shall be determined for the individual streams before they are combined, and prior to any control (e.g., by subtracting any emission contributions from storage tanks, continuous process vents or batch process vents, as applicable), in order to determine the most stringent applicable requirements. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the requirements of Section 2.1 E.2.j are not met.
k. For continuous process vents, the Permittee shall comply with the provisions in 40 CFR 63.11496(g)(1) through (7) and (9) in addition to the applicable provisions in 40 CFR part 63, subpart SS. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the requirements of this Section 2.1 E.2.k are not met.

CLOSED VENT SYSTEMS

Closed Vent System Equipment and Operating Requirements [40 CFR 63.983(a)]

l. The Permittee shall route emissions from each CMPU through a closed vent system to a flare according to the following requirements:
    i. Each closed vent system shall be designed and operated to collect the organic HAP material vapors from the emission point, and to route the collected vapors to a control device.
    ii. The Permittee shall operate the closed vent systems at all times when emissions are vented to or collected by them.
    iii. Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the Permittee shall comply with one of the following for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.
        (A) The Permittee shall properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. The flow indicator shall be installed at the entrance to any bypass line. Records shall be generated as specified in Section 2.1 E.2.s below.
        (B) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in Section 2.1 E.2.s below.
    iv. Each closed vent system collecting regulated material from a transfer rack shall be designed and operated so that regulated material vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.
    v. The owner or operator of a transfer rack subject to the provisions of this Subpart SS shall ensure that no pressure relief device in the transfer rack's closed vent system shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the closed vent systems and transfer racks are not operated or maintained as specified above.

Closed Vent System Inspection and Monitoring, and Repair Requirements [40 CFR 63.983(b) through (d)]

m. Except for any closed vent systems that are designated as unsafe or difficult to inspect as specified in Section 2.1 E.2.n and o below, the Permittee shall inspect each closed vent system as follows:
   i. If the closed vent system is constructed of hard-piping, the Permittee shall comply with the requirements specified below:
      (A) Conduct an initial inspection according to the procedures in Section 2.1 E.2.q below; and
      (B) Conduct annual inspections for visible, audible, or olfactory indications of leaks.
   ii. If the closed vent system is constructed of ductwork, the Permittee shall conduct an initial and annual inspection according to the procedures in Section 2.1 E.2.q below.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the closed vent systems are not inspected as specified above.

n. Any parts of the closed vent system that are designated as unsafe to inspect are exempt from the inspection requirements of Section 2.1 E.2.m above, if the following conditions are met:
   i. The Permittee determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with Section 2.1 E.2.m above; and
   ii. The Permittee has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if an inspection plan for unsafe-to-inspect equipment is not written as required above.

o. Any parts of the closed vent system that are designated as difficult-to-inspect are exempt from the inspection requirements of Section 2.1 E.2.m above, if the following conditions apply.
   i. The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and
   ii. The Permittee has a written plan that requires inspection of the equipment at least once every 5 years.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if an inspection plan for difficult-to-inspect equipment is not written as required above.

p. For each bypass line, the Permittee shall comply with the following:
   i. If a flow indicator is used, a reading shall be taken at least once every 15 minutes.
   ii. If the bypass line valve is secured in the non-diverting position, the Permittee shall visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if bypass lines are not monitored or inspected as required above.

q. As required in Section 2.1 E.2.m above, the Permittee shall inspect each closed vent system in accordance with Method 21 of 40 CFR part 60, appendix A, and the procedures specified in 40 CFR 63.983(c)(1). The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of 40 CFR part 60, appendix A. Inspections shall be performed when the equipment is in organic HAP service, or in use with any other detectable gas or vapor. Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if closed vent systems are not inspected as per the requirements in this Section 2.1 E.2.q.

r. The Permittee shall comply with the following closed vent system leak repair provisions:
   i. If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by Section 2.1 E.2.m above, the Permittee shall either:
      (A) eliminate the leak; or
      (B) monitor the equipment according to the procedures in Section 2.1 E.2.q above.
   ii. Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided below per in paragraph (iii) below.
      (A) A first attempt at repair shall be made no later than 5 days after the leak is detected.
      (B) Except as provided in paragraph (iii), below, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.
   iii. Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in 40 CFR 63.981, or if the Permittee determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if closed vent system leaks are not repaired as required above or the above procedures are not complied with for any repairs for closed vent system leaks.

