JOSH STEIN
Governor
D. REID WILSON
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

April 21, 2025

Kevin Pressley
VP of Manufacturing
S & D Coffee, Inc.
300 Concord Parkway South
Concord, NC 28027

SUBJECT: Air Quality Permit No. 05029T23
Facility ID: 1300051
S & D Coffee, Inc.
Concord
Cabarrus County
Fee Class: Title V
PSD Class: Minor

Dear Mr. Pressley:

In accordance with your completed Air Quality Permit Application for significant modification and renewal of your Title V permit, we are forwarding, herewith, Air Quality Permit No. 05029T23 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

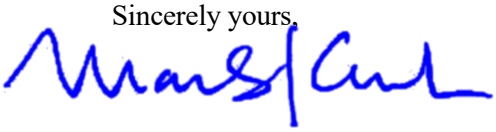
143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

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

This Air Quality Permit shall be effective from April 21, 2025 until March 31, 2030, 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 Emily Supple at 919-707-8481 or at Emily.supple@deq.nc.gov.

Sincerely yours,



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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Laserfiche (1300051)

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:

Daniel S. Hirschman, 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. 05029T22:*

Page No.	Section	Description of Changes
Cover and throughout	-	• Updated all dates and permit revision numbers. • Updated to current shell language and formatting.
4-5	1	• Revised various control device ID numbers for coffee bean roasters.
10-13	2.1 A.5	• Added 02Q .0317 for 112(g) Avoidance
24	2.1 F.4	• Added NSPS Subpart Dc requirements for the boiler (ID No. ES-BLR1).
29-33	2.2 A.2	• Updated 02Q .0317 (RACT Avoidance) to include temperature monitoring, periodic testing, and VOC emissions calculations requirements.
33-34	2.2 A.3	• Added 02Q .0317 for PSD Avoidance for emissions of VOC
-	-	• Removed 02Q .0504 for Application No. 1300051.18A.
36-43	General Conditions	• Updated to latest version of DAQ shell version 8.0, 07/10/2024.

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

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
05029T23	05029T22	April 21, 2025	March 31, 2030

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than September 30, 2029.

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:	**S & D Coffee, Inc.**
Facility ID:	**1300051**
Primary SIC Code:	**2095**
NAICS Code:	**311920**
Facility Site Location:	**300 Concord Parkway South**
City, County, State, Zip:	**Concord, Cabarrus County, NC 28027**
Mailing Address:	**300 Concord Parkway South**
City, State, Zip:	**Concord, NC 28027**
Application Number(s):	**1300051.20C, 1300051.21B**
Complete Application Date(s):	**November 18, 2020, July 26, 2021**
Division of Air Quality, Regional Office Address:	**Mooresville Regional Office 610 East Center Avenue, Suite 301 Mooresville, NC 28115**

Permit issued this the 21st day of April, 2025.

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
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Coffee Bean Roasting Operations			
ES-R1	Natural gas-fired coffee bean roasting operation (4.0 million Btu per hour maximum heat input; 4,400 pounds per hour maximum process rate)	CD-R1-RVC CD-R1-TO	Receiving cyclone (40 inches in diameter) Natural gas-fired thermal oxidizer (3.5 million Btu per hour maximum heat input)
ES-R1C	Cooling system (4,400 pounds per hour maximum process rate)	CD-R1-C/DC	Cooling/de-stoning cyclone (21.5 inches in diameter)
ES-R2-New	Natural gas-fired coffee bean roasting operation (6.8 million Btu per hour maximum heat input; 6,600 pounds per hour maximum process rate)	CD-R2-New-RVC CD-R2-New-CO	Receiving cyclone (72 inches in diameter) Natural gas-fired catalytic oxidizer (3.0 million Btu per hour maximum heat input)
ES-R2C-New	Cooling and de-stoning system (6,600 pounds per hour maximum process rate)	CD-R2-New-CC CD-R2-New-DC	Cooling cyclone (63 inches in diameter) De-stoning cyclone (52 inches in diameter)
ES-R3	Natural gas-fired coffee bean roasting operation (7.0 million Btu per hour maximum heat input; 8,800 pounds per hour maximum process rate)	CD-R3-RVC CD-R3-CO	Receiving cyclone (40 inches in diameter) Natural gas-fired catalytic oxidizer (2.6 million Btu per hour maximum heat input)
ES-R3C	Cooling and de-stoning system (8,800 pounds per hour maximum process rate)	CD-R3-CC CD-R3-DC	Cooling cyclone (88 inches in diameter) De-stoning cyclone (60 inches in diameter)
ES-R4	Natural gas-fired specialty coffee bean roasting operation (0.4 million Btu per hour maximum heat input; 405 pounds per hour maximum process rate)	CD-R4-TO	Natural gas-fired thermal oxidizer (1.4 million Btu per hour maximum heat input)
ES-R5	Natural gas-fired coffee bean roasting operation (7.0 million Btu per hour maximum heat input; 8,800 pounds per hour maximum process rate)	CD-R5-RVC CD-R5-CO	Receiving cyclone (88 inches in diameter) Natural gas-fired catalytic oxidizer (2.6 million Btu per hour maximum heat input)
ES-R5C	Cooling and de-stoning system (8,800 pounds per hour maximum process rate)	CD-R5-CC CD-R5-DC	Cooling cyclone (88 inches in diameter) De-stoning cyclone (88 inches in diameter)
ES-R6	Natural gas-fired coffee bean roasting operation (3.0 million Btu per hour	CD-R6-RVC	Receiving cyclone (72 inches in diameter)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
	maximum heat input; 6,850 pounds per hour maximum process rate)	CD-R6-CO	Natural gas-fired catalytic oxidizer (4.2 million Btu per hour maximum heat input)
ES-R6C	Cooling and de-stoning system (6,850 pounds per hour maximum process rate)	CD-R6-CC CD-R6-DC	Cooling cyclone (60 inches in diameter) De-stoning cyclone (36 inches in diameter)
Green Bean Handling			
ES-BH1	Bean handling system (5.70 tons per hour maximum process rate)	BH1-SB BH1-BF	Settling box Bagfilter (2,398 square feet of filter area)
ES-BH2	Bean handling system (22.8 tons per hour maximum process rate)	CD-BF-1 CD-BF-2	Bagfilter (2,400 square feet of filter area) Bagfilter (4,800 square feet of filter area)
Chaff Handling			
ES-CHS1	Chaff handling system	CD-CHS1-BF	Bagfilter (862 square feet of filter area)
ES-CHS2	Chaff handling system	CD-CHS2-BF	Bagfilter (862 square feet of filter area)
Tea Leaf Mixing and Packaging			
ES-TMP	Tea leaf mixing and packaging system	CD-TMP	Bagfilter (662 square feet of filter area)
Coffee Bean Flavoring/Grinding and Packaging/Conveying			
ES-CBG/CP	Coffee bean grinding and ground coffee conveying/packaging operation	CD-CBG/CP	Bagfilter (1,180 square feet of filter area)
ES-WBGCTS	Whole bean and ground coffee transfer system	CD-WBGCTS	Bagfilter (564 square feet of filter area)
ES-CBG	Coffee bean grinding consisting of six coffee grinders and storage bin	CD-CBG-BF	Bagfilter (1,533 square feet of filter area)
ES-CBFB	Coffee bean flavoring booth	NA	NA
New Side Green Bean Handling			
ES-NSGBH	New side green bean handling equipment	CD-NSGBH	Bagfilter (1,404 square feet of filter area)
Miscellaneous			
ES-BLR1 **NSPS Dc** **MACT DDDDD**	Natural gas-fired boiler (10.5 million Btu per hour maximum heat input)	NA	NA
ES-EG **NSPS JJJJ** **MACT ZZZZ**	Natural gas-fired emergency generator (130 kW)	NA	NA

