



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL ABRACZINSKAS
Director

TBD

Matthew Hendrickson
Operations Director
DAK Americas, LLC
3216 Cedar Creek Road
Fayetteville, N.C. 28312

SUBJECT: Air Quality Permit No. 04319T26
Facility ID: 2600106
DAK Americas, LLC – Cedar Creek Site
Fayetteville, North Carolina
Cumberland County
Fee Class: Title V
PSD Status: Major

Dear Mr. Hendrickson:

In accordance with your completed Air Quality Permit Application for renewal and a 501(b)(2) modification of your Title V permit, we are forwarding herewith Air Quality Permit No. 04319T26 authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

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

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to existing emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.



North Carolina Department of Environmental Quality | Division of Air Quality
217 West Jones Street | 1641 Mail Service Center | Raleigh, North Carolina 27699-1641
919.707.8400

Cumberland County has triggered increment tracking under PSD for particulate matter 10 (PM₁₀) and sulfur dioxide (SO₂). However, this permit renewal and 502(b)(10) modification does not consume or expand increments for any 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 yours,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
James Burke, DAK Americas, LLC
Laserfiche
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. 04319T25:*

Page No.	Section	Description of Changes
Throughout	Throughout	<ul style="list-style-type: none"> • Updated dates and permit numbers. • Changed name to “DAK Americas, LLC - Cedar Creek Site” to reflect name on application. • Corrected typos. • Updated formatting to match latest DAQ standard. Corrections to formatting are not intended to impact the Permittee’s compliance requirements.
5	1.	<ul style="list-style-type: none"> • Removed references to No. 6 fuel oil from ES-001 and ES-002 at Permittee’s request.
15	2.1 E.	<ul style="list-style-type: none"> • Removed all references and requirements related to firing No. 6 fuel oil because no sources at that facility can burn No. 6 fuel oil.
16	2.1 E.5	<ul style="list-style-type: none"> • Updated condition for 40 CFR Part 63 Subpart JJJJJ to match DAQ’s standard wording for these types of boilers. This change is meant for uniformity across DAQ’s permits, and is not meant to impact compliance requirements.
23	2.2 A.1	<ul style="list-style-type: none"> • Noted date of modeling approval.
24	2.2 B.1	<ul style="list-style-type: none"> • Noted date of modeling approval.
32	3. (new)	<ul style="list-style-type: none"> • Moved the list of Insignificant Activities to this new section.
33	4.	<ul style="list-style-type: none"> • Updated General Conditions to v6.0.

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



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
04319T26	04319T25	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 *[enter date six months prior to expiration date]*.

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

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

Permittee: **DAK Americas, LLC – Cedar Creek Site**
Facility ID: **2600106**
Primary SIC Code: **2821**
NAICS Code: **325211**

Facility Site Location: **3216 Cedar Creek Road**
City, County, State, Zip: **Fayetteville, Cumberland County, NC, 28312**
Mailing Address: **3216 Cedar Creek Road**
City, State, Zip: **Fayetteville, NC, 28312**

Application Number: **2600106.22A**
Complete Application Date: **August 8, 2022**

Division of Air Quality,
Regional Office Address: **Fayetteville Regional Office**
225 Green Street, Suite 714
Fayetteville, North Carolina 28301

Permit issued this the TBD

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

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List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
CSAPR	Cross-State Air Pollution Rule
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
PM_{2.5}	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM₁₀	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
SO₂	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	Control Device ID No.	Control Device Description
Esterification/Continuous Polymerization Operations			
ES 94-02 NSPS DDD, GACT VVVVVV	Seal pot vent (raw material preparation/esterification operation)	CD 94-02	Chill water scrubber/condenser
ES 94-3 NSPS DDD, GACT VVVVVV	UFPP hotwell venting to the glycol wells header (ID No. ES 94-4) (polymerization operation)	N/A	N/A
ES 94-5 NSPS DDD, GACT VVVVVV	Finisher hotwell venting to the glycol wells header (ID No. ES 94-4) (polymerization operation)	N/A	N/A
ES 94-6 NSPS DDD, GACT VVVVVV	Secondary spray hotwell venting to the glycol wells header (ID No. ES 94-4) (polymerization operation)	N/A	N/A
ES 94-4 NSPS DDD, GACT VVVVVV	Glycol wells header (polymerization operation)	N/A	N/A
ES 94-08 NSPS DDD, GACT VVVVVV	Ejector hotwell (polymerization operation)	CD 94-08	Chill water scrubber/condenser
Solid State Polycondensation (SSP) Operations			
ES 94-15	Precrystallizer	CD 94-15a and CD 94-15aa CD 1333-F01 CD 00-15	Parallel cyclones (94.5 inches in diameter each), Bagfilter (573 square feet filter area), and Catalytic oxidizer
ES 94-16	Crystallizer	CD 94-15b CD 1333-F01 CD 00-15	Cyclone (94.5 inches in diameter), Bagfilter (573 square feet filter area), and Catalytic oxidizer
Batch Polymerization Operations and Storage Area			
ES-94-1	Ethylene Glycol Storage Area	N/A	N/A
ES-94-24	Crude Ethylene Glycol Storage Area (including ethylene glycol recovery)	N/A	N/A
ES-13 GACT VVVVVV	Esterification and Polymerization Process Vents, Steam Jet Ejectors, and Tank / Storage Vents	CD-TO	Natural gas-fired thermal oxidizer (7.5 million Btu per hour max heat input)
Miscellaneous Dust Sources			
ES 94-18	SSP cooler	CD 94-18	Dust filter (1,290 square feet filter area)
ES 94-24	Isophthalic acid silo	CD 94-24	Bin vent filter (308 square feet filter area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Dowtherm Heaters and Wastewater Handling System			
ES 94-9a and ES 94-9b NSPS Dc	Two natural gas/No. 2 fuel oil-fired Dowtherm heaters with low-NOx burners (41.7 million Btu per hour, each)	N/A	N/A
DTH-1 NSPS Dc	Natural gas/No. 2 fuel oil-fired Dowtherm heater (with preheater, 39.3 million Btu per hour max heat input)	N/A	N/A
DTH-2	Natural gas/No. 2 fuel oil-fired Dowtherm heater (23.3 million Btu per hour max heat input)	N/A	N/A
DTH-3	Natural gas/No. 2 fuel oil-fired Dowtherm heater (27.2 million Btu per hour max heat input)	N/A	N/A
Service Area			
ES-001 and ES-002 GACT JJJJJ	Two natural gas/No. 2 fuel oil-fired boilers (222 million Btu per hour heat input rate each)	N/A	N/A
ES-003 NSPS Dc	One natural gas-fired boiler equipped with low NOx burners and flue gas recirculation (100 million Btu per hour heat input rate)	N/A	N/A
ES SCWW	Wastewater treatment system (equalization, pH adjustment, aerated basin, clarifier, digester, contactor, outfall, lift station)	N/A	N/A