Closed Vent System Recordkeeping [40 CFR 63.998(d)(1) and 40 CFR 63.11501(c), and Table 3 to Subpart VVVVVV]

s. For each closed vent system used to collect organic HAP emissions from each CMPU, the Permittee shall maintain the following records in accordance with 40 CFR 63.998(d)(1):
   i. The identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by Section 2.1 E.2.n.ii or 2.1 E.2.o.ii above.
   ii. If the closed vent system contains a bypass line that could divert the stream away from the flare to the atmosphere, the Permittee shall keep records in either paragraph (A) or (B) as follows:
      (A) Hourly records of whether the flow indicator specified in Section 2.1 E.2.l.iii.(A), above, was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the flare or the flow indicator is not operating; or
      (B) If a seal mechanism is used to comply with Section 2.1 E.2.l.iii.(B) above, the Permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been conducted, and record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken. Hourly records of flow are not required.
   iii. When a leak is detected, as specified in Section 2.1 E.2.r.ii above, the following information shall be recorded:
      (A) The instrument and the equipment identification number and the operator name, initials, or identification number.
      (B) The date the leak was detected and the date of the first attempt to repair the leak.
      (C) The date of successful repair of the leak.
      (D) The maximum instrument reading measured by the procedures in Section 2.1 E.2.q above, after the leak is successfully repaired or determined to be nonrepairable.
      (E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The Permittee may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
      (F) Copies of the Periodic Reports as specified in Section 2.1 E.2.ll below, if records are not maintained on a computerized database capable of generating summary reports from the records.
   iv. If a leak is not detected, record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if closed vent system records are not retained as required above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the records required in this Section 2.1 E.2.s are not kept.

CONTROL DEVICE - FLARE

Flare Requirements [40 CFR 63.987 and 40 CFR 63.997]

t. Flares subject to the Subpart VVVVVV shall meet the performance requirements in 40 CFR 63.11(b) (General Provisions). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the flare **(ID No. G-1955)** does not meet the requirements of this Section 2.1 E.2.t.
u. The Permittee has requested a waiver to conduct the initial compliance assessment of the flare **(ID No. G-1955)** as allowed by 40 CFR 63.997(b), and DAQ approved the waiver request on August 11, 2022. The Permittee is not required to conduct a performance test to determine percent emission reduction or outlet regulated material or total organic compound concentration when a flare is used.
v. [Reserved]
w. Flare compliance assessments shall meet the requirements specified in 40 CFR 63.987(b)(3)(i) through (iv) as below:
   i. Method 22 of appendix A of part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours, except for transfer racks as provided in (b)(3)(i)(A) or (B) of 40 CFR 63.987.

(A) For transfer racks, if the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.
(B) For transfer racks, if additional loading cycles are initiated within the 2-hour period, then visible emissions observations shall be conducted for the additional cycles.

ii. The net heating value of the gas being combusted in a flare shall be calculated using the Equation 1, as specified below:

$$H_T = K_1 \sum_{j=1}^{n} D_j H_j \qquad [Eq.\ 1]$$

Where:

H_T = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

K_1 = 1.740×10^{-7} (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

n = number of sample components;

D_j = Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by ASTM D6420-18 (incorporated by reference, see 40 CFR 63.14) under the conditions specified in 40 CFR 63.997(e)(2)(iii)(D)(*1*) through (*3*). Hydrogen and carbon monoxide are measured by ASTM D1946-90 (Reapproved 1994) (incorporated by reference, see 40 CFR 63.14); and

H_j = Net heat of combustion of sample component j, kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

iii. The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in unit of standard temperature and pressure), as determined by Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, Appendix A, as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

iv. Flare flame or pilot monitors, as applicable, shall be operated during any flare compliance assessment.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if he/she does not comply with the flare compliance assessment requirements of this Section 2.1 E.2.w.

x. Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame is present. Flare flame monitoring and compliance records shall be kept as specified in 40 CFR 63.998(a)(1) and reported as specified in 40 CFR 63.999(a). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if he/she does not comply with the flare monitoring requirements of Section 2.1 E.2.x.

