ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

XXXX XX, 2022

Mr. Augustinus Gerritsen
Vice President
Avoca LLC
PO Box 129
Merry Hill, North Carolina 27957

SUBJECT: Air Quality Permit No. 01819T54
Facility ID: 0800044
Avoca LLC
Merry Hill
Bertie County
Fee Class: Title V
PSD Class: Major

Dear Mr. Gerritsen:

In accordance with your complete application for a renewal for your Title V permit received June 30, 2021, we are forwarding herewith Air Quality Permit No. 01819T54 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 identitifed 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 the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS

143-215.114A and 143-215.114B.

Bertie County has been triggered for increment tracking under PSD for PM-10, SO_2, and NOx. However, this permit renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from (Enter Permit Issuance Date) until (Enter Permit Expiration Date), is nontransferable to future owner and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact David B.Hughes at (919) 707-8411 or david.b.hughes@ncdenr.gov.

Sincerely yours,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Washington Regional Office
Central Files
Connie Horne (cover letter only)

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

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

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

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

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

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

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

* * *

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

Summary of Changes to Permit

The following changes were made to Avoca LLC, Merry Hill, Air Permit No 01819T53:*

Page No.	Section	Description of Changes
Global	Global	-Updated the application number and complete date. -Updated permit revision number to T54. -Updated the issuance/effective dates to permit.
Cover Letter	Cover Letter	-Updated PSD increment tracking statement.
3	List of Acronyms	-Moved List of Acronyms from end of permit.
4 - 9	Section 1 Equipment Table	-Removed 15A NCAC 02D .1109 112(j); Case-by-Case MACT designations. -Removed footnotes 3 and 4 due to the fact the dates are past due for Case-by-Case MACT and MACT DDDDD. -Removed footnotes 5, 6, and 7. The minor modifications are past due. -Added MACT FFFF applicability to emission sources (ID Nos. MHZ-1002, ES-1004-1, ES-1004-2-F, ES-1004-2-WW, ES-1004-2Silo, and ES-MSDU-1024). -Changed One No. 2 fuel oil-fired emergency generator ID No. from ES-PkGen1 to E105. -Moved Three No. 2 oil-fired emergency generators (ID Nos. E101, E102, and E103) and One No. 2 fuel oil-fired emergency fire water pump (ID No. FP) to Insignificant Activities list.
10	2.1 A Table	-Removed 15A NCAC 02D .1109 112(j); Case-by-Case MACT.
---	2.1 A.4	-Removed 15A NCAC 02D .1109 112(j); Case-by-Case MACT.
11	2.1 A.4	-Updated 40 CFR Part 60 Subpart Dc shell language for one propane-fired boiler (ID No. H-104).
11 - 15	2.1 A.5	-Updated 40 CFR Part 63, Subpart DDDDD shell language for two No. 2 fuel oil-fired boilers (ID Nos. H-101 and H-102).
15 - 17	2.1 A.6	-Updated 40 CFR Part 63, Subpart DDDDD shell language for one propane-fired boiler (ID No. H-104).
18	2.1 B	-Changed One No. 2 fuel oil-fired emergency generator ID No. from ES-PkGen1 to E105.
18	2.1 B Table	-Removed 15A NCAC 02Q .0317 to avoid 15A NCAC 02D .0530.

18	2.1 B.1.a & c 2.1 B.2.a & c 2.1 B.3.a	-Changed One No. 2 fuel oil-fired emergency generator ID No. from ES-PkGen1 to E105.
18	2.1 B.3	-Updated 40 CFR Part 63 Subpart ZZZZ language for one diesel-fired emergency generator (ID No. E105).
---	2.1 B.4	-Removed 15A NCAC 02Q .0317: AVOIDANCE CONDTIONS to avoid 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION.
25	2.1 E Table	-Replaced 15A NCAC 02D .0503 with 15A NCAC 02D .0504.
25 & 26	2.1 E.1	-Replaced 15A NCAC 02D .0503 language with 15A NCAC 02D .0504 language.
27	2.1 E.4	-Updated 40 CFR Part 60 Subpart Dc shell language for two biomass boilers (ID Nos. ES-BB1 & ES-BB2).
27 -32	2.1 E.5	-Updated 40 CFR Part 63, Subpart DDDDD shell language for two biomass boilers (ID Nos. ES-BB1 & ES-BB2).
---	2.1 F	-Removed Three Emergency Generators and Fire Water Pump (ID Nos. E101, E102, E104, & FP) from permit and added them to the Insignificant Activities list.
37	2.1 I.1.c.ii	-Removed annual internal inspection for cyclone (ID No. CD-MHZ-2001). DAQ doesn't require annual internal inspections for cyclones that aren't equipped with a door.
62 & 63	Section 3 Insignificant Activities	-Moved Insignificant Activities list and removed footnote 3. -Moved Three No. 2 oil-fired emergency generators (ID Nos. E101, E102, and E103) and One No. 2 fuel oil-fired emergency fire water pump (ID No. FP) to Insignificant Activities list from permit.
64 - 72	Section 4 General Conditions	-Updated shell conditions (v6.0, 01/07/2022).