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 Emission Source(s) Specific Limitations and Conditions

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

A. Esterification/Continuous Polymerization Operations, including:

- **Seal pot vent (ID No. ES 94-02) with associated chill water scrubber/condenser (ID No. CD 94-02)**
- **Glycol wells header (ID No. ES 94-4) with associated hotwells:**
 - **UFPP hotwell (ID No. ES 94-3);**
 - **Finisher hotwell (ID No. ES 94-5); and,**
 - **Secondary spray hotwell (ID No. ES 94-6).**
- **Ejector hotwell vent (ID No. ES 94-08) with associated chill water scrubber/condenser (ID No. CD 94-08)**

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	New Source Performance Standards for the Polymer Manufacturing Industry	15A NCAC 02D .0524 (40 CFR 60, Subpart DDD)
Toxic Air Pollutants	<u>State-enforceable Only</u> Facility-Specific TAP Emission Limitations See Section 2.2 A.1	15A NCAC 02D .1100
Hazardous Air Pollutants	Chemical Manufacturing Area Source GACT requirements; See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart VVVVVV)
Hazardous Air Pollutants	<u>MACT Avoidance Condition</u> See Section 2.2 D.1	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)
Odor	<u>State-enforceable Only</u> See Section 2.2 D.3	15A NCAC 02D .1806

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

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart DDD "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry," including Subpart A "General Provisions."

Emission Standards [40 CFR 60.562-1(c)(2)]

- b. Limit continuous total organic compound (TOC) emissions from the raw material preparation operation (**ID No. ES 94-02**) to no greater than 0.04 kilograms per million grams of product (kg/Mg).
- c. Limit continuous TOC emissions from the continuous polymerization operation (**ID Nos. ES 94-4 and ES 94-08**) to no greater than 0.02 kilograms per million grams of product (kg/Mg).
- d. Maintain the concentration of ethylene glycol in the liquid effluent exiting the vacuum system servicing the polymerization operation at or below 0.35 percent (%) by weight, averaged on a rolling 14-operating day period.

Operating Standards [40 CFR 60.562-1]

- e. The average daily temperature of the chill water scrubber/condensers (**ID Nos. CD 94-02 and CD 94-08**) shall not exceed 63.8 degrees Fahrenheit.
- f. Closed vent systems and control devices used to comply with 40 CFR Part 60, Subpart DDD shall be operated at all times when emissions may be vented to them. [40 CFR 60.562-1(d)]

Testing [15A NCAC 02Q .0508(f), 40 CFR 60.564]

- g. If emission testing is required, the testing shall be performed in accordance with the procedures provided in 40 CFR 60.564 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.b, c, and/or d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [40 CFR 60.563, 40 CFR 60.564(j), 40 CFR 60.565(f)(2)]

- h. The Permittee shall install, calibrate, maintain, and operate temperature monitoring devices on the liquid streams of the chilled water scrubbers/condensers (**ID Nos. CD 94-02 and CD 94-08**). The device shall continuously measure and record the chilled water temperature to within 1 percent (relative to degrees Celsius) or ± 0.9 degrees Fahrenheit, whichever is greater. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if it fails to monitor and record the liquid stream temperature as provided above, or if the daily average temperature exceeds the limit in Section 2.1 A.1.e of this permit. [40 CFR 60.563(e)]
- i. The Permittee shall install flow indicators on the liquid streams of the chilled water scrubbers/condensers (**ID Nos. CD 94-02 and CD 94-08**). The device shall indicate and record whether or not flow exists at least once every fifteen minutes. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if it fails to monitor and record the presence liquid as provided above, or if any consecutive readings indicate that no flow is present for 90 minutes (or greater). [40 CFR 60.563(e)]
- j. The Permittee shall perform inspections and maintenance of the chilled water scrubbers/condensers (**ID Nos. CD 94-02 and CD 94-08**) as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's recommendations, the inspection and maintenance requirement shall include, as a minimum, a visual inspection of the spray nozzles to check for clogging and/or degradation during each planned shutdown of the Resins Plant. The period between consecutive visual inspections shall not exceed 24 months. The inspection and maintenance results shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the chilled water scrubbers/condensers are not inspected and maintained as required above. [40 CFR 60.563(e)]
- k. The Permittee shall monitor the ethylene glycol concentration of the liquid effluent from the steam-jet ejectors used to produce a vacuum in the polymerization reactors in accordance with the following procedures:
 - i. At least once per operating day, collect a sample of the liquid effluent using the grab sampling procedures of ASTM D3370-07, "Standard Practices for Sampling Water from Closed Conduits", except as provided in iv. below;
 - ii. Determine ethylene glycol concentration of the sample using procedures that conform to the methods described in ASTM D2908-74 or 91, "Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography";
 - iii. Calculate the average ethylene glycol concentration (in percent by weight) on a daily basis over a rolling 14-operating day period, except as provided in Section 2.1 A.1.k.iv below;
 - iv. The Permittee may elect to reduce the sampling program to any 14 consecutive day period once every two calendar months, if at least seventeen consecutive 14-operating day rolling average concentrations immediately preceding the reduced sampling program are each less than 0.10% by weight ethylene glycol. If the average concentration obtained during the reduced testing period exceeds the upper 95 percent confidence interval calculated in accordance with 40 CFR 60.564(j)(iv), then the owner or operator shall reinstitute a daily sampling program as provided in Section 2.1 A.1.k.i above. A reduced sampling program can be reinstated if the requirements specified in this paragraph are met.