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

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

A. Coffee bean roasting operation including six (6) roasters and associated cooling and de-stoning systems:

Roaster No. 1 (ID No. ES-R1) associated with Receiving Cyclone (ID No. EP-R1-RVC) and Thermal Oxidizer (ID No. CD-R1-TO) installed in series; Cooling System (ID No. CD-R1C) associated with Cooling/De-stoning Cyclone (ID No. CD-R1-C/DC)

Roaster No. 2 (ID No. ES-R2-New) associated with Receiving Cyclone (ID No. CD-R2-New-RVC) and Catalytic Oxidizer (ID No. CD-R2-New-CO) installed in series; Cooling and De-stoning System (ID No. ES-R2C-New) associated with Cooling Cyclone and De-stoning Cyclone (ID Nos. CD-R2-New-CC and CD-R2-New-DC, respectively) installed in series

Roaster No. 3 (ID No. ES-R3) associated with Receiving Cyclone (ID No. CD-R3-RVC) and Catalytic Oxidizer (ID No. CD-R3-CO) installed in series; Cooling and De-stoning System (ID No. ES-R3C) associated with Cooling Cyclone and De-Stoning Cyclone (ID Nos. CD-R3-CC and CD-R3-DC, respectively) installed in series

Roaster No. 4 (ID No. ES-R4) associated with Thermal Oxidizer (ID No. CD-R4-TO)

Roaster No. 5 (ID No. ES-R5) associated with Receiving Cyclone (ID No. CD-R5-RVC) and Catalytic Oxidizer (ID No. CD-R5-CO) installed in series; Cooling and De-stoning System (ID No. ES-R5C) associated with Cooling Cyclone and De-stoning Cyclone (ID Nos. CD-R5-CC and CD-R5-DC, respectively) installed in series

Roaster No. 6 (ID No. ES-R6) associated with Receiving Cyclone (ID No. CD-R6-RVC) and Catalytic Oxidizer (ID No. CD-R6-CO) installed in series; Cooling and De-stoning System (ID No. ES-R6C) associated with Cooling Cyclone and De-stoning Cyclone (ID Nos. CD-R6-CC and CD-R6-DC, respectively) installed in series

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Toxic air pollutants	**State-enforceable only** Emissions must remain below modeled emission rates	15A NCAC 02D .1100
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806

Hazardous air pollutants	**(ID Nos. ES-R2-New and ES-R6 only)** Less than 10 tons per consecutive 12-month period of any HAP, and Less than 25 tons per consecutive 12-month period of a combination of HAPs	15A NCAC 02Q .0317 (112(g) Avoidance)
Volatile organic compounds	**State-enforceable only** **See Section 2.2 A.2** VOC emissions less than 100 tons per consecutive 12-month period	15A NCAC 02Q .0317 (RACT Avoidance)
Volatile organic compounds	**See Section 2.2 A.3** VOC emissions less than 250 tons per consecutive 12-month period	15A NCAC 02Q .0317 (PSD Avoidance)
Toxic air pollutants	**State-enforceable only** **See Section 2.2 A.4** Facility-wide TAP emissions must remain below the respective Toxic Pollutant Emission Rate	15A NCAC 02Q .0711

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

a. Emissions of particulate matter from coffee bean roasting operations **(ID Nos. ES-R1, ES-R1C, ES-R2-New, ES-R2C-New, ES-R3, ES-R3C, ES-R4, ES-R5, ES-R5C, ES-R6, and ES-R6C)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.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 these sources **(ID Nos. ES-R1, ES-R1C, ES-R2-New, ES-R2C-New, ES-R3, ES-R3C, ES-R5, ES-R5C, ES-R6, and ES-R6C)** shall be controlled by the cyclones **(ID Nos. CD-R1-RVC, CD-R1-C/DC, CD-R2-New-RVC, CD-R2-New-CC, CD-R2-New-DC, CD-R3-RVC, CD-R3-CC, CD-R3-DC, CD-R5-RVC, CD-R5-CC, CD-R5-DC, CD-R6-RVC, CD-R6-CC, and CD-R6-DC)**. 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 are 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; and
   ii. an annual (for each 12-month period following the initial inspection) external inspection of the cyclone's structural integrity.

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

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

d. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above, can be derived and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained or the types of materials and finishes are not monitored.

e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;

ii. the results of each inspection;
iii. the results of any maintenance performed on any control device; and
iv. any variance from manufacturer's recommendations, if any, and corrections made.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

f. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
g. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.1.c through 2.1 A.1.e 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 .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources **(ID Nos. ES-R1, CD-R1-TO, ES-R2-New, CD-R2-New-CO, ES-R3, CD-R3-CO, ES-R4, CD-R4-TO, ES-R5, CD-R5-CO, ES-R6, and CD-R6-CO)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in these sources **(ID Nos. ES-R1, CD-R1-TO, ES-R2-New, CD-R2-New-CO, ES-R3, CD-R3-CO, ES-R4, CD-R4-TO, ES-R5, CD-R5-CO, ES-R6, and CD-R6-CO)**.

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

a. Visible emissions from these sources **(ID Nos. ES-R1, ES-R1C, ES-R2-New, ES-R2C-New, ES-R3, ES-R3C, ES-R5, ES-R5C, ES-R6, and ES-R6C)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.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-R1, ES-R1C, ES-R2-New, ES-R2C-New, ES-R3, ES-R3C, ES-R5, ES-R5C, ES-R6, and ES-R6C)** 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 A.3.a above.
The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring 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 Sections 2.1 A.3.c and 2.1 A.3.d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable only

4. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application (1300051.08A) for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Source	Toxic Air Pollutant(s)	Emission Limit(s)
ES-R1	Acetic acid Acetaldehyde Acrolein Formaldehyde	0.28 lb/hr 0.13 lb/hr 0.018 lb/hr 0.62 lb/hr
ES-R2-New	Acetic acid Acetaldehyde Acrolein Formaldehyde	1.75 lb/hr 1.71 lb/hr 0.02 lb/hr 0.868 lb/hr
ES-R3	Acetic acid Acetaldehyde Acrolein Formaldehyde	2.09 lb/hr 2.03 lb/hr 0.024 lb/hr 1.04 lb/hr
ES-R4	Acetic acid Acetaldehyde Acrolein Formaldehyde	0.026 lb/hr 0.012 lb/hr 0.00162 lb/hr 0.057 lb/hr
ES-R5	Acetic acid Acetaldehyde Acrolein Formaldehyde	2.09 lb/hr 2.03 lb/hr 0.02 lb/hr 1.04 lb/hr
ES-R6	Acetic acid Acetaldehyde Acrolein Formaldehyde	1.62 lb/hr 1.58 lb/hr 0.019 lb/hr 0.81 lb/hr

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .1100]

b. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated February 13, 2008 for the facility's toxic air pollutant emissions as listed in the above table. The modeling analysis was reviewed and approved by the AQAB on February 14, 2008. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

**5. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .1112: 112(g) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY**

a. In order to avoid applicability of 15A NCAC 02D .1112, emissions from the coffee bean roasters **(ID Nos. ES-R2-New and ES-R6)** shall each be less than the following limitations:
   i. 25 tons per consecutive 12-month period of total hazardous air pollutants; and
   ii. 10 tons per consecutive 12-month period of any individual hazardous air pollutant.