Flare Recordkeeping Requirements [40 CFR 63.998(a)(1) and 15A NCAC 02Q .0508(f)]

y. Upon request, the Permittee shall make available such records as may be necessary to determine the conditions of flare compliance assessments performed pursuant to 40 CFR 63.987(b).

i. When using a flare to comply with this subpart, record the information specified in 40 CFR 63.998(a)(1)(i)(A) through (C), as below, for each flare compliance assessment performed pursuant to 40 CFR 63.987(b). As specified in 40 CFR 63.999(a)(2)(iii)(A), the Permittee shall include this information in the flare compliance assessment report.
(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);
(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance assessment; and
(C) All periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

ii. The Permittee shall keep up to date and readily accessible hourly records of whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present. For transfer racks, hourly records are required only while the transfer rack vent stream is being vented.

iii. The Permittee shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in 40 CFR 63.999(c)(3).

iv. The Permittee shall keep records of the times and durations of all periods during which the monitor is not operating.
v. When the Permittee is complying with the heat content determinations requirement in Section 2.1 E.2.y.i.(B) above, the heat content shall be determined by the rolling average of three one-hour block averages.

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

WASTEWATER STREAMS

Wastewater System Operating Requirements [40 CFR 63.11498 and Table 6 to Subpart VVVVVV]

z. The Permittee shall determine the total concentration of partially soluble HAP in each wastewater stream using process knowledge, engineering assessment, or test data for all wastewater streams from each CMPU. Partially soluble HAP are listed in Table 7 to 40 CFR Part 63, Subpart VVVVVV. The Permittee shall reevaluate the concentration if any process or operational changes are made that would affect the concentration of partially soluble HAP in a wastewater stream. It is not required to determine the partially soluble concentration in wastewater if the entire wastewater stream is hard piped to an on-site combustion unit or hazardous waste treatment unit, or hard piped to a point of transfer to an off-site hazardous waste treatment. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the partially soluble HAP concentration in each wastewater stream is not determined as applicable.

aa. The Permittee shall discharge each wastewater stream from each CMPU to an onsite or offsite wastewater treatment system or hazardous waste treatment system. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the above requirements are not met.

Wastewater Stream Recordkeeping [40 CFR 63.11498 and Table 6 to Subpart VVVVVV]

bb. The Permittee shall maintain records identifying each wastewater stream and documenting the type of treatment that it receives. Multiple wastewater streams with similar characteristics and from the same type of activity in each CMPU may be grouped together for recordkeeping purposes. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if wastewater stream treatment records are not maintained as required above.

GENERAL RECORDKEEPING

Recordkeeping [40 CFR 63.11501 and 40 CFR 63.10(b)(3)]

cc. The Permittee shall retain files of all information (including all reports and notifications) required to comply with 40 CFR Part 63, Subpart VVVVVV for at least 5 years following the date of each occurrence, recorded in a form suitable and readily available for expeditious inspection and review. At a minimum, the Permittee shall retain the most recent 2 years of data on site. The remaining 3 years of data may be retained off site. Such files may be maintained on electronic media. If the Permittee is subject, he/she shall comply with the recordkeeping and reporting requirements of 40 CFR 63.10(b)(2)(iii) and (vi) through (xiv), and the applicable requirements specified in paragraphs (c)(1) through (8) of 40 CFR 63.11501.
    i. For each CMPU subject to this Subpart VVVVVV, the Permittee shall keep the
        (A) records of management practice inspections, repairs, and reasons for any delay of repair, as specified in 40 CFR 63.11495(a)(5).
        (B) records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this Subpart VVVVVV that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions.
        (C) records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.11495(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
    ii. For continuous process vents subject to Table 3 to this Subpart VVVVVV, the Permittee shall keep records of the occurrence and duration of each startup and shutdown of operation of process equipment, or of air pollution control and monitoring equipment.

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

dd. The Permittee shall comply with all applicable provisions in 40 CFR 63.10(b)(3) for recordkeeping. The Permittee shall keep records for the applicability determination for non-applicability of major source standard in 40 CFR Part 63 Subpart FFFF "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing". The applicability determination must be kept on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source subject to the relevant

standard such as Subpart FFFF (or other requirement established under this Part), whichever comes first if the determination is made prior to January 19, 2021. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not kept or the requirements in this Section 2.1 E.2.dd are not complied with.