The Permittee shall record the date of each liquid effluent sample, the ethylene glycol concentration of each sample, and the results of each 14-operating day average concentration. Records shall be retained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0524 if the ethylene glycol concentration of the liquid effluent from the steam-jet ejectors is not monitored and recorded as required above, or if the 14-day average concentration exceeds the limit in Section 2.1 A.1.d above. [40 CFR 60.564(j)]

Reporting [40 CFR 60.565]

1. The Permittee shall submit a summary report of monitoring and recordkeeping activities in Section 2.1 A.1.h through Section 2.1 A.1.k, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
 - i. Each period during which the average daily temperature of either chilled water scrubber/condenser (**ID No. CD 94-02 or CD 94-08**) exceeded the limit in Section 2.1 A.1.e of this permit.
 - ii. Each period during which no flow was detected at either chilled water scrubber/condenser (**ID No. CD 94-02 or CD 94-08**) for a period of 90 minutes or more.
 - iii. Each period during which the 14-operating day rolling average ethylene glycol concentration (in percent by weight) exceeded the limit in Section 2.1 A.1.d of this permit.
 - iv. All instances of deviations from the requirements of this permit must be clearly identified.

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B. Solid State Polycondensation (SSP) Operations, including:

- **Precrystallizer (ID No. ES 94-15) with associated parallel cyclones (ID Nos. 94-15a and 94-15aa), bagfilter (ID No. CD 1333-F01), and catalytic oxidizer (ID No. CD 00-15).**
- **Crystallizer (ID No. ES 94-16) with associated cyclones (ID Nos. 94-15b), bagfilter (ID No. CD 1333-F01), and catalytic oxidizer (ID No. CD 00-15).**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 * P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Toxic Air Pollutants (TAP)	State-enforceable Only Facility-Specific TAP Emission Limitations See Section 2.2 A.1	15A NCAC 02D .1100
Hazardous Air Pollutants	MACT Avoidance Condition See Section 2.2 D.1	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)
Odor	State-enforceable Only See Section 2.2 D.3	15A NCAC 02D .1806

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

- a. Emissions of particulate matter from each affected source (**ID Nos. ES 94-15 and ES 94-16**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where: E = allowable emission rate in pounds per hour, and
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 an emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- c. Particulate matter emissions from these sources (**ID Nos. ES 94-15 and ES 94-16**) shall be controlled by cyclones (**ID Nos. CD 94-15a, 94-15aa, and 94-15b**) and bagfilter (**ID No. CD 1333-F01**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- A monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - An internal inspection of the bagfilter's (**ID No. CD 1333-F01**) structural integrity during each planned shutdown of the Solid State Polycondensation operation. The period between consecutive internal inspections shall not exceed 24 months.

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

- d. The results of inspection and maintenance required by Section 2.1 B.1.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 inspection;
 - iii. The results of any maintenance performed on the bagfilters; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 B.1.c and Section 2.1 B.1.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.

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

- a. Visible emissions from these sources (**ID Nos. ES 94-15 and ES 94-16**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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

- b. If an emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a, above, 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 these sources (**ID Nos. ES 94-15 and ES 94-16**) 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 these sources 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 B.2.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 or 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 required by Section 2.1 B.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 given in Section 2.1 B.2.c and Section 2.1 B.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.

**C. SSP Cooler (ID No. ES 94-18) with associated dust filter (ID No. CD 94-18); and,
 Isophthalic acid silo (ID No. ES 94-24) with associated bin vent filter (ID No. CD 94-24).**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

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

- a. Emissions of particulate matter from each affected source (**ID Nos. ES 94-18 and ES 94-24**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$

Where: E = allowable emission rate in pounds per hour, and
 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 an emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

- c. Particulate matter emissions from the affected sources (**ID Nos. ES 94-18 and ES 94-24**) shall be controlled by dust filter and bin vent filter (**ID Nos. CD 94-18 and CD 94-24**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. A monthly visual inspection of the system ductwork and material collection unit for leaks;
 - ii. An internal inspection of the structural integrity of dust filter (**ID No. CD 94-18**) associated with the SSP cooler during each planned shutdown of the Solid State Polycondensation operation. The period between consecutive internal inspections shall not exceed 24 months; and,
 - iii. An annual internal inspection of the structural integrity of bin vent filter (**ID No. CD 94-24**) associated with the isophthalic acid storage silo.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and fabric filters are not inspected and maintained as required above.

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

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the bagfilters; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on any control device (**ID Nos. CD 94-18 and CD 94-24**) within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities in Section 2.1 C.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July

and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

- a. Visible emissions from these sources (**ID Nos. ES 94-18 and ES 94-24**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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

- b. If an emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.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 these sources (**ID Nos. ES 94-18 and ES 94-24**) 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 these sources 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.2.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 or 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 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 given in Section(s) 2.1 C.2.c and d above 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. Two natural gas/No. 2 fuel oil-fired Dowtherm heaters with low-NOx burners (ID Nos. ES 94-9a and ES 94-9b)

Natural Gas/ No. 2 Fuel Oil-Fired Dowtherm Heater (with preheater) (ID No. DTH-1)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Sources: ES 94-9a and ES 94-9b 0.21 pounds per million Btu heat input Affected Source: DTH-1 0.34 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	No. 2 fuel oil sulfur content shall not exceed 0.5% by weight.	15A NCAC 02D .0524 (40 CFR 60, Subpart Dc)
Visible emissions	20 percent opacity	15A NCAC 02D .0524 (40 CFR 60, Subpart Dc)
Hazardous Air Pollutants	MACT Avoidance Condition See Section 2.2 D.1	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)

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

- a. Emissions of particulate matter from the combustion of natural gas or No. 2 fuel oil that are discharged from these Dowtherm heaters (ID Nos. ES 94-9a and ES 94-9b) into the atmosphere shall not exceed 0.21 pounds per million Btu heat input.
- b. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from this source (ID No. DTH-1) into the atmosphere shall not exceed 0.34 pounds per million Btu heat input.

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Sections 2.1 D.1.a and b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- d. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or No. 2 fuel oil in these sources (ID Nos. ES 94-9a, ES 94-9b and DTH-1).

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

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions."