* 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
01819T54	01819T53	XXXX XX, 2022	XXXX XX, 2027

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than XXXX XX, 2027.

Until such time as this permit expires or is modified or revoked, the below named Permittee is authorized 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:	**Avoca LLC**
Facility ID:	**0800044**
Primary SIC Code:	**2087**
Primary NAICS Code:	**31193**
Facility Site Location:	**841 Avoca Farm Road**
City, County, State, Zip:	**Merry Hill, Bertie County, NC 27957**
Mailing Address:	**PO Box 129**
City, State, Zip:	**Merry Hill, NC 27957**
Application Numbers:	**0800044.21A**
Complete Application Date:	**June 30, 2021**
Division of Air Quality, Regional Office Address:	**Washington Regional Office 943 Washington Square Mall Washington, NC 27889**

Permit issued this the XXth day of XXXX, 2022.

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

Table of Contents

List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
CSAPR	Cross-State Air Pollution Rate
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1001-2-1-P1 **BACT PSD** **CAM** **MACT FFFF**	Rotocel extractor, desolventizer, and solvent separation/recovery	CD-31209 CD-1001-2-S-1	One chilled water condenser One packed tower scrubber (8 gallons per minute minimum mineral oil injection rate)
ES-M-125A and M-125B **MACT FFFF**	Two storage and recycle tanks (19,500 gallons capacity each)	CD-1001-2-C-1 CD-1001-2-S-1[1]	One chilled water condenser One packed tower scrubber (8 gallons per minute minimum mineral oil injection rate)
ES-1001-2-1-F **BACT PSD** **MACT FFFF**	Process equipment leaks	NA	NA
ES-1001-2-1-WW **BACT PSD** **MACT FFFF**	Rotocel Operations wastewater stream	NA	NA
ES-1001-1-1-P1 **BACT PSD** **CAM** **MACT FFFF**	Arcon process tank M-1	CD-1001-1-3 CD-1001-2-S-1 [1]	One chilled water condenser One packed tower scrubber (8 gallons per minute minimum mineral oil injection rate)
ES-1001-1-1-P2 **BACT PSD** **CAM** **MACT FFFF**	Stripper T-5 and receiver M-21	CD-1001-1-T5B CD-1001-2-S-1 [1]	One chilled water condenser One packed tower scrubber (8 gallons per minute minimum mineral oil injection rate)
ES-1001-1-1-P3 **BACT PSD** **MACT FFFF**	Seven process tanks of various capacities and one fixed roof methanol storage tank (7,050 gallon capacity)		
ES-1001-1-1-F **BACT PSD** **MACT FFFF**	Process equipment leaks	NA	NA
ES-1001-1-1-WW **BACT PSD** **MACT FFFF**	Recovery Operations wastewater stream	NA	NA
ES-1001-1-2-P **BACT PSD** **MACT FFFF**	Six process tanks of various capacities	CD-1001-1-2	One chilled water condenser
ES-1001-1-2-F **MACT FFFF**	Process equipment leaks	NA	NA
ES-1001-1-2-WW **MACT FFFF**	Concrete Operations wastewater stream	NA	NA
T-3001 **BACT PSD**	One process tank (6,700 gallons capacity)	*Optional controls* CD-3003 CD-3004-S	*Optional controls* Chilled water condenser Mineral oil scrubber
T-3002 through 3005 **BACT PSD**	Four process tanks (2,538 gallons capacity each)		
T-3006 **BACT PSD**	One storage tank (12,500 gallons capacity)		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
T-3007 **BACT PSD**	One process tank (12,500 gallons capacity)		
C-3001 and C-3002 **BACT PSD**	Two centrifuges		
R-3002 **BACT PSD**	One reactor equipped with a chilled water process condenser (EX-3003)		
R-3003 **BACT PSD**	One reactor equipped with a chilled water process condenser (EX-3004)		
R-3004 **BACT PSD**	One reactor equipped with a chilled water process condenser (EX-3005)		
R-3001 **BACT PSD**	One reactor equipped with two chilled water process condensers (EX-3001 and EX-3002)	CD-3001 *Optional controls* CD-3003 CD-3004-S	Chilled water condenser *Optional controls* Chilled water condenser Mineral oil scrubber