REPORTING

Reporting [40 CFR 63.11501 and 40 CFR 63.999]

ee. For each NOCS required pursuant to 40 CFR 63.9(h), the Permittee shall include the following additional information as applicable:
   i. This certification of compliance, signed by a responsible official:
   ii. "This facility complies with the management practices in 40 CFR 63.11495."
   iii. "This facility complies with the requirements in 40 CFR 63.11496 for HAP emissions from process vents."
   iv. "This facility complies with the requirements in 40 CFR 63.11496 and 40 CFR 63.11497 for surge control vessels, bottoms receivers, and storage tanks."
   v. "This facility complies with the requirements in 40 CFR 63.11498 to treat wastewater streams."
   vi. "This facility complies with the requirements in 40 CFR 63.11499 for heat exchange systems."

ff. The owner or operator shall notify the Administrator of the intention to conduct a performance test or flare compliance assessment at least 30 days before such a compliance demonstration is scheduled to allow the Administrator the opportunity to have an observer present. If after 30 days notice for such an initially scheduled compliance demonstration, there is a delay (due to operational problems, etc.) in conducting the scheduled compliance demonstration, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original demonstration date. The owner or operator shall provide at least 7 days prior notice of the rescheduled date of the compliance demonstration, or arrange a rescheduled date with the Administrator by mutual agreement.

gg. Unless specified differently in Subpart SS or a referencing Subpart, performance test and flare compliance assessment reports, not submitted as part of a Notification of Compliance Status report, shall be submitted to the Administrator within 60 days of completing the test or determination.

hh. Any application for a waiver of an initial performance test or flare compliance assessment, as allowed by 40 CFR 63.997(b)(2), shall be submitted no later than 90 days before the performance test or compliance assessment is required. The application for a waiver shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.

ii. Any application to substitute a prior performance test or compliance assessment for an initial performance test or compliance assessment, as allowed by 40 CFR 63.997(b)(1), shall be submitted no later than 90 days before the performance test or compliance test is required. The application for substitution shall include information demonstrating that the prior performance test or compliance assessment was conducted using the same methods specified in 40 CFR 63.997(e) or 40 CFR 63.987(b)(3), as applicable. The application shall also include information demonstrating that no process changes have been made since the test, or that the results of the performance test or compliance assessment reliably demonstrate compliance despite process changes.

jj. Performance test and flare compliance assessment reports shall be submitted as specified in 40 CFR 63.999(a)(2)(i) through (iii).
   i. For performance tests or flare compliance assessments, the Notification of Compliance Status or performance test and flare compliance assessment report shall include one complete test report as specified in paragraph (a)(2)(ii) of 40 CFR 63.999 for each test method used for a particular kind of emission point and other applicable information specified in of 40 CFR 63.999(a)(2)(iii). For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of this subpart shall be submitted, but a complete test report is not required.
   ii. A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.
   iii. The flare compliance assessment report shall also include the records specified in 40 CFR 63.998(a)(1)(i).

kk. The Permittee shall comply with applicable notification provisions in 40 CFR 63.9(b)(1)(ii), (j) and (k).

ll. The Permittee shall submit a summary report of the 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 following information shall be included in the summary report and are required only for semiannual periods during which any of the following events occurred. [40 CFR 63.11501(d) and 63.999(c)]

i. Any deviation from the requirements of this permit must be clearly identified.
ii. The following information for each delay of leak repair beyond 15 days for any process equipment in the CMPU:
    (A) Information on the date the leak was identified;
    (B) The reason for the delay in repair; and
    (C) The date the leak was repaired.
iii. Each process change that affects a compliance determination and submit a new certification of compliance with the applicable requirements in accordance with the procedures specified for the Notification of Compliance Status in 40 CFR 63.11501(b).
iv. If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions. The report must also include a description of actions you took during a malfunction of an affected source to minimize emissions in accordance with Section 2.1 E.2.f above, including actions taken to correct a malfunction.
v. The reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in 40 CFR 63.999 and in the referencing Subpart, including reports of periods when monitored parameters are outside their established ranges.
vi. For closed vent systems subject to the requirements of 40 CFR 63.983, the information specified in 40 CFR 63.999(c)(2)(i) through (iii), as applicable.
    (A) The information recorded in 40 CFR 63.998(d)(1)(iii)(B) through (E);
    (B) Reports of the times of all periods recorded under 40 CFR 63.998(d)(1)(ii)(A) when the vent stream is diverted from the control device through a bypass line; and
    (C) Reports of all times recorded under 40 CFR 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.
vii. For flares subject to this Subpart SS (through incorporation by reference in Subpart VVVVVV), information on all periods when all pilot flames were absent or the flare flame was absent as recorded in 40 CFR 63.998(a)(1)(i)(C).