Emission Standards [15A NCAC 02D .0524]

- b. The maximum sulfur content of any fuel oil received and fired in these Dowtherm heaters (ID Nos. ES 94-9a, ES 94-9b, and DTH-1) shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]
- c. Visible emissions from the Dowtherm heaters shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43c(c)]

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

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above any limit given in Section 2.1 D.2.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

- e. The Permittee shall retain a copy of the fuel supplier certification for any No. 2 fuel oil fired in these Dowtherm heaters (**ID Nos. ES 94-9a, ES 94-9b, and DTH-1**). The fuel supplier certification shall include the following information:
 - i. The name of the oil supplier;
 - ii. The sulfur content of the oil (in % by weight); and,
 - iii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the sulfur content of the oil exceeds the limit provided in Section 2.1 C.2.b, above, or if fuel supplier certifications are not retained as described above. [40 CFR 60.48c(f)(1)]

- f. When No. 2 fuel oil is fired in these Dowtherm heaters (**ID Nos. ES 94-9a, ES 94-9b, and DTH-1**), the Permittee shall demonstrate that the percent opacity from the emission points of the Dowtherm heaters in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 D.2.c, above. The Method 9 observations shall be conducted according the following schedule:
 - i. Once every 12 months or within 45 days of combusting No. 2 fuel oil, whichever is later, when no visible emissions were observed during the previous Method 9 observation;
 - ii. Once every 6 months or within 45 days of combusting No. 2 fuel oil, whichever is later, when visible emissions were observed, but at no more than 5% opacity, during the previous Method 9 observation;
 - iii. Once every 3 months or within 45 days of combusting No. 2 fuel oil, whichever is later, when visible emissions were observed to be greater than 5% opacity but no more than 10% opacity during the previous Method 9 observation; and
 - iv. Once every 45 days when visible emissions were observed to be greater than 10 percent opacity during the previous Method 9 observation. [40 CFR 60.47c(a)]
- g. In addition to any other recordkeeping required by 40 CFR 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during each month and the date, time and opacity of each visible observation conducted. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained. [40 CFR 60.48c(g)(2)]

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

- h. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities required by Section 2.1 E.2.e through Section 2.1 E.2.g, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The summary report shall include the following information:
 - i. Fuel supplier certification(s) for distillate fuel oil, as provided in Section 2.1 D.2.e, above;
 - ii. A certified statement signed by the owner or operator that the records of fuel supplier certification(s) submitted represents all of the fuel fired at the affected Dowtherm heaters during the semiannual period; and,
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

**E. Two natural gas/No. 2 fuel oil-fired boilers () (ID Nos. ES-001 and ES-002); and,
One natural gas-fired boiler () (ID No. ES-003)**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Sources: ES-001, ES-002 0.22 pounds per million Btu heat input Affected Source: ES-003 0.21 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu per heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
N/A	Affected Source: ES-003 Recordkeeping only	15A NCAC 02D .0524 (40 CFR 60, Subpart Dc)
Sulfur dioxide	Combined SO ₂ emissions < 660.7 tons per consecutive 12- month period	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .0530)
Hazardous air pollutants	Affected Sources: ES-001 and ES-002 40 CFR Part 63, Subpart JJJJJ	15A NCAC 02D .1111
Hazardous air pollutants	MACT Avoidance Condition See Section 2.2 D.1	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)

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

- a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from these sources (**ID Nos. ES-001 and ES-002**) into the atmosphere shall not exceed 0.22 pounds per million Btu heat input.
- b. Emissions of particulate matter from the combustion of natural gas that are discharged from this source (**ID No. ES-003**) into the atmosphere shall not exceed 0.21 pounds per million Btu heat input.

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.1.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- d. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources (**ID Nos. ES-001, ES-002, and ES-003**).

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

- a. Emissions of sulfur dioxide from these sources (**ID Nos. ES-001, ES-002, and ES-003**) 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 E.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/reporting is required for to demonstrate compliance with sulfur dioxide emissions from the firing of No. 2 fuel oil or natural gas in these sources (**ID Nos. ES-001, ES-002, and ES-003**)

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

- a. Visible emissions from these boilers (**ID Nos. ES-001, ES-002, and ES-003**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent

not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.3.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 for visible emissions from the firing of No. 2 fuel oil or natural gas in these sources (**ID Nos ES-001, ES-002, and ES-003**).

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

- a. For the affected boiler (**ID No. ES-003**), the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 “New Source Performance Standards” (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,” including Subpart A “General Provisions.”

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

- b. In addition to any other recordkeeping required by 40 CFR 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired at the affected boiler (**ID No. ES-003**) during each month. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained. [40 CFR 60.48c(g)(2)]

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

Applicability [40 CFR 63.11193, 63.11194(a)(1) and (b), 63.11200(c)]

- a. For boilers (**ID Nos. ES-001 and ES-002**; i.e., existing boilers in the oil subcategory with no oxygen trim system) the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 “Maximum Achievable Control Technology” as promulgated in 40 CFR 63, Subpart JJJJJ, “National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers,” including Subpart A “General Provisions.”

Definitions and Nomenclature

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

General Provisions

- c. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart JJJJJ. [40 CFR 63.11235]

Compliance Dates

- d. The Permittee has satisfied the initial tune-up requirement [40 CFR 63.11196(a)]

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

- e. At all times, 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 the Permittee 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 that 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 63.11205(a)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these general compliance requirements are not met.

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

- f. The following work practice requirements apply:

- i. The Permittee shall conduct a tune-up every two years while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up, as specified below:
 - (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection. Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.
 - (B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
 - (C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection. Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.
 - (D) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject.
 - (E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
 - (F) If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 days of startup.
 - (G) Each tune-up shall be conducted no more than 25 months after the previous tune-up.
[40 CFR 63.11201(b), 63.11223(a) and (b)]

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

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

- g. The Permittee conducted a one-time energy assessment by a qualified energy assessor in June of 2012.

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

- h. The following recordkeeping requirements apply. The Permittee shall:
 - i. as required in 40 CFR 63.10(b)(2)(xiv), keep a copy of each notification and report that was submitted to comply with GACT JJJJJ and all documentation supporting any Notification of Compliance Status that was submitted. [40 CFR 63.11225(c)(1)]
 - ii. keep records to document conformance with the performance tune-ups. The records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. [40 CFR 63.11225(c)(2)(i)]
 - iii. keep a copy of the energy assessment report. [40 CFR 63.11225(c)(2)(iii)]
 - iv. keep records of the occurrence and duration of each malfunction of the boiler or of the associated air pollution control and monitoring equipment. [40 CFR 63.11225(c)(4)]
 - v. keep records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in **Section 2.1 E.5.e**, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. [40 CFR 63.11225(c)(5)]
 - vi. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
 - (A) the concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler;
 - (B) a description of any corrective actions taken as a part of the tune-up of the boiler; and
 - (C) the type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[40 CFR 63.11223(b)(6)]
 - vii. keep:
 - (A) records in a form suitable and readily available for expeditious review;
 - (B) each record for 5 years following the date of each recorded action; and
 - (C) each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The Permittee may keep

the records off site for the remaining 3 years.
[40 CFR 63.11225(d)]

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

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

- i. The annual compliance certification reporting requirements of 40 CFR 63.11225(b) shall be met by complying with General Condition P of this permit.