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the testing is not conducted or if the results of any test are above the limits given in Sections 2.1 A.5.a.i or 2.1 A.5.a.ii, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112.
c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits in Sections 2.1 A.5.a.i and 2.1 A.5.a.ii above by conducting initial and periodic testing on the coffee bean roasters **(ID Nos. ES-R2-New and ES-R6)** and associated control devices **(ID Nos. CD-R2-New-CO and CD-R6-CO)**, as specified in Sections 2.1 A.5.d and 2.1 A.5.e below, to establish the HAP emission rates from the affected sources controlled by oxidizers for HAP emissions in units of pounds of HAPs emitted per ton of coffee roasted, as well as the proper operating temperatures of the control devices in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ.
d. Initial testing of the coffee bean roasters (**ID Nos. ES-R2-New and ES-R6)** controlled by catalytic oxidizers **(ID Nos. CD-R2-New-CO and CD-R6-CO)** shall be completed and the results submitted within 180 days of the issuance of Permit No. 05029T23, unless an alternate date is approved by the DAQ. Testing shall be conducted according to the following conditions:
   i. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R2-New or ES-R6)** as representative of both roasters **(ID Nos. ES-R2-New and ES-R6)** for initial performance testing.
   ii. The Permittee shall submit a permit application to DAQ for revising the operating temperatures of the control devices as well as the HAP emission rates from the affected sources controlled by oxidizers for HAP emissions used in the HAP emissions calculations required by Section 2.1 A.5.m below within 270 days of the issuance of Permit No. 05029T23, unless an alternate date is approved by the DAQ.

   If the testing is not conducted within the required timeframe, if the results of this test are above the limit given in Section 2.1 A.5.a.i or 2.1 A.5.a.ii above for HAP emissions, or if the permit application is not submitted within the required timeframe, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112.
e. After the performance testing required in Section 2.1 A.5.d is completed, the Permittee shall conduct periodic performance testing of the coffee bean roasters **(ID Nos. ES-R2-New and ES-R6)** and associated control devices **(ID Nos. CD-R2-New-CO and CD-R6-CO)** once every 60 months. Testing shall be conducted according to the following conditions:
   i. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R2-New or ES-R6)** as representative of both roasters **(ID Nos. ES-R2-New and ES-R6)** for periodic performance testing. The Permittee shall test the roaster **(ID Nos. ES-R2-New or ES-R6)** which was not tested during the previous performance testing.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the testing is not conducted or if the results of any test are above the limit given in Sections 2.1 A.5.a.i or 2.1 A.5.a.ii above for HAP emissions.
f. The Permittee may reestablish any parametric operating values during periodic testing.
   i. If the new parametric operating values reestablished during periodic testing are more stringent than the previously established parametric operating values, the Permittee shall submit a request to revise the value(s) in the permit at the same time the associated test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
   ii. If the new parametric operating values reestablished during periodic testing are less stringent than the previously established parametric operating values, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.
g. Compliance with previously approved parametric operating values is not required during periodic testing or other tests undertaken to establish or reestablish parametric operating values by the Permittee.
h. During testing, the Permittee shall ensure that the equipment or process being tested is operated at or near its maximum normal production rate, or at a lesser rate is specified by the Director or his delegate.

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

i. To ensure compliance with the avoidance limits given in Sections 2.1 A.5.a.i and 2.1 A.5.a.ii above, HAP emissions from the coffee bean roasters **(ID Nos. ES-R2-New and ES-R6)** shall be controlled at all times by the associated catalytic oxidizers **(ID Nos. CD-R2-New-CO and CD-R6-CO)**. The Permittee shall record and maintain records of

the hours of operation of the oxidizers and any time periods for which the oxidizers did not control HAP emissions from the coffee bean roasters **(ID Nos. ES-R2-New and ES-R6)**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if these records are not maintained.

j. To ensure proper operation of the catalytic oxidizers **(ID Nos. CD-R2-New-CO and CD-R6-CO)**, the Permittee shall monitor the firebox temperature of the catalytic oxidizers continuously. The Permittee shall maintain a 3-hour block average temperature at or above the 3-hour block average temperature established during performance testing conducted pursuant to Sections 2.1 A.5.b through 2.1 A.5.f above. The operating temperature shall be measured at the same location used to establish the average operating temperature during the oxidizer control device HAP tests required in Section 2.1 A.5.b through 2.1 A.5.e above. Until the performance testing required in Section 2.1 A.5.d is conducted, the Permittee shall maintain the 3-hour block average temperature of each oxidizer at or above the temperature established during the most recent performance test or according to the manufacturer's specifications, as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the temperature of each oxidizer is not maintained at or above the temperature established during the most recent performance test or according to the manufacturer's specifications, as applicable.

k. The Permittee shall record the 3-hour block average temperatures in a logbook (written or electronic format). These records shall be made available to DAQ personnel upon request. The Permittee shall assume no emission control for any period during which the minimum temperature is not met or if the temperature is not monitored. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the temperatures are not recorded or if these records are not maintained.

l. Each calendar month, the Permittee shall calculate the individual HAP emissions and the total HAP emissions for the previous calendar month and the previous 12-month period for each roaster **(ID Nos. ES-R2-New and ES-R6)** to ensure compliance with the avoidance limits given in Section 2.1 A.5.a.i and 2.1 A.5.a.ii above.

m. Monthly individual HAP emissions, monthly total HAP emissions, and consecutive 12-month rolling HAP emissions, in tons, shall be determined by the following equations and emissions factors:

   i. Monthly individual HAP emissions, in tons, for each coffee bean roaster **(ID Nos. ES-R2-New and ES-R6)** and associated control device **(ID Nos. CD-R2-New-CO and CD-R6-CO)** shall be determined by the following equations and DAQ approved emission factors until performance testing as required by Section 2.1 A.5.d is approved.

$E_{HAP\_Roaster} = E_{HAP\_Oxidizer} + E_{HAP\_Bypass}$

$E_{HAP\_Oxidizer}$ = {[controlled pounds (lb) HAP per ton coffee roasted (ton)] x [tons coffee roasted per hour (hr)] x (hours per month oxidizer is deemed "in operation")} x (1 ton / 2000 lb)

$E_{HAP\_Oxidizer} = [(Xc \times t_{Oxidizer}) \times 1/2000]$

E_{HAP_Bypass} = {[(uncontrolled lb HAP/ton coffee roasted) x (tons coffee roasted/hr)] x (hrs/month oxidizer is not operated or is deemed "not in operation")} x (1 ton / 2000 lb)

$E_{HAP\_Bypass} = [(Xuc \times t_{Bypass}) \times 1/2000]$

Where:

$E_{HAP\_Individual}$ = the individual HAP emissions (tons/month) of the coffee bean roaster including emissions from coffee bean roasting and emissions from natural gas combustion

$E_{HAP\_Roaster}$ = the individual HAP emissions (tons/month) of the coffee bean roaster, controlled and uncontrolled

$E_{HAP\_Oxidizer}$ = tons of individual HAP emissions per month (tons/month) from the coffee bean roaster controlled by the associated oxidizer

Xc = controlled lb individual HAP/hr on a monthly basis, calculated using emissions factors from Table 2.1 A.5.m-1; [HAP Emissions Factor x tons coffee roasted in roaster/hr on a monthly basis]

$t_{Oxidizer}$ = hours/month when oxidizer is not bypassed and oxidizer temperature is greater than or equal to the hourly block average temperature specified in Section 2.1 A.5.j.