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-Wide

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

Pollutant	Limits/Standards	Applicable Regulation
Odor	**State-enforceable Only** Suitable control measures	15A NCAC 02D .1806
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, Volatile organic compounds, and Hazardous air pollutants	See Section 2.2 A.2	15A NCAC 02Q .0315 (Avoidance of Title V)
Carbon monoxide, Nitrogen oxides, Sulfur dioxide, and Volatile organic compounds	See Section 2.2 A.3	15A NCAC 02Q .0317 (Avoidance of PSD)
Toxic Air Pollutants	**State-enforceable Only** See Section 2.2 A.4	15A NCAC 02Q .0711

State-enforceable Only

1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.
b. The DAQ may require the Permittee to implement maximum feasible controls per 15A NCAC 02D .1806(g) if:
   i. A member of the DAQ staff determines by field investigation that an objectionable odor is present by considering the nature, intensity, pervasiveness, duration, and source of the odor and other pertinent factors;
   ii. The facility emits known odor causing compounds such as ammonia, total volatile organics, hydrogen sulfide, or other sulfur compounds at levels that cause objectionable odors beyond the property line of the facility; or
   iii. The DAQ receives epidemiological studies associating health problems with odors from the facility or evidence of documented health problems associated with odors from the facility provided by the State Health Director.
c. If the DAQ determines that a facility is emitting an objectionable odor, the Permittee shall:
   i. Complete the determination process outlined in 15A NCAC 02D .1807 and submit to the DAQ a completed maximum feasible control determination process, a permit application for maximum feasible controls and a compliance schedule within 180 days of receipt of written notification from the Director of the requirement to implement maximum feasible controls; and
   ii. Have installed and begun operating the maximum feasible controls within 18 months of receipt of written notification from the DAQ of the requirement to implement maximum feasible controls.

2. 15A NCAC 02Q .0315: SYNTHETIC MINOR FACILITIES (AVOIDANCE CONDITION for 15A NCAC 02Q .0500: TITLE V PROCEDURES)

a. To avoid the applicability of 15A NCAC 02Q .0500, the Permittee shall limit the facility-wide emissions of CO, NOx, SO_2, and VOC to each less than 100 tons for any consecutive 12-month period.
b. To avoid the applicability of 15A NCAC 02Q .0500, the Permittee shall limit the facility-wide emissions of single HAP and aggregate HAPs to less than 10 tons per consecutive 12-months period 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 specified in Sections 2.2 A.2.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

d. The monitoring and recordkeeping requirements in Sections 2.2 A.3.c and d below shall be sufficient to ensure compliance with 15A NCAC 02Q .0315. If these monitoring and recordkeeping requirements are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500.

e. Individual HAP Emissions - Each month the Permittee shall calculate the facility-wide emission rates of each individual HAP during the previous calendar month and during the previous consecutive 12-months. The emissions estimations shall include all HAP emission sources, including but not limited to all chemical processes, combustion sources, storage tanks, wastewater treatment, remediation activities, fugitive emissions, and material handling. Acceptable emissions estimation methodologies include:
   i. Engineering estimates for chemical operations, based on chemical properties, operating conditions, and production rates;
   ii. US EPA-approved emission factors for fuel combustion (i.e., AP-42 emission factors);
   iii. US EPA-approved emissions factors for chemical storage operations (i.e., AP-42 emission factors); and
   iv. Either TOXCHEM or US EPA-approved WATER9 software for wastewater treatment operations.

   The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if the emissions calculations are not recorded as specified above or the 12-month rolling emissions of any HAP exceeds the limitation provided in Section 2.2 A.2.b above.

f. Total (Aggregate) HAP Emissions - Each month the Permittee shall calculate the facility-wide emission rate of total (aggregate) HAPs during the previous calendar month and during the previous consecutive 12-months. The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if the emissions calculations are not recorded as specified above or the 12-month rolling emissions of total (aggregate) HAPs exceed the limitation in Section 2.2 A.2.b above.

g. Monitoring/recordkeeping requirements for the flare **(ID No. G-1955)** in Sections 2.1 E.2. t through y above shall be sufficient to ensure compliance with 15A NCAC 02Q .0315. The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0500 if the monitoring or record keeping requirements of these Sections 2.1 E.2.t through y are not complied with.