**6. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, the affected boilers (**ID Nos. ES-001, ES-002, and ES-003**) shall limit the combined sulfur dioxide emissions to less than 660.7 tons per consecutive 12-month period.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.6.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The Permittee shall keep monthly records of fuel usage in a logbook (written or in electronic format), as follows:
 - i. The total quantity (in million scf) of natural gas fired at the affected boilers;
 - ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired at the affected boilers; and,
 - iii. The fuel oil supplier certification for any fuel oil fired at the affected boilers, including the sulfur content of the oil (in percent by weight).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and fuel oil sulfur contents are not created and retained as required above.

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

- d. The Permittee shall calculate monthly and 12-month rolling SO₂ emissions from the affected boilers within 30 days after the end of each calendar month. Calculations shall be recorded in a logbook (written or electronic format), according to the following formulas:
 - i. Calculate SO₂ emissions from the previous calendar month using the following equation:

$$E_{SO_2} = (142 \times S_{FO_2} \times Q_{FO_2}) + (0.6 \times Q_{NG})$$

Where, E_{SO_2} = SO₂ emissions (in pounds) during the previous calendar month
 Q_{fo2} = Quantity of No. 2 fuel oil fired during the previous calendar month (in 1,000 gallons)
 S_{fo2} = Sulfur content in the No. 2 fuel oil (in percent by weight)
 Q_{ng} = Quantity of natural gas fired during the previous calendar month (in million scf)

- ii. Sum the SO₂ emissions from the affected boilers for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in Section 2.1 E.6.a of this permit.

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

- e. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities required by section 2.1 E.6.d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
 - i. The monthly SO₂ emissions from the affected boilers for the previous 17 calendar months;
 - ii. The 12-month rolling SO₂ emissions for each 12-month period ending during the reporting period; and,
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

F. Wastewater treatment system (equalization, pH adjustment, aerated basin, clarifier, digester, contactor, outfall, lift station) (ID No. ES SCWW)

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

Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants (TAP)	<u>State-enforceable Only</u> Facility-Specific TAP Emission Limitations See Section 2.2 A.1 and 2.2 B.1	15A NCAC 02D .1100
Hazardous Air Pollutants	<u>MACT Avoidance Condition</u> See Section 2.2 D.1	15A NCAC 02Q .0317 <i>(Avoidance of 15A NCAC 02D .1111)</i>
Odor	<u>State-enforceable Only</u> See Section 2.2 D.3	15A NCAC 02D .1806

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G. Natural Gas/ No. 2 Fuel Oil-Fired Dowtherm Heater (ID No. DTH-2)

Natural Gas/ No. 2 Fuel Oil-Fired Dowtherm Heater (ID No. DTH-3)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Source: DTH-2 0.48 pounds per million Btu heat input Affected Source: DTH-3 0.39 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu per heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous Air Pollutants	MACT Avoidance Condition See Section 2.2 D.1	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)

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

- a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from this source (**ID No. DTH-2**) into the atmosphere shall not exceed 0.48 pounds per million Btu heat input.
- b. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from this source (**ID No. DTH-3**) into the atmosphere shall not exceed 0.39 pounds per million Btu heat input.

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.1.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

- d. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas or No. 2 fuel oil in these sources (**ID Nos. DTH-2 and DTH-3**).

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

- a. Emissions of sulfur dioxide from these sources (**ID Nos. DTH-2 and DTH-3**) 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 H.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/reporting is required for sulfur dioxide emissions from the firing of natural gas or No. 2 fuel oil in these sources.

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

- a. Visible emissions from these boilers (**ID Nos. DTH-2 and DTH-3**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas or No. 2 fuel oil in these sources (**ID Nos. DTH-2 and DTH-3**).

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H. Batch Polymerization Operations and Storage Area, including:

- **Esterification and Polymerization Process Vents, Steam Jet Ejectors, and Tank/Storage vents (ID No. ES-13)**
- **Ethylene Glycol Storage Area (ID No. ES-94-1)**
- **Crude ethylene glycol storage area (ID No. ES 94-24)**

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

Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	State-enforceable Only Facility-Specific TAP Emission Limitations See Section 2.2 B.1	15A NCAC 02D .1100
Hazardous Air Pollutants	Affected Source: ES-13 Chemical Manufacturing Area Source GACT requirements; See Section 2.2 C.1	15A NCAC 02D .1111 <i>(40 CFR Part 63, Subpart VVVVVV)</i>
Hazardous Air Pollutants	MACT Avoidance Condition See Section 2.2 D.1	15A NCAC 02Q .0317 <i>(Avoidance of 15A NCAC 02D .1111)</i>
Odor	State-enforceable Only See Section 2.2 D.3	15A NCAC 02D .1806

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

A.

- Seal pot vent (ID No. ES 94-02) with associated chill water scrubber/condenser (ID No. CD 94-02),
- Ejector Hotwell Vent (ID No. ES 94-08) with associated chill water scrubber/condenser (ID No. CD 94-08),
- Wastewater handling system (including organic stripping column, waste retention tank, retention basin, lift station, and emergency retention basin) (ID No. I-94-7) and associated Dowtherm heaters (ID Nos. ES 94-9a and ES 94-9b)
- Precrystallizer/Crystallizer (ID Nos. ES 94-15 and ES 94-16) with associated catalytic oxidizer (ID No. CD 00-15)

State-Enforceable Only

1. 15A NCAC 02D .1100: TOXIC AIR POLLUTANT EMISSIONS LIMITATIONS AND REQUIREMENTS

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration (approved May 8, 2008), the following permit limit shall not be exceeded:

Regulated Pollutant	Emission Source	Allowable Emission Rate
Acetaldehyde	Seal Pot Vent (ID No. ES 94-02)	1 lb/hr
	Ejector Hotwell Vent (ID No. ES 94-08)	1 lb/hr
	Wastewater handling system (ID No. I-94-7) and associated Dowtherm heaters (ID Nos. ES 94-9a and ES 94-9b)	40 lb/hr
	Precrystallizer/Crystallizer (ID Nos. ES 94-15 and ES 94-16)	1,057 lb/hr
1,3-Butadiene	Seal Pot Vent (ID No. ES 94-02)	2,703 lb/yr
	Ejector Hotwell Vent (ID No. ES 94-08)	2,231 lb/yr

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0611]

- c. No monitoring/recordkeeping/reporting is required to demonstrate compliance with the emission limits in Section 2.2 A.1.a above.