D-3001 **BACT PSD**	One steam-heated dryer equipped with a chilled water process condenser (EX-3002)		
D-3002 **BACT PSD**	One steam-heated dryer equipped with a chilled water process condenser (EX-3006)	CD-3002 *Optional controls* CD-3003 CD-3004-S	Chilled water condenser *Optional controls* Chilled water condenser Mineral oil scrubber
ES-1003-10-F **BACT PSD**	Process equipment leaks	NA	NA
ES-1003-10-WW **BACT PSD**	SFG Process wastewater stream	NA	NA
ES-1001-1-3-P **MACT FFFF**	Eleven (11) process tanks of various capacities: • Hexane storage tank (M-2) • Process tank (M-4) with chilled water process condenser (T-6) • Process tank (M-4A) with chilled water process condenser (T-6A) • Receiver tank (M-39) for M-4/T-6 • Process tank (M-44) with two chilled water process condensers (T-13 and T-15) • Receiver tank (M-16) for T-13 and T-15 • Crystallizer tank (M-15) • Tank for cooled hexane for centrifuge (M-11) • Receiver tank for dryer condenser (TK-1210) • Process tank (M-17) • Process tank (M-17A)	NA	NA
G-17 **MACT FFFF**	One centrifuge	NA	NA
D-1202 **MACT FFFF**	One steam-heated dryer with condenser	NA	NA
ES-1001-1-3-Filters **MACT FFFF**	Filters	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1001-3-F **MACT FFFF**	SDE-1 process equipment leaks	NA	NA
ES-1001-1-3-WW **MACT FFFF**	SDE-1 wastewater stream	NA	NA
T-4001 **BACT PSD** **MACT FFFF**	One 17,900 gallon virgin solvent tank	CD-4002 CD-4003-S	Chilled water condenser Mineral oil scrubber
T-4017 and T-4018 **BACT PSD** **MACT FFFF**	Two 6,000 gallon process tanks		
R-4004 **BACT PSD** **MACT FFFF**	One 4,200 gallon reactor with process condenser (EX-4001)		
R-4005 **BACT PSD** **MACT FFFF**	One 4,200 gallon reactor with process condenser (EX-4002)		
R-4044 **BACT PSD** **MACT FFFF**	One 4,200 gallon reactor with process condenser (EX-4003)		
R-4015 **BACT PSD** **MACT FFFF**	One 1,500 gallon reactor		
C-4001 **BACT PSD** **MACT FFFF**	One centrifuge		
D-4001 **BACT PSD** **MACT FFFF**	One dryer with process condenser (EX-4004)	CD-4001 CD-4002 CD-4003-S	Chilled water condenser Chilled water condenser Mineral oil scrubber
ES-4000-F **BACT PSD** **MACT FFFF**	SDE-2 process equipment leaks	NA	NA
ES-4000-WW **BACT PSD** **MACT FFFF**	SDE-2 process wastewater stream	NA	NA
D31214 **MACT FFFF**	One product extract reactor	EX2203 CD-Z-9215 [2] CD-Z-9216 [2]	One chilled water condenser One water spray fume scrubber (0.5 gallons per minute minimum water injection rate) One water spray fume scrubber (0.5 gallons per minute minimum water injection rate)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
D31211 **MACT FFFF**	One waste solids separator vessel (1,333 gallon capacity)	EX2205 CD-Z-9215 [2] CD-Z-9216 [2]	One chilled water condenser One water spray fume scrubber (0.5 gallons per minute minimum water injection rate) One water spray fume scrubber (0.5 gallons per minute minimum water injection rate)
ES-TK-PNE-1 **MACT FFFF**	Solvent Process Tank (9,500 gallons capacity	NA	NA
ES-1003-2-1-F **MACT FFFF**	Process equipment leaks	NA	NA
ES-1003-2-1-WW **MACT FFFF**	PNE process wastewater stream	NA	NA
ES-1003-2-1-P **MACT FFFF**	Seven process tanks of various capacities	CD-Z-9215 [2] CD-Z-9216 [2]	One water spray fume scrubber (0.5 gallons per minute minimum water injection rate) One water spray fume scrubber (0.5 gallons per minute minimum water injection rate)
C-31203 **MACT FFFF**	One centrifuge		
D-1002 **MACT FFFF**	One dryer with a process chilled water condenser		
D-2202 **MACT FFFF**	One reactor	CD-Z-9215 [2] CD-Z-9216 [2]	One water spray fume scrubber (0.5 gallons per minute minimum water injection rate) One water spray fume scrubber (0.5 gallons per minute minimum water injection rate)