Reporting [15A NCAC 2Q .0508(f)]

h. Reporting requirements in Section 2.2 A.3.f below (for CO, NOx, SO_2, and VOC), and Sections 2.1 E.2.ee though ll above, as applicable (for the flare **(ID No. G-1955))**, shall be sufficient to ensure compliance with the requirements in 15A NCAC 02Q .0315.

i. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities required by Sections 2.2 A.2.d through 2.2 A.2.g, above, acceptable to the Regional Air Quality Supervisor, of postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for months between January and June. The report shall contain the following information:
   i. For each consecutive 12-month period ending during the previous calendar half:
      (A) Provide the highest individual (single) HAP emission rate (in tons per consecutive 12-months) and state the identity of the highest emitting HAP; and,
      (B) Provide the total (aggregate) HAPs emission rate (in tons per consecutive 12-months).
   ii. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0317: AVOIDANCE CONDITION for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. To avoid the applicability of existing major stationary source requirements under 15A NCAC 02D .0530 (i.e., to be classified as an existing minor source), the Permittee shall limit the facility-wide emissions of CO, NOx, SO_2, and VOC to each less than 100 tons for any consecutive 12-month period.

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above any limit in Condition 2.2 A.3.a above, the Permittee shall be deemed an existing major stationary source under 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508 (f)]

c. The Permittee shall keep monthly operational records in a logbook (written or electronic format), as follows:
   i. the total quantity (in million standard cubic feet) of natural gas and propane fired in the affected sources;
   ii. the total quantity (in 1,000 gallons) of fuel oil fired in the affected sources;
   iii. the fuel oil supplier certifications for any fuel oil fired in the affected sources, including the sulfur content of the fuel oil (in percent by weight);
   iv. the total amount of each type of raw materials consumed;
   v. the total amount of polyester polyols produced; and
   vi. the data required for monitoring specified in Section 2.2 A.3.d.i. below.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not kept.

d. Each month the Permittee shall calculate the facility-wide emissions of CO, NOx, SO_2, and VOC during the previous calendar month and during the previous consecutive 12-months. The emissions estimations shall include all affected emission sources, including, but not limited to, all chemical processes, combustion sources, storage tanks, wastewater treatment, remediation activities, fugitive emissions, and material handling. Acceptable emissions estimation methodologies include:
   i. Engineering estimates for chemical operations, based on chemical properties, operating conditions, and production rates;
   ii. US EPA-approved emission factors for fuel combustion (i.e., AP-42 emission factors);
   iii. US EPA-approved emissions factors for chemical storage operations (i.e., AP-42 emission factors); and
   iv. Either TOXCHEM or US EPA-approved WATER9 software for wastewater treatment operations.

   The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format) and made available to the DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the emissions calculations are not recorded as provided above or the 12-month rolling emissions of either CO, NOx, SO_2, or VOC exceeds the emission limitation provided in Section 2.2 A.3.a above.

e. Monitoring/recordkeeping requirements for the flare **(ID No. G-1955)** in Sections 2.1 E.2.t through y above shall be sufficient to ensure compliance with 15A NCAC 02Q .0317. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monitoring or record keeping requirements of these Sections 2.1 E.2.t through y are not complied with.

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

f. Reporting requirements for the flare **(ID No. G-1955)** in Sections 2.1 E.2.ee though ll above, as applicable, shall be sufficient to ensure compliance with 15A NCAC 02Q .0317.

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 emissions of CO, NOx, SO_2, and VOC for each of the previous 17 months; and
   ii. The consecutive 12-month period emissions of CO, NOx, SO_2, and VOC for each of the six months of the calendar half.
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable Only

4. 15A NCAC 02Q .0711 TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT

a. The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any Toxic Air Pollutant (TAP) listed in 15A NCAC 02Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions"), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TAP permitting emission rates (TPER) listed in 15A NCAC 02Q .0711 without first obtaining an air permit to construct or operate.

b. PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements found in 15A NCAC 02D .1100 "Control of Toxic Air Pollutants."

c. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.
d. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

Pollutant	CAS No.	Carcinogens (lb/yr)	Chronic Toxicant (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Arsenic and inorganic arsenic compounds	N/A	0.194			
Ammonia	7664-41-7				2.84
Benzene	71-43-2	11.069			
Beryllium	7440-41-7	0.378			
Cadmium	7440-43-9	0.507			
Formaldehyde	50-00-0				0.16
Nickel, soluble compounds, as nickel	N/A		2.5×10^{-2}		

State-enforceable only

5. DISCLOSURE OF INFORMATION RELATING TO EMISSIONS OF FLUORINATED CHEMICALS

The Permittee shall have an ongoing duty to disclose the presence of materials containing fluorinated chemicals at the facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Supervisor, DAQ within thirty days of the Permittee becoming aware of such information, unless such information has already been disclosed to DAQ by the Permittee. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term "fluorinated chemicals" includes but is not limited to per- and polyfluoroalkyl substances (PFAS). [15A NCAC 02Q. 0308(a); 15A NCAC 02Q.0309(b)]