B.

- **Esterification and Polymerization Process Vents, Steam Jet Ejectors, and Tank/Storage vents (ID No. ES-13)**
- **Wastewater lift station (ID No. I-94-11)**

State-Enforceable Only

1. 15A NCAC 02D .1100: TOXIC AIR POLLUTANT EMISSIONS LIMITATIONS AND REQUIREMENTS

- a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration (approved February 12, 1999 for Dupont Cedar Creek and Dupont Teijin Films, facility ID No. 2600198), the following permit limit shall not be exceeded:

Regulated Pollutant	Allowable Emission Rate
Acetaldehyde	127.89 lb/hr
1,3-Butadiene	1,444 lb/yr

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0611]

- c. No monitoring/recordkeeping/reporting is required to demonstrate compliance with the emission limits in Section 2.2 B.1.a above.

C. Esterification/Continuous Polymerization Operations, including:

- **Seal pot vent (ID No. ES 94-02) with associated chill water scrubber/condenser (ID No. CD 94-02)**
- **Glycol wells header (ID No. ES 94-4) with associated hotwells:**
 - **UFPP hotwell (ID No. ES 94-3);**
 - **Finisher hotwell (ID No. ES 94-5); and,**
 - **Secondary spray hotwell (ID No. ES 94-6).**
- **Ejector hotwell vent (ID No. ES 94-08) with associated chill water scrubber/condenser (ID No. CD 94-08)**

Esterification and Polymerization Process Vents, Steam Jet Ejectors, and Tank / Storage Vents (ID No. ES-13)

Wastewater handling system (including organic stripping column, waste retention tank, retention basin, lift station, and emergency retention basin) (ID No. I-94-7) and associated Dowtherm heaters (ID Nos. ES 94-9a and ES 94-9b)

1. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. For the chemical manufacturing process unit (CMPU), the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111, "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63, Subpart VVVVVV, "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources."
- Operational Limits and Management Practices** [15A NCAC 02Q .0508(f)]
- b. At all times, the Permittee shall operate and maintain any affected 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. [40 CFR 63.11495(d)]
- c. The Permittee shall equip each process vessel with a cover or lid that is 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. [40 CFR 63.11495(a)(1)]
- d. The Permittee shall operate the heat exchange systems such that the minimum pressure on the cooling water side is at least 35 kilopascals (5.1 psi) greater than the maximum pressure on the process side. [40 CFR 63.104(a) and 40 CFR 63.11495(b)]
- e. For batch process vents, the Permittee shall meet the following:
 - i. The Permittee shall determine the organic HAP emissions from all batch process vents within a CMPU in accordance with the procedures in 40 CFR 63.11496(a)(1) and (2).
 - ii. For CMPUs with less than 10,000 lb/yr of uncontrolled HAP emissions from batch process vents, total emissions must be reevaluated prior to making any process changes that affect the emissions calculations in 40 CFR 63.11496(a)(1) and (2). If projected emissions increase to 10,000 lb/yr or more, the Permittee shall comply with the requirements for CMPUs with emissions greater than 10,000 lb/yr upon initiating operation under the new operating conditions. [40 CFR 63.11496(a)(3) and (4)]
 - iii. For CMPUs with 10,000 pounds per year or more of uncontrolled organic HAP emissions from batch process vents, the Permittee shall comply with the emission limits and other requirements in Table 2 of 40 CFR Part 63 Subpart VVVVVV. [40 CFR 63.11496(a) and Table 2]
- f. The Permittee shall limit the concentration of the hazardous air pollutants (HAPs) listed in 40 CFR 63, Subpart VVVVVV, Table 1, in each wastewater stream to less than 10,000 parts per million by weight and shall discharge each wastewater stream to onsite or offsite wastewater treatment or hazardous waste treatment. [Table 6 of 40 CFR Part 63 Subpart VVVVVV]
- g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.2 C.1.b through Section 2.2 C.1.f, above are not met.

Monitoring Requirements [15A NCAC 02Q .0508(f) and 40 CFR 63.11495(a)(3) and (4)]

- h. The Permittee shall conduct quarterly inspections while the CPMU is operating to determine that process vessels and equipment in organic HAP are covered as specified in 2.2 C.1.c above, sound, and free of leaks. For these inspections, the Permittee may use detection methods incorporating sight, sound, or smell in accordance with 40 CFR 63.11495(a)(3) or follow Method 21 of 40 CFR part 60, appendix A-7, with a leak definition of 500 ppmv, to detect leaks. If the CPMU operates at all during a calendar quarter, an inspection is required. No inspection is needed if the CPMU does not operate for the entire calendar quarter and is not in organic HAP service.
- i. The Permittee shall repair any leak within 15 calendar days after detection of the leak, or document the reason for any delay of repair. A leak is considered "repaired" if a one of the following three conditions 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.
- j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if a required quarterly inspection is not performed or if documentation is not maintained for any leaks not repaired within 15 calendar days.

Recordkeeping Requirements [15A NCAC 02Q .0508(f) and 40 CFR 63.11501(c)]

- k. For each CPMU subject to Subpart VVVVVV, the Permittee shall keep records specified in Section 2.2 C.1.k.i through Section 2.2 C.1.k.vi below, as applicable:
 - i. Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in 40 CFR 63.11495(a)(5).
 - ii. If batch process vent emissions are less than 10,000 lb/yr for a CPMU, records of batch process vent emission calculations, as specified in 40 CFR 63.11496(a)(1), the number of batches operated each month, as specified in 40 CFR 63.11496(a)(3), and any updated emissions calculations, as specified in 40 CFR 63.11496(a)(3). Alternatively, keep records of the worst-case processes or organic HAP usage, as specified in 40 CFR 63.11496(a)(2) and (4), respectively.
 - iii. Records of all TRE calculations for continuous process vents as specified in 40 CFR 63.11496(b)(2).
 - iv. Records identifying wastewater streams and the type of treatment they receive.
 - v. 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 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.
 - vi. 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.
- l. For batch process vents subject to Table 2 to this subpart and continuous process vents subject to Table 3 to this subpart, the Permittee shall keep records specified in Section 2.2 C.1.l.i and ii below, as applicable.
 - i. If emissions are routed to a control device other than a flare, the Permittee shall keep records of performance tests, if applicable, as specified in 40 CFR 63.998(a)(2)(ii) and (4), keep records of the monitoring system and the monitored parameters, as specified in 40 CFR 63.998(b) and (c), and keep records of the closed-vent system, as specified in 40 CFR 63.998(d)(1).
 - ii. If the Permittee uses a recovery device to maintain the TRE above 1.0 for a continuous process vent, the Permittee shall keep records of monitoring parameters during the TRE index value determination, as specified in 40 CFR 63.998(a)(3).
- m. All documentation supporting initial notifications and notifications of compliance status.
- n. The Permittee shall maintain all records for a period of five years during which time the records shall be kept onsite for at least the first two years, and made available to DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

Reporting Requirements [15A NCAC 02Q .0508(f) and 40 CFR 63.11501(d)]

- o. The Permittee shall submit a summary report 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 include the following:
 - i. For each leak of the heat exchange system not repaired within 45 days of identification and for each leak of any other process equipment not repaired within 15 days of identification, the reason for the delay in the leak repair and the date the leak was repaired.