$E_{HAPBypass}$ = tons of individual HAP emissions per month from the coffee bean roaster bypassing the control device

Xuc = uncontrolled lb individual HAP/hr on a monthly basis assuming 94.5% HAP control efficiency ($CE_{Oxidizer}$); [Xc / (1 – $CE_{Oxidizer}$)]

t_{Bypass} = hrs/month when oxidizer is bypassed or hourly periods when the oxidizer temperature is less than the hourly block average temperature specified in Section 2.1 A.5.j including hourly periods of start-up, shutdown, and malfunction

Table 2.1 A.5.m-1: Controlled HAP Emissions Factors

Source ID No.	HAP Emissions Factors[1,2] (lb/ton coffee roasted)				
	Acetaldehyde	Acetic Acid	Acrolein	Formaldehyde	n-Hexane
ES-R2-New	4.61E-01	5.22E-03	1.14E-04	1.13E-03	6.56E-03
ES-R6	4.61E-01	4.74E-01	5.42E-03	2.40E-01	6.56E-03

[1] Emissions factors for HAPs come from 2001 Trigon Engineering stack test reports completed on Roaster No. 1 with a thermal oxidizer and Roaster No. 2 (old) with a catalytic oxidizer.

[2] Emissions factors for acetic acid, acrolein, and formaldehyde for Roaster No. 2 (new) come from a November 2014 GEL Engineering stack test conducted on a similar roaster at the S & D Coffee West Winds facility (Facility ID No. 1300170).

ii. Monthly total HAP emissions, in tons, for each coffee bean roaster **(ID Nos. ES-R2-New and ES-R6)** and associated control device **(ID Nos. CD-R2-New-CO and CD-R6-CO)** shall be determined by summing all individual HAP emissions, as determined using the equations in Section 2.1 A.5.m.i above, for each coffee bean roaster.

iii. When the oxidizers are operated at temperatures below the specified temperatures listed in Section 2.1 A.5.j above or if the temperatures are not monitored, the oxidizers shall be deemed "not in operation" and the HAP emissions shall be determined using the uncontrolled emissions rates specified in Section 2.1 A.5.m.i above.

iv. When the oxidizers are not in operation or deemed "not in operation" as given in Section 2.1 A.5.m.iii above, the HAP emissions shall be determined using the uncontrolled emissions rates specified in Section 2.1 A.5.m.i above.

v. Consecutive 12-month rolling HAP emissions, in tons, shall be calculated by summing the monthly emissions as determined above, for the previous 12-month period for both individual and total HAP emissions.

vi. Until the stack testing required in Section 2.1 A.5.d above is conducted and the test results are approved by DAQ, the Permittee shall assume in the emissions calculations in Section 2.1 A.5.m.i above the control efficiency of the oxidizers **(ID Nos. CD-R2-New-CO and CD-R6-CO)** and the HAP emissions factors in Table 2.1 A.5.m-1 as included therein.

n. The Permittee shall keep records of all parameters required to calculate monthly and consecutive 12-month rolling HAP emissions specified in Sections 2.1 A.5.l and 2.1 A.5.m and to demonstrate compliance with the avoidance limits given in Sections 2.1 A.5.a.i and 2.1 A.5.a.ii above including, but not limited to, monthly records of the amount of coffee beans processed in each roaster **(ID Nos. ES-R2-New and ES-R6)**. The monthly and consecutive 12-month rolling HAP emissions shall be recorded monthly in a logbook (written or electronic format), maintained on-site and available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the records are not kept or if the monthly HAP emissions are not monitored, calculated, or recorded as specified in Sections 2.1 A.5.l through 2.1 A.5.n above.

o. To ensure proper operation of the thermal and catalytic oxidizers, the Permittee shall perform periodic inspections and maintenance as recommended by the manufacturer, if applicable. As a minimum, the inspections and maintenance of the oxidizers shall include the following:
   i. a monthly external inspection of the structural integrity of the oxidizers;
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the oxidizers' primary components, including the heat exchanger and valves, to ensure structural integrity; and
   iii. an annual (for each 12-month period following the initial inspection) inspection of the burner of each oxidizer.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if the oxidizers are not inspected and maintained.

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

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1112 if these records are not maintained.

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

q. Within 30 days of a written request from the DAQ, the Permittee shall submit a summary report of any maintenance performed on the oxidizers.

r. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities given in Sections 2.1 A.5.i through 2.1 A.5.p 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 information:
   i. for each roaster, the highest monthly individual HAP emissions and the total HAP emissions for each twelve (12) month period over the previous seventeen (17) months;
   ii. a summary of the monitoring and recordkeeping requirements for the oxidizers;
   iii. a summary report of the inspections and maintenance performed on any of the oxidizers;
   iv. a summary report of the monthly hours of operation for the oxidizers and any time periods during which the oxidizers were not in operation for the previous 17 months;
   v. all instances of deviations from the requirements of this permit must be clearly identified.

B. Green bean handling system (ID No. ES-BH1) and associated settling box (ID No. BH1-SB) in series with bagfilter (ID No. BH1-BF)

Green bean handling system (ID No. ES-BH2) and associated bagfilters (ID Nos. CD-BF-1 and CD-BF-2) installed in parallel

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806

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

a. Emissions of particulate matter from these sources **(ID Nos. ES-BH1 and ES-BH2)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from these sources **(ID Nos. ES-BH1 and ES-BH2)** shall be controlled by the bagfilters **(ID Nos. BH1-BF, CD-BF-1, and CD-BF-2)**. 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 are 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; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters's structural integrity.

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

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 any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.1.c and 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-BH1 and ES-BH2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

Monitoring [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-BH1 and ES-BH2)** 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; 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 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 Sections 2.1 B.2.c and 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. Chaff handling system (ID No. ES-CHS1) and associated bagfilter (ID No. CD-CHS1-BF)

Chaff handling system (ID No. ES-CHS2) and associated bagfilter (ID No. CD-CHS2-BF)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806

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

a. Emissions of particulate matter from these sources **(ID Nos. ES-CHS1 and ES-CHS2)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 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 these sources **(ID Nos. ES-CHS1 and ES-CHS2)** shall be controlled by the bagfilters **(ID Nos. CD-CHS1-BF and CD-CHS2-BF)**. 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 are 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; and
   ii. an annual (for each 12-month period following the initial inspection) inspection of the bagfilters's structural integrity.