2.3 Permit Shield for Non-Applicable Requirements

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

A. As of the issuance of permit revision T57, 15A NCAC 02D .0614 "Compliance Assurance Monitoring" is not applicable to this facility because each emission source controlled by the flare (**ID No. G-1955)** and scrubber tank **(ID No. S-7001-4)** is exempt from CAM applicability based on one of the exemptions in 15A NCAC 02D .0614(b)(1), and the raw material silo **(ID No. T-7906)** does not have potential emissions greater than the major source threshold and so does not meet the applicability test in 15A NCAC 02D .0614(a)(3).

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

Emission Source ID No.	Emission Source Description[1,2]	No.
ICLEAN	Cleaning and decommissioning operations	1
ICT-1 **GACT VVVVVV**	Polyester polyols cooling tower; 3,750 gpm capacity	2
IH7905 **GACT VVVVVV**	Closed loop dry raw material unloading; 30 million pounds per year capacity (vented through IT7200)	3
IH7907 **GACT VVVVVV**	Closed loop dry raw material unloading; 6000 pounds per hour capacity (vented through IT7007)	4
IL01	Gasoline dispensing station	5
IL02	Diesel dispensing station	6
IL03	Fuel oil dispensing station	7
ILAB	Laboratory activities	8
ILIQADD	Liquid additives loading	9
IMAINT	Various Maintenance Activities	10
IMOBILE	All mobile combustion and other sources onsite	11
IPAINT	Various Painting Activities	12
IPARTWASH	Parts washers	13
IR01 **GACT VVVVVV**	Polyester polyols blending operations	14
IR02 **GACT VVVVVV**	Polyester polyols transloading operations	15
IR03 **GACT VVVVVV**	Polyester polyols raw material heating	16
IR04 **GACT VVVVVV**	Electric heater for drums and 330 gallon capacity totes	17
IR05 **GACT VVVVVV**	Isotainer loading (20,000 gallon capacity)	18
IRAW **GACT VVVVVV**	Raw material addition (to reactors)	19
IRESTRAN **GACT VVVVVV**	Polyester polyols product transfer	20
IS19341 **GACT VVVVVV**	Wastewater treatment plant #2 clarifier	21
IS1959 **GACT VVVVVV**	Wastewater treatment plant #3 clarifier	22
IS1985 **GACT VVVVVV**	Wastewater treatment plant reactor clarifier	23
ISB01	Sandblasting activities	24
ISOLIDADD	Solid adhesive unloading	25
IT01	Gasoline storage tank (145 gallon capacity)	26
IT02	Fuel oil storage tank (506 gallon capacity)	27
IT03	Highway Fuel A diesel storage tank (262 gallon capacity)	28
IT04	Highway Fuel B diesel storage tank (262 gallon capacity)	29
IT1035	evaporator distillate receiver; 30 gallons	30
IT12 **GACT VVVVVV**	Floating roof tank storing very low volatility material; 1,000,000 gallon capacity	31
IT1219 **GACT VVVVVV**	Fixed roof storage tank; 28,000 gallon capacity	32