- ii. For each process change, a description of the process change, how the process change affects compliance with 40 CFR 63, Subpart VVVVVV, and, when applicable, a new certification of compliance in accordance with 40 CFR 63.11501(b).
- iii. If there are no delays in leak repair and/or no process changes, provide a statement that there were no delays in leak repair and/or no process changes during the reporting period.
- iv. All instances of deviations from the requirements of this permit must be clearly identified.

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D. Facility-Wide

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

Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	<u>MACT Avoidance Condition</u> Facility-wide HAP emissions shall be less than: 10 tpy of any individual HAP; and, 25 tpy of total, combined HAP.	15A NCAC 02Q .0317 <i>(Avoidance of 15A NCAC 02D .1111)</i>
Odors	Prevention of objectionable odors beyond the facility's boundary	15A NCAC 02D .1806

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS

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

- a. In order to remain classified a minor source for hazardous air pollutants and avoid applicability of MACT standards, including 40 CFR Part 63, Subpart JJJ “National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins,” facility-wide HAP emissions shall be less than the following limitations:
 - i. 10 tons per year of each hazardous air pollutant; and,
 - ii. 25 tons per year of total combined hazardous air pollutants.

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

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

- c. As needed to meet the limitations in Section 2.2 D.1.a above, the Permittee shall control emissions from the organic stripping column at the wastewater handling system (**ID No. I-94-7**) using the Dowtherm heaters (**ID Nos. ES 94-9a and ES 94-9b**).
- d. As needed to meet the limitations in Section 2.2 D.1.a above, the Permittee shall control emissions of hazardous air pollutants from the Esterification/Continuous Polymerization Operations (**ID Nos. ES 94-02 and ES 94-08**) using the chilled water scrubber/condensers (**ID Nos. CD 94-02 and CD 94-08**). Operation of the control devices shall be monitored in accordance with Section 2.1 A.1 of this permit.
- e. As needed to meet the limitations in Section 2.2 D.1.a above, the Permittee shall control emissions of hazardous air pollutants from the Solid State Polycondensation Operations (**ID Nos. ES 94-15 and ES 94-16**) using the catalytic oxidizer (**ID No. CD 00-15**).
 - i. The 3-hour average temperature of the inlet stream to the catalyst bed shall be at least 277 °C.
 - ii. The 3-hour average temperature of the outlet stream from the catalyst bed shall be at least 280 °C.
The Permittee shall install, calibrate, maintain, and operate a temperature monitoring device at the catalyst bed inlet and outlet streams. The device shall continuously measure and record the temperature to within 1 percent (relative to degrees Celsius).
- f. The Permittee shall perform inspections and maintenance of the catalytic oxidizer (**ID No. CD 00-15**) 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 shall include an internal inspection of the oxidizer during each planned shutdown of the Solid State Polycondensation operation. The period between consecutive internal inspections shall not exceed 24 months. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the catalytic oxidizer is not inspected and maintained.
- g. As needed to meet the limitations in Section 2.2 D.1.a above, the Permittee shall control emissions of hazardous air pollutants from the esterification and polymerization process (**ID No. ES-13**) using the natural gas fired-thermal oxidizer (**ID No. CD-TO**). The combustion zone of the natural gas-fired thermal oxidizer shall be maintained at or above the minimum three-hour average temperature of 1,100°F. The Permittee shall install, calibrate, maintain, and operate a temperature monitoring device. The device shall continuously measure and record the temperature to within 1 percent (relative to degrees Celsius). The thermocouple of temperature sensor shall be installed in the combustion zone at a location in the combustion chamber.
- h. The Permittee shall perform inspections and maintenance of the natural gas fired-thermal oxidizer (**ID No. CD-TO**) 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 Permittee shall perform an annual internal inspection of the primary heat exchanger and associated inlet/outlet valves of the control device to ensure structural integrity. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the thermal oxidizer is not inspected and maintained.

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

- i. The Permittee shall maintain the following up-to-date and readily accessible records for the catalytic oxidizer (**ID No. CD 00-15**) during its operation:
 - i. Continuous records of the monitored 3-hour average temperature of the inlet stream; and,
 - ii. Continuous records of the monitored 3-hour average temperature of the outlet stream.
- j. The Permittee shall maintain continuous records of the monitored 3-hour average temperature of the combustion zone of the natural gas-fired thermal oxidizer (**ID No. CD-TO**) during its operation.
- k. The results of inspection and maintenance of the catalytic oxidizer (**ID No. CD 00-15**) and the thermal oxidizer (**ID No. CD-TO**) shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each inspection;
 - iii. The results of any maintenance performed on the catalytic oxidizer; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.
- l. Each month, the Permittee shall calculate and record facility-wide emissions of each, individual HAP and total, combined HAP during the previous calendar month and during the previous consecutive 12-month period.
 - i. When the chilled water scrubber/condensers (**ID Nos. CD 94-02 and CD 94-08**) daily average liquid temperatures or flow rates at the chilled water scrubber/condensers (**ID Nos. CD 94-02 and CD 94-08**) do not meet the limits in Section 2.1 A.1 of this permit, the Permittee shall assume no emissions control when calculating HAP emissions.
 - ii. Emissions from the SSP Operations shall be estimated using emissions data from the most recent performance test. For periods when the inlet temperature and/or temperature rise at the catalytic oxidizer (**ID No. CD 00-15**) is less than the limit in Section 2.2 D.1.e.i and/or ii above, the Permittee shall assume no emissions control when calculating HAP emissions.
 - iii. For periods when the minimum operating temperature of the combustion zone of the thermal oxidizer (**ID No. CD-TO**) is less than the limit in Section 2.2 D.1.g above, the Permittee shall assume no emissions control when calculating HAP emissions.
 - iv. Emissions from the Dowtherm heaters (**ID Nos. ES 94-9a, ES 94-9b, DTH-1, DTH-2, and DTH-3**) and Service Complex boilers (**ID Nos. ES-001, ES-002, and ES-003**) shall be estimated using the actual quantity of fuel fired and the most recent AP-42 emission factors.
 - v. Emissions from the wastewater handling and treatment operations shall be estimated using actual flow and concentration data and engineering estimates (e.g., factor developed from WATER9, assumed organic destruction efficiencies at the Dowtherm heaters, etc.). The Permittee shall assume no emissions control of HAP emissions from the Organic Stripping Column for any period during which the exhaust stream is not routed to the Dowtherm heaters (**ID Nos. ES 94-9a and ES 94-9b**).