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

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 any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 C.1.c and 2.1 C.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-CHS1 and ES-CHS2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 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-CHS1 and ES-CHS2)** 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; 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 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 Sections 2.1 C.2.c and 2.1 C.2.d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. Tea leaf mixing and packaging system (ID No. ES-TMP) and associated bagfilter (ID No. CD-TMP)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806

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

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

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.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 this source **(ID No. ES-TMP)** shall be controlled by the bagfilter **(ID No. CD-TMP)**. 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 are 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; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters's structural integrity.

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

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 any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 D.1.c and 2.1 D.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 this source **(ID No. ES-TMP)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of this source **(ID No. ES-TMP)** 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 D.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; 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 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 Sections 2.1 D.2.c and 2.1 D.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.

E. Coffee bean grinding and ground coffee conveying/packaging operation (ID No. ES-CBG/CP) and associated bagfilter (ID No. CD-CBG/CP)

Whole bean and ground coffee transfer system (ID No. ES-WBGCTS) and associated bagfilter (ID No. CD-WBGCTS)

Coffee bean grinders (ID No. ES-CBG) consisting of six grinders and storage bin with associated bagfilter (ID No. CD-CBG-BF)

Coffee bean flavoring booth (ID No. ES-CBFB)

New side green bean handling equipment (ID No. ES-NSGBH) and associated bagfilter (ID No. CD-NSGBH)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E=4.10 \times P^{0.67}$, for process rates ≤ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806
Volatile organic compounds	**State-enforceable only** **See Section 2.2 A.2** **(ID No. ES-CBFB only)** VOC emissions less than 100 tons per consecutive 12-month period	15A NCAC 02Q .0317 (RACT Avoidance)
Volatile organic compounds	**See Section 2.2 A.3** **(ID No. ES-CBFB only)** VOC emissions less than 250 tons per consecutive 12-month period	15A NCAC 02Q .0317 (PSD Avoidance)

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

a. Emissions of particulate matter from these sources **(ID Nos. ES-CBG/CP, ES-WBGCTS, ES-CBG, ES-CBFB, and ES-NSGBH)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.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 these sources **(ID Nos. ES-CBG/CP, ES-WBGCTS, ES-CBG, ES-CBFB, and ES-NSGBH)** shall be controlled by the bagfilters **(ID Nos. CD-CBG/CP, CD-WBGCTS, CD-CBG-BF, and CD-NSGBH)**. 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 are 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; and
ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters's structural integrity.

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

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 any control device; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

e. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 E.1.c and 2.1 E.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-CBG/CP, ES-WBGCTS, ES-CBG, ES-CBFB, and ES-NSGBH)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.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-CBG/CP, ES-WBGCTS, ES-CBG, ES-CBFB, and ES-NSGBH)** 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 E.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; 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 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 Sections 2.1 E.2.c and 2.1.E.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.

F. Natural gas-fired boiler (ID No. ES-BLR1)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.60 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
-	Recordkeeping/reporting only	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Hazardous air pollutants	Work practice standards	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806
Volatile organic compounds	**State-enforceable only** **See Section 2.2 A.2** VOC emissions less than 100 tons per consecutive 12-month period	15A NCAC 02Q .0317 (RACT Avoidance)
Volatile organic compounds	**See Section 2.2 A.3** VOC emissions less than 250 tons per consecutive 12-month period	15A NCAC 02Q .0317 (PSD Avoidance)

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

a. Emissions of particulate matter from the combustion of natural gas that are discharged from this source **(ID No. ES-BLR1)** into the atmosphere shall not exceed 0.60 pounds per million Btu heat input.

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 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in this source **(ID No. ES-BLR1)**.

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

a. Emissions of sulfur dioxide from this source **(ID No. ES-BLR1)** 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 F.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 in this source **(ID No. ES-BLR1)**.

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

a. Visible emissions from this source **(ID No. ES-BLR1)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87

percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.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 in this source **(ID No. ES-BLR1)**.

4. 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 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 in this source **(ID No. ES-BLR1)** during each calendar 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)]

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

c. No reporting is required for compliance with this subpart.

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

Applicability [40 CFR 63.7485 and 40 CFR 63.7490(d)]

a. For this emission source **(ID No. ES-BLR1)**, the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in the Environmental Management Commission Standard 15A NCAC 02D .1111, "Maximum Achievable Control Technology," as promulgated in 40 CFR Part 63 Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers," including Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR 63.7575]

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

General Provisions [40 CFR 63.7565]

c. The Permittee shall comply with the General Provisions as applicable pursuant to Table 10 of 40 CFR 63 Subpart DDDDD.

Work Practice Standards [15A NCAC 02Q .0508(f), 40 CFR 63.7500(a), 63.7540(a)(10), 63.7515(d), 63.7515(g)]

d. The following work practice standards apply.
   i. The Permittee shall conduct a tune-up of the source annually 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);
      (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 fuel-to-air 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);
      (D) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject; and
      (E) Measure the concentrations in the effluent stream of carbon monoxide 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.

ii. Each annual tune-up shall be conducted no more than 13 months after the previous tune-up.
iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.
iv. 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. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but it not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 F.5.d are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7555(a)(1), 63.7540(a)(10), 63.7560, 63.10]

e. The Permittee shall keep the following records:
i. a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted according to the requirements in 40 CFR 63.10(b)(2)(xiv);
ii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information below:
(A) the concentrations of carbon monoxide 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 source;
(B) a description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the tune-up, 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.
iii. the associated records for Section 2.1 F.5.d.

f. The Permittee shall:
i. maintain records in a form suitable and readily available for expeditious review;
ii. keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
iii. keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

g. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained as described in Sections 2.1 F.5.e and 2.1 F.5.f.

Reporting Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.7550(a), (b), (c), (h)(3), and Table 9]

h. The Permittee shall submit compliance reports to the DAQ on an annual basis. The first report shall cover the period beginning on January 31, 2016 and ending on December 31, 2016. Subsequent annual reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance report postmarked on or before January 30 for the preceding reporting period.
i. This report must also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

i. The compliance report must contain the following information:
i. company name and address;
ii. process unit information, emissions limitations, and operating parameter limitations, as applicable;
iii. date of report and beginning and ending dates of the reporting period;
iv. date of the most recent tune-up for each unit required according to Section 2.1 F.5.d. Include the date of the most recent burner inspection; and
v. statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in Sections 2.1 F.5.h and 2.1 F.5.i are not met.

G. Natural gas-fired emergency generator (ID No. ES-EG)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds	1.0 g/hp-hr	15A NCAC 02D .0524 (40 CFR Part 60, Subpart JJJJ)
Nitrogen oxides	2.0 g/hp-hr	
Carbon monoxide	4.0 g/hp-hr	
Hazardous air pollutants	Meet the requirements of 40 CFR Part 60, Subpart JJJJ	15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ)
Odors	**State-enforceable only** **See Section 2.2 A.1** Odorous emissions must be controlled	15A NCAC 02D .1806
Volatile organic compounds	**State-enforceable only** **See Section 2.2 A.2** VOC emissions less than 100 tons per consecutive 12-month period	15A NCAC 02Q .0317 (RACT Avoidance)
Volatile organic compounds	**See Section 2.2 A.3** VOC emissions less than 250 tons per consecutive 12-month period	15A NCAC 02Q .0317 (PSD Avoidance)

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

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

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

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of natural gas in this source **(ID No. ES-EG)**.