Emission Source ID No.	Emission Source Description[1,2]	No.
IT1220 **GACT VVVVVV**	Fixed roof storage tank; 28,000 gallon capacity	33
IT130026R **GACT VVVVVV**	Tank; 37,000 gallon capacity	34
IT130029A	Sulfuric acid tank	35
IT130051R	Generator fuel oil storage tank (410 gallon capacity)	36
IT1301	Fuel oil tank	37
IT1500E	Fuel oil tank	38
IT1500F	Fuel oil tank	39
IT1500G	Fuel oil tank	40
IT1500H	Fuel oil tank	41
IT15012	Generator fuel oil storage (79 gallon capacity)	42
IT1916R	Waste treatment phosphoric acid tank	43
IT1917	Waste treatment ammonia tank	44
IT1919	Lime storage silo	45
IT19351 **GACT VVVVVV**	Wastewater treatment plant clear well	46
IT1955 **GACT VVVVVV**	Wastewater treatment plant #3 aeration basin	47
IT1964 **GACT VVVVVV**	Wastewater treatment plant clear well	48
IT1983	Waste treatment sulfuric acid tank	49
IT1991 **GACT VVVVVV**	Wastewater treatment plant clear well	50
IT230	Fixed roof storage tank; 9,000 gallon capacity	51
IT3223	Aluminum sulfate tank; 10,000 gallons	52
IT5400 **GACT VVVVVV**	Fixed roof storage tank; 20,000 gallon capacity	53
IT5420A-C **GACT VVVVVV**	Fixed roof storage tank; 20,000 gallon capacity	54
IT5700 **GACT VVVVVV**	Fixed roof storage tank; 57,000 gallon capacity	55
IT6021	Sodium hypochlorite tank	56
IT6109R **GACT VVVVVV**	Raw material tank; 20,000 gallon capacity	57
IT6311 **GACT VVVVVV**	Raw material fixed roof storage tank; 42,298 gallon capacity	58
IT6409R **GACT VVVVVV**	Product storage tank (30,400 gallon capacity)	59
IT6417 **GACT VVVVVV**	Diethylene glycol fixed roof storage tank; 65,000 gallon capacity	60
IT64173 **GACT VVVVVV**	Diethylene glycol fixed roof storage tank; 56,000 gallon capacity	61
IT6419 **GACT VVVVVV**	Storage tank	62
IT6516A **GACT VVVVVV**	Raw material storage tank; 20,000 gallon capacity	63
IT6900 **GACT VVVVVV**	Diethylene glycol storage tank	64
IT7000 **GACT VVVVVV**	Fixed roof storage tank; 31,000 gallon capacity	65

Emission Source ID No.	Emission Source Description[1,2]	No.
IT70012 **GACT VVVVVV**	Additive fixed roof storage tank; 500 gallon capacity	66
IT70013 **GACT VVVVVV**	Additive fixed roof storage tank; 500 gallon capacity	67
IT70015 **GACT VVVVVV**	Additive fixed roof storage tank; 30,400 gallon capacity	68
IT7004 **GACT VVVVVV**	Tall oil fatty acid fixed roof storage tank; 32,000 gallon capacity	69
IT7005 **GACT VVVVVV**	Surfactant fixed roof tank; 9,971 gallon capacity	70
IT7006 **GACT VVVVVV**	Fixed roof storage tank; 49,000 gallon capacity	71
IT7007 **GACT VVVVVV**	Raw material fixed-roof slurry tank; 3,870 gallon capacity	72
IT7008 **GACT VVVVVV**	Fixed roof storage tank; 101,000 gallon capacity	73
IT7009 **GACT VVVVVV**	Additive fixed roof storage tank; 25,250 gallon capacity	74
IT7011 **GACT VVVVVV**	Fixed roof storage tank; 31,000 gallon capacity	75
IT7014 **GACT VVVVVV**	Fixed roof storage tank; 53,000 gallon capacity	76
IT7016 **GACT VVVVVV**	Fixed roof storage tank; 101,000 gallon capacity	77
IT7017 **GACT VVVVVV**	Fixed roof storage tank; 101,000 gallon capacity	78
IT7019 **GACT VVVVVV**	Fixed roof storage tank; 52,000 gallon capacity	79
IT7101 **GACT VVVVVV**	Residue weigh tank; 3,675 gallon capacity	80
IT71024 **GACT VVVVVV**	Polyester polyols rework tank; 25 gallon capacity	81
IT71044 **GACT VVVVVV**	Polyester polyols rework tank; 100 gallon capacity	82
IT7104A-B **GACT VVVVVV**	Fixed roof storage tank; 6,000 gallon capacity	83
IT7200 **GACT VVVVVV**	Slurry Tank	84
IT7230-10 **GACT VVVVVV**	10 gallon mix tank	85
IT76003	Therminol receiver	86
IT7601	Therminol fixed roof storage tank; 10,486 gallon capacity	87
IT7603	Fuel oil tank	88
IT8200R	Highway fuel A diesel storage tank (2000 gallon capacity)	89
IT8201R	Gasoline (4000 gallon capacity)	90
IT8205	Used oil storage tank (536 gallon capacity)	91
IT8206R	Diesel storage tank (1000 gallon capacity)	92
IT8209	Fuel oil storage (550 gallon capacity)	93
IWASTE	All waste drum storage onsite	94
IWCU	Water treatment chemical usage	95
IWTT	Foamtrol water treatment tote (400 gallon capacity)	96
IES01	Site remediation activities	97

Emission Source ID No.	Emission Source Description[1,2]	No.
ICLRMU **GACT VVVVVV**	Organic liquid unloading stations	98
IRD	Research, development, and laboratory activities	99

[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.