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 02D .1111 if the records are not maintained or if the individual and/or total HAP emissions for any 12-month period exceed(s) the limitation(s) in 2.2 D.1.a above.

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

- m. The Permittee shall submit a semiannual 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 on or before July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following information:
 - i. The greatest individual HAP emission rate for each consecutive 12-month period ending during the previous calendar half, identify;
 - ii. The total, combined HAP emission rate (in tons) for each of the six consecutive 12-month periods ending during the previous calendar half;
 - iii. Identification of all periods, including date and duration, during which:
 - (A) The daily average liquid temperatures or flow rates at the chilled water scrubber/condensers (**ID Nos. CD 94-02 and CD 94-08**) do not meet the limits in Section 2.1 A.1 of this permit;

- (B) The minimum inlet and/or outlet temperatures at the catalyst bed of the catalytic oxidizer (**ID No. CD 00-15**) did not meet the requirements Section 2.2 D.1.e above;
 - (C) The minimum combustion zone temperature of the natural gas-fired thermal oxidizer (**ID No. CD-TO**) did not meet the requirements Section 2.2 D.1.g above;
 - (D) The exhaust from the organic stripping column is not routed to and controlled by the Dowtherm heaters (**ID Nos. ES 94-9a and ES 94-9b**).
- iv. Identification of any new factor used in the emission calculations in 2.2 D.1.l during the previous six month period above along with documentation supporting the factor is representative of HAP emissions.
 - v. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable Only

2. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

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.

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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. 15A NCAC 02D .0543: Best Available Retrofit Technology

NC DAQ determined through air dispersion modeling (CALPUFF) that the visibility impact of this facility to all Class I Federal Areas is less than 0.5 deciviews. Pursuant to 40 CFR 51.303, this facility is exempt from the “Best Available Retrofit Technology” requirements provided in 15A NCAC 02D .0543.

B. 15A NCAC 02D .0614: Compliance Assurance Monitoring (CAM)

NC DAQ determined that there are no pollutant specific emission units (PSEUs) subject to the requirements of 15A NCAC 02D .0614 at this facility. This facility is not affected by the Compliance Assurance Monitoring (CAM) requirements pursuant to 15A NCAC 02D .0614.

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

Emission Source ID No.	Emission Source Description^{1,2}
I-05	Fuel Oil Unloading Station (3,149 gal/hr)
I-06	Miscellaneous Liquid Storage Tank (900,000 gallon) ³
I-07	Fuel Oil Storage Tank (200,000 gallon)
I-08	Chemical Totes (Catalysts)
I-09	Chemical Totes (Clearshield)
I-10	Product Pellet Transfer/Loading Operations
I-11	Antimony Transloading Operation
I-12	Fuel Oil Storage Tank, Services Area (1,000 gallon)
I-13	Gasoline Storage Tank, Services Area (1,000 gallon)
I-14	Fuel Oil Storage Tank, Resins Area (500 gallons)
I-18-31	Powder transfer 1 to ES-13 with one bagfilter (275 square feet of filter area) (ID No. CD-31)
I-SP-92-04	Storage Tanks 410-73-200 and 201 (300,000 gallon capacity each, empty) ³
I-SP-5	Storage Tank 410-73-260 (530,000 gallon capacity, empty) ³
I-SP-14	Storage Tank 410-71-276 (1,400 gallon capacity, empty) ³
I-94-10	Dowtherm vacuum system
I-94-12	Feed hopper with associated bin vent filter (80 square feet filter area) (ID No. CD 94-12)
I-94-13	Storage Silo with associated bin vent filter (80 square feet filter area) (ID No. CD 94-13)
I-94-14	Off-specification day silo with associated bin vent filter (80 square feet filter area) (ID No. CD 94-14)
I-94-17	Catalyst preparation system
I-94-19	Product day silo with associated bin vent filter (222 square feet filter area) (ID No. CD 94-19)
I-94-20	Finish chip silo with associated bin vent filter (287 square feet filter area) (ID No. CD 94-20)
I-94-21	Railcar heel vacuum system with associated filter (119 square feet filter area) (ID No. CD 94-21)
I-94-23	Rotary valve purge and miscellaneous fugitive VOC emission leaks
I-94-25	Terephthalic acid silo with associated bin vent filter (597 square feet filter area) (ID No. CD 94-25)
I-94-26	Storage Silo
I-ES-22, I-ES-23, I-ES-26, I-ES-28, and I-ES-29	PET Chip Storage Silos with associated bagfilters (63 square feet of filter area) (ID Nos. CD-22, CD-23, CD-26, CD-28, and CD-29)
I-ES-24, I-ES-25, and I-ES-27	PET Chip Storage Silos with associated bagfilter (100 square feet of filter area) (ID Nos. CD-24, CD-25, and CD-27)
I-ES-30	Powder Load Hopper with associated bagfilter (59 square feet) (ID No. CD-30)
I-94-7 GACT VVVVVV	Wastewater handling system (incl. organic stripping column, waste retention tank, retention basin, lift station, and emergency retention basin) with the associated control devices (ES 94-9a and ES 94-9b), two manufacturing natural gas/No. 2 fuel oil-fired Dowtherm heaters with low-NOx burners (41.7 million Btu per hour each)
I-ES-94-11	Wastewater lift station
I-EG2 GACT ZZZZ	One No. 2 fuel oil-fired emergency fire water pump No. 2 (300 hp)

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."

³ Service to be determined at a later date for the empty tanks.

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 NO_x 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.

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