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

a. Visible emissions from this source **(ID No. ES-EG)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas in this source **(ID No. ES-EG)**.

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

Applicability [40 CFR 60.4230(a)(4)(iv), 60.4233(e)]

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

General Provisions [40 CFR 60.4246]

b. The Permittee shall comply with the General Provisions as applicable pursuant to Table 3 of 40 CFR Part 60 Subpart JJJJ.

Emission Standards [40 CFR 60.4233(e) and Table 1]

c. Owners and operators of stationary spark ignition internal combustion engines (SI ICE) with a maximum engine power greater than or equal to 75 kW (100 hp) must comply with the emission standards in Table 1 to 40 CFR Part 60 Subpart JJJJ.

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

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

Monitoring [15A NCAC 02Q .0508(f) and 40 CFR 60.4237(b)]

e. The engine shall be equipped with a non-resettable hour meter.

Compliance Requirements [15A NCAC 02Q .0508(f), 40 CFR 60.4243(a)(1), (b)(1), (d), and 60.4234]

f. The Permittee shall comply with the emission standards in Section 2.1 G.3.c for the appropriate model year.
g. The Permittee shall operate and maintain the certified stationary ICE according to the manufacturer's emission-related written instructions. The Permittee shall also meet the requirements as specified in 40 CFR Part 1068, Subparts A through D, as they apply. If the engine settings are adjusted according to and consistent with the manufacturer's instructions, the stationary SI ICE will not be considered out of compliance.
h. The Permittee must operate and maintain stationary SI ICE that achieve the emission standards as required in Section 2.1 G.3.c for the entire life of the engine.
i. In order for the engine to be considered an emergency stationary ICE under 40 CFR Part 60 Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (iii) below, is prohibited. If the engine is not operated according to the requirements in paragraphs (i) through (iii) below, the engine will not be considered an emergency engine under 40 CFR Part 60 Subpart JJJJ and must meet all requirements for non-emergency engines.
    i. There is no time limit on the use of emergency stationary ICE in emergency situations.
    ii. The Permittee may operate its emergency stationary ICE for any combination of the purposes specified in paragraph (A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (iii) below counts as part of the 100 hours per calendar year allowed by this paragraph (ii).
        (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
    iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraphs (i) and (ii) above. Except as provided in paragraph (iii)(A) below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
        (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met.
            (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region;
(3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
(4) The power is provided only to the facility itself or to support the local transmission and distribution system.
(5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

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

Recordkeeping [15A NCAC 02Q .0508(f), 40 CFR 60.4245(a), (b), and 60.4243(a)(1)]

j. The Permittee shall keep the following records:
   i. all notifications submitted to comply with 40 CFR Part 60 and all documentation supporting any notification;
   ii. maintenance conducted on the engine;
   iii. documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
   iv. the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

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

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

k. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these reporting requirements are not met.

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

Applicability [40 CFR 63.6585, 63.6590(a)(2)(ii), 63.6590(c)(6)]

a. For this natural gas-fired engine **(ID No. ES-EG)**, the Permittee shall comply with all applicable provisions, including notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111, as promulgated in 40 CFR 63, Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines," including Subpart A "General Provisions."
b. In accordance with 40 CFR 63.6590(c)(6), this source shall meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart JJJJ for spark ignition internal combustion engines. No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ or Subpart A. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility Wide

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

Pollutant	Limits/Standards	Applicable Regulation
Odors	**State-enforceable only** Odorous emissions must be controlled	15A NCAC 02D .1806
Volatile organic compounds	Less than 100 tons per consecutive 12-month period	15A NCAC 02Q .0317 (Avoidance of RACT)
Volatile organic compounds	Less than 250 tons per consecutive 12-month period	15A NCAC 02Q .0317 (Avoidance of PSD)
Toxic air pollutants	Facility-wide TAP emissions must remain below the respective Toxic Pollutant Emission Rate	15A NCAC 02Q .0711

State-enforceable only

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

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

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0902: APPLICABILITY - REASONABLY AVAILABLE CONTROL TECHNOLOGY

a. In order to avoid applicability of 15A NCAC 02D .0902 "Applicability" (Reasonably Available Control Technology (RACT)), these sources **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, ES-R6, ES-CBFB, ES-BLR1, ES-EG, IS-TLFS, and IS-SR2)** shall discharge into the atmosphere less than 100 tons of volatile organic compounds (VOC) per consecutive 12-month period.

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of any test are above the limit given in Section 2.2 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit in Section 2.2 A.2.a above by conducting initial and periodic testing on the coffee bean roasters **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R5, and ES-R6)** and associated control devices **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)**, as specified in Sections 2.2 A.2.d and 2.2 A.2.e below, to establish the VOC emission rates from all affected sources controlled by oxidizers for VOC emissions in units of pounds of VOCs emitted per ton of coffee roasted, as well as the proper operating temperatures of the control devices in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ.

d. Initial testing of the coffee bean roasters controlled by thermal and catalytic oxidizers shall be completed and the results submitted within 180 days of the issuance of Permit No. 05029T23, unless an alternate date is approved by the DAQ. Testing shall be conducted according to the following conditions:
   i. The Permittee shall test Roaster No. 1 **(ID No. ES-R1)** during both initial and periodic testing.
   ii. Performance testing is not required for Roaster No. 4 **(ID No. ES-R4)**.
   iii. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R2-New or ES-R6)** as representative of both roasters **(ID Nos. ES-R2-New and ES-R6)** for initial performance testing.
   iv. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R3 or ES-R5)** as representative of both roasters **(ID Nos. ES-R3 and ES-R5)** for initial performance testing.

   The Permittee shall submit a permit application to DAQ for revising the operating temperatures of the control devices as well as the VOC emission rates from the affected sources controlled by oxidizers for VOC emissions used in the VOC emissions calculations given in Section 2.2 A.2.m below within 270 days of the issuance of Permit No. 05029T23, unless an alternate date is approved by the DAQ. If the testing is not conducted within the required timeframe, if the results of this test are above the limit given in Section 2.2 A.2.a above for VOC emissions, or if the

permit application is not submitted within the required timeframe, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902.

e. After the performance testing required in Section 2.2 A.2.d is completed, the Permittee shall conduct periodic performance testing of the coffee bean roasters and associated control devices once every 60 months. Testing shall be conducted according to the following conditions:
   i. The Permittee shall test Roaster No. 1 **(ID No. ES-R1)** during both initial and periodic testing.
   ii. Performance testing is not required for Roaster No. 4 **(ID No. ES-R4)**.
   iii. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R2-New or ES-R6)** as representative of both roasters **(ID Nos. ES-R2-New and ES-R6)** for periodic performance testing. The Permittee shall test the roaster **(ID Nos. ES-R2-New or ES-R6)** which was not tested during the previous performance testing.
   iv. The Permittee may opt to test only one of the two roasters **(ID Nos. ES-R3 or ES-R5)** as representative of both roasters **(ID Nos. ES-R3 and ES-R5)** for periodic performance testing. The Permittee shall test the roaster **(ID Nos. ES-R3 or ES-R5)** which was not tested during the previous performance testing.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the testing is not conducted or if the results of any test are above the limit given in Section 2.2 A.2.a above for VOC emissions.

f. The Permittee may reestablish any parametric operating values during periodic testing.
   i. If the new parametric operating values reestablished during periodic testing are more stringent than the previously established parametric operating values, the Permittee shall submit a request to revise the value(s) in the permit at the same time the associated test report required pursuant to General Condition JJ is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
   ii. If the new parametric operating values reestablished during periodic testing are less stringent than the previously established parametric operating values, the Permittee may request to revise the value(s) in the permit pursuant to 15A NCAC 02Q .0515.

g. Compliance with previously approved parametric operating values is not required during periodic testing or other tests undertaken to reestablish parametric operating values by the Permittee.

h. The Permittee shall ensure that the equipment or process being tested is operated at or near its maximum normal production rate, or at a lesser rate is specified by the Director or his delegate.

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

i. To ensure compliance with the avoidance limit given in Section 2.2 A.2.a above, VOC emissions from the coffee bean roasters **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, and ES-R6)** shall be controlled at all times by the associated thermal oxidizers **(ID Nos. CD-R1-TO and CD-R4-TO)** and catalytic oxidizers **(ID Nos. CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)**. The Permittee shall record and maintain records of the hours of operation of the oxidizers and any time periods for which the oxidizers did not control VOC emissions from any coffee bean roaster. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if these records are not maintained.

j. To ensure proper operation of the thermal and catalytic oxidizers, the Permittee shall monitor the chamber temperature of the thermal oxidizer **(ID No. CD-R1-TO)** and the firebox temperature of the catalytic oxidizers **(ID Nos. CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)** continuously. Temperature monitoring is not required for the Roaster No. 4 thermal oxidizer **(ID No. CD-R4-TO)**. The Permittee shall maintain a 3-hour block average temperature for each oxidizer **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)** at or above the 3-hour block average temperature established during performance testing conducted pursuant to Sections 2.2 A.2.b through 2.2 A.2.e above. The operating temperature shall be measured at the same location used to establish the average operating temperature during the oxidizer control device VOC tests required in Section 2.2 A.2.b through 2.2 A.2.e above. Until the performance testing required in Section 2.2 A.2.d is conducted, the Permittee shall maintain the 3-hour block average temperature of each oxidizer at or above the temperature established during the most recent performance test or according to the manufacturer's specifications, as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the temperature of each oxidizer **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)** is not maintained at the temperature established during the most recent performance test or according to the manufacturer's specifications, as applicable.

k. The Permittee shall record the 3-hour block average temperatures of the oxidizers **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)** in a logbook (written or electronic format). These records shall be made available to DAQ personnel upon request. The Permittee shall assume no emission control for any period during which the minimum temperature of an oxidizer **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, and CD-R6-CO)** is not met or if the temperature is not monitored or recorded. This provision includes the Roaster No. 4 thermal oxidizer **(ID No. CD-R4-TO)**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the temperature of each oxidizer **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R5-CO, and CD-R6-CO)** is not recorded or if these records are not maintained.

l. Each calendar month, the Permittee shall calculate the VOC emissions for the previous calendar month and the previous 12-month period to ensure compliance with the avoidance limit given in Section 2.2 A.2.a above.

m. Monthly and consecutive 12-month rolling VOC emissions, in tons, shall be determined by the following equations and emission factors:

$E_{VOC\_Total} = \sum E_{VOC\_Roasters} + \sum E_{VOC\_Misc}$

Where:

E_{VOC_Total} = the total facility-wide tons of VOC emissions per month (tons/month) of all VOC emission sources, controlled and uncontrolled, including insignificant activities

$E_{VOC\_Roasters}$ = the total VOC emissions (tons/month) of all coffee bean roasters, controlled and uncontrolled

$E_{VOCMisc}$ = the total VOC emissions (tons/month) from miscellaneous VOC emission sources (e.g., **ID No. ES-CBFB**), including insignificant activities and natural gas combustion **(e.g., ID No. IS-TLFS, IS-SR2, ES-EG, ES-BLR1, ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, ES-R6, CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, and CD-R6-CO)**

i. For the coffee bean flavoring booth and the tea leaf flavoring stations **(ID No. ES-CBFB and IS-TLFS)**, VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC content of the material (e.g., vendor safety data sheets) as presented with the calculation methodologies provided in Permit Application No. 1300051.20A.

ii. For natural gas combustion, VOC emissions for each source and control device which combusts natural gas **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, ES-R6, CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, CD-R6-CO, ES-BLR1, ES-EG, and IS-SR2)** shall be determined as applicable by multiplying the appropriate natural gas combustion emission factor by natural gas usage.

iii. Monthly VOC emissions, in tons, for the coffee bean roasters **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, and ES-R6)** and associated control devices **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, and CD-R6-CO)** shall be determined by the following equations and DAQ approved emission factors until performance testing as required by Section 2.2 A.2.d is approved.

$E_{VOC\_Roasters} = \sum E_{VOC\_Oxidizers} + \sum E_{VOC\_Bypass}$

$E_{VOC\_Oxidizers}$ = {[controlled pounds (lb) VOC per ton coffee roasted (ton)] x [tons coffee roasted per hour (hr)] x (hours per month oxidizer is deemed "in operation")} x (1 ton / 2000 lb)

$E_{VOC\_Oxidizers} = [(Xc \times t_{Oxidizer}) \times 1/2000]$

E_{VOC_Bypass} = {[(uncontrolled lb VOC/ton coffee roasted) x (tons coffee roasted/hr)] x (hrs/month oxidizer is not operated or is deemed "not in operation")} x (1 ton / 2000 lb)

$E_{VOC\_Bypass} = [(Xuc \times t_{Bypass}) \times 1/2000]$

Where:

$E_{VOC\_Roasters}$ = the total VOC emissions (tons/month) of all coffee bean roasters, controlled and uncontrolled

$E_{VOC\_Oxidiers}$ = tons of VOC emissions per month (tons/month) from roasters controlled by oxidizers (i.e., thermal and catalytic oxidizers)

Xc = controlled lb VOC/hr on a monthly basis, calculated using emissions factors from Table 2.2 A.2.m-1, [VOC Emissions Factor x tons coffee roasted in roaster/hr on a monthly basis]

$t_{Oxidizer}$ = hours/month when oxidizer is not bypassed and oxidizer temperature is greater than or equal to the hourly block average temperature specified in Section 2.2 A.2.j.

$E_{VOCBypass}$ = tons of VOC emissions per month from each roaster bypassing the control device

Xuc = uncontrolled lb VOC/hr on a monthly basis assuming 94.5% VOC control efficiency ($CE_{Oxidizer}$), [Xc / (1 – $CE_{Oxidizer}$)]

t_{Bypass} = hrs/month when oxidizer is bypassed or hourly periods when the oxidizer temperature is less than the hourly block average temperature specified in Section 2.2 A.2.j. including hourly periods of start-up, shutdown, and malfunction

Table 2.2 A.2.m-1: Controlled VOC Emissions Factors

Emission Source(s) (ID No.(s))	Emission Factor	Control Device
Coffee bean roaster No. 1 **(ID No. ES-R1)**	1.69 lb/ton coffee roasted	Thermal oxidizer **(ID No. CD-R1-TO)**
Coffee bean roaster No. 2 **(ID No. ES-R2-New)**	0.0905 lb/ton coffee roasted	Catalytic oxidizer **(ID No. CD-R2-New-CO)**
Coffee bean roaster No. 3 **(ID No. ES-R3)**	2.66 lb/ton coffee roasted	Catalytic oxidizer **(ID No. CD-R3-CO)**
Coffee bean roaster No. 4 **(ID No. ES-R4)**	1.69 lb/ton coffee roasted	Thermal oxidizer **(ID No. CD-R4-TO)**
Coffee bean roaster No. 5 **(ID No. ES-R5)**	2.66 lb/ton coffee roasted	Catalytic oxidizer **(ID No. CD-R5-CO)**
Coffee bean roaster No. 6 **(ID No. ES-R6)**	2.66 lb/ton coffee roasted	Catalytic oxidizer **(ID No. CD-R6-CO)**
Miscellaneous Sources:		
Coffee bean flavoring booth **(ES-CBFB)**	Varies based on material	N/A
Tea leaf flavoring stations **(ID No. IS-TLFS)**	Varies based on material	N/A
Emergency Generator **(ID No. ES-EG)**	1.0 g/hp-hr	N/A
<u>Natural Gas Usage</u> Boiler **(ID No. ES-BLR1)**; Coffee bean roasters **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, ES-R6, and IS-SR2)**; Oxidizers **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, and CD-R6-CO)**	Natural Gas Combustion VOC Emission Factor	N/A

iv. When the oxidizers are operated at temperatures below the specified temperatures listed in Section 2.2 A.2.j above or if the temperatures are not monitored, the oxidizers shall be deemed "not in operation" and the VOC emissions shall be determined using the uncontrolled emissions rates specified in Section 2.2 A.2.m.iii above.

v. When the oxidizers are not in operation or deemed "not in operation" as given in Section 2.2 A.2.m.iv above, the VOC emissions shall be determined using the uncontrolled emissions rates specified in Section 2.2 A.2.m.iii above.

vi. Consecutive 12-month rolling VOC emissions, in tons, shall be calculated by summing the monthly emissions as determined above, for the previous 12-month period.

vii. Until the stack testing required in Section 2.2 A.2.d above is conducted and the test results are approved by DAQ, the Permittee shall assume in the emissions calculations in Section 2.2 A.2.m.iii above the control efficiency of the

oxidizers **(ID Nos. CD-R1-TO, CD-R2-New-CO, CD-R3-CO, CD-R4-TO, CD-R5-CO, and CD-R6-CO)** and the VOC emissions factors in Table 2.2 A.2.m-1 as included therein.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the consecutive 12-month rolling VOC emissions exceed the limit given in Section 2.2 A.2.a above.

n. The Permittee shall keep records of all parameters required to calculate monthly and 12-month consecutive rolling VOC emissions specified in Sections 2.2 A.2.l through 2.2 A.2.m and to demonstrate compliance with the avoidance limit given in Section 2.2 A.2.a above including, but not limited to, monthly records of the total amount of VOC-containing material used, the amount of coffee beans processed in each roaster, hours of operation of the emergency generator, and natural gas usage. The total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format), maintained on-site and available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the records are not kept or if the monthly and 12-month consecutive rolling VOC emissions are not monitored, calculated, or recorded as specified in Sections 2.2 A.2.l through 2.2 A.2.n above.

o. To ensure proper operation of the thermal and catalytic oxidizers, the Permittee shall perform periodic inspections and maintenance as recommended by the manufacturer, if applicable. As a minimum, the inspections and maintenance of the oxidizers shall include the following:
   i. a monthly external inspection of the structural integrity of the oxidizers;
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the oxidizers' primary components, including the heat exchanger and valves, to ensure structural integrity; and
   iii. an annual (for each 12-month period following the initial inspection) inspection of the burner of each oxidizer.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if the oxidizers are not inspected and maintained.

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

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0902 if these records are not maintained.

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

r. Within 30 days of a written request from the DAQ, the Permittee shall submit a summary report of any maintenance performed on the oxidizers.

s. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities given in Sections 2.2 A.2.i through 2.2 A.2.p 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 information:
   i. the monthly VOC emissions for each of the previous seventeen (17) months and the total VOC emissions for each of the twelve (12) month periods over the previous 17 months;
   ii. a summary of the monitoring and recordkeeping requirements for the oxidizers;
   iii. a summary report of the inspections and maintenance performed on any of the oxidizers;
   iv. a summary report of the monthly hours of operation for the oxidizers and any time periods during which the oxidizers were not in operation for the previous 17 months;
   v. all instances of deviations from the requirements of this permit must be clearly identified.

3. 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), these sources **(ID Nos. ES-R1, ES-R2-New, ES-R3, ES-R4, ES-R5, ES-R6, ES-CBFB, ES-BLR1, ES-EG, IS-TLFS, and IS-SR2)** shall discharge into the atmosphere less than 250 tons of volatile organic compounds (VOC) per consecutive 12-month period.

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

c. Compliance with the performance testing requirement for RACT avoidance in Sections 2.2 A.2.b through 2.2 A.2.h above shall ensure compliance with PSD avoidance for these sources. If the emissions testing in Sections 2.2 A.2.b through 2.2 A.2.h above is not performed, or the results of the test are above the limit given in Section 2.2 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d. The monitoring/recordkeeping/reporting requirements in Sections 2.2 A.2.i through 2.2 A.2.s above for RACT avoidance shall be sufficient to ensure compliance with PSD avoidance. If the monitoring and recordkeeping requirements given in Sections 2.2 A.2.i through 2.2 A.2.p above are not conducted, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

State-enforceable only

4. 15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT

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

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

c. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.

d. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

Pollutant	CAS No.	Carcinogens (lb/yr)	Chronic Toxicant (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)
Ammonia	7664-41-7				0.68
n-Hexane	110-54-3		23		
Phenol	108-95-2			0.24	

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

Emission Source ID No.	Emission Source Description[1,2]
I-ES-R1-RC, I-ES-R2-RC, I-ES-R3-RC, and I-ES-R5-RC	Four closed loop roasting cyclones
IS-SR2	Probat Probatino Tabletop natural gas-fired roaster (0.0185 million Btu per hour maximum heat input) associated with research and development operations
IS-GCR	Ground coffee remixing process with associated dust collector (ID No. CD-GCR)
IS-GCSS	Two (2) series of ground coffee storage silos with associated bin vents (ID No. CD-GCSSBV)
IS-CC-1 and IS-CC-2	Two chaff collection cyclones
IS-CD-CHS1-C	Chaff handling system No. 1 - cyclone
IS-CD-CHS2-C	Chaff handling system No. 2 - cyclone
IS-CD-CHS1-DLC	Chaff handling system No. 1 - divert line cyclone
IS-CD-CHS2-DLC	Chaff handling system No. 2 - divert line cyclone
IS-401/402-BF	Ground coffee conveying and packaging line with bagfilter
IS-CHPS	Chaff handling and pelletizing system
IS-SGCHD	Spent grounds coffee handling and drying system
IS-DCGPS	Dried coffee grounds pelletizing system
IS-TLFS	Tea leaf flavoring station

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

[2] When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit.”

SECTION 4 - GENERAL CONDITIONS (version 8.0, 07/10/2024)

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

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

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

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

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

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

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements [15A NCAC 02Q .0508(f)]
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.
2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

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

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

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

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

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

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

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

J. **RESERVED**

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

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

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **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.