D-1215 **MACT FFFF**	One reactor		
D-1218 **MACT FFFF**	One reactor		
D-1201 **MACT FFFF**	One steam-heated dryer		
ES-1003-2-2-F **MACT FFFF**	Process equipment leaks	NA	NA
ES-1003-2-2-WW **MACT FFFF**	EVG Operation wastewater stream	NA	NA
ES-1001-11-P **BACT PSD** **CAM** **MACT FFFF**	Immersion extractor Z-1001, desolventizer Z-1002, day tank 90024 (6,000 gallon capacity), first-stage evaporator EX-1012, second-stage evaporator EX-1013, distillation column EX-90008, and nine process tanks of various capacities	CD-1001-11-EX1002 CD-1001-11-EX1003	One chilled water condenser One cryogenic (nitrogen) condenser system
ES-1001-11-F **BACT PSD** **MACT FFFF**	Process equipment leaks	NA	NA
MHZ-1002 **MACT FFFF**	One plant material grinder (1,011 pounds per hour nominal feed rate)	CD-1003-4-1	One bagfilter (244 square feet of filter area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1001-11-WW **BACT PSD** **MACT FFFF**	Botanical extraction operation wastewater stream	NA	NA
ES-1004-1 **BACT PSD** **MACT FFFF**	Biomass extraction debagging	CD-1004-1-FF1	One cartridge filter (6.7:1 maximum air-to-cloth ratio)
ES-1004-2-F **BACT PSD** **MACT FFFF**	Process equipment leaks	NA	NA
ES-1004-2-WW **BACT PSD** **MACT FFFF**	Biomass extraction operation wastewater stream	NA	NA
ES-1004-2-P **BACT PSD** **CAM** **MACT FFFF**	Primary Operating Scenario (POS) Immersion extractor Z-41001, desolventizer Z-41002, day tank 490025 (9,953 gallon capacity), storage tank 490024 (13,536 gallon capacity), first stage evaporator EX-41012, second stage evaporator EX-41013, distillation column EX-490008, and nine process tanks of various capacities	CD-1004-2EX1002 CD-1004-2EX1003	One chilled water condenser One cryogenic (nitrogen) condenser system
BACT PSD	Secondary Operating Scenario (SOS) Immersion extractor Z-41001, day tank 490025 (9,953 gallon capacity), storage tank 490024 (13,536 gallon capacity), first stage evaporator EX-41012, second stage evaporator EX-41013, distillation column EX-490008, and nine process tanks of various capacities Tray Dryer (RV-1002) equipped with bagfilter (DC-1001) vented to a vent condenser (HX-1001) and a solvent knockout pot (TK-1002)	CD-1004-2EX1002 CD-1004-2EX1003	One chilled water condenser One cryogenic (nitrogen) condenser system
ES-1004-2Silo **MACT FFFF**	Biomass silo loadout	CD-1004-2-FF2	One bagfilter (254 square feet of filter area)
ES-MSDU-1024 **MACT FFFF**	Molecular sieve	N/A	N/A
H-101 **MACT DDDDD**	One No. 2 fuel oil-fired boiler (20.3 million Btu per hour maximum heat input rate)	NA	NA
H-102 **MACT DDDDD**	One No. 2 fuel oil-fired boiler (20.3 million Btu per hour maximum heat input rate)	NA	NA
H-104 **NSPS – Dc** **MACT DDDDD**	One propane-fired boiler (33.5 million Btu per hour maximum heat input rate)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-BB1 and ES-BB2 **NSPS – Dc** **MACT – DDDDD**	Two biomass/bio-based solids-fired boilers (24 million Btu per hour maximum heat input rate each)	CD-BB1BH	One bagfilter (8,900 square feet of filter area)
E105 **MACT ZZZZ**	One No. 2 fuel oil-fired emergency generator (2,935 horsepower maximum rated power output)	CD-CatOx1	One catalytic oxidizer (695 °F minimum inlet temperature)
WWTP-AT1 **BACT PSD** **MACT FFFF**	Wastewater treatment plant aeration tank No. 1	NA	NA
ES-DEC-2001	One flaker deconditioner	CD-MHZ-2001	One simple cyclone (32 inches in diameter)

[1] The Permittee is permitted to operate sources **(ID Nos ES-M-125A and 125B, ES-1001-1-1-P1, ES-1001-1-1-P2, and ES-1001-1-1-P3)** without the simultaneous operation of scrubber **(ID No. CD-1001-2-S-1)** under the conditions cited in Sections 2.2 B.1.c and e, below.

[2] The Permittee is allowed to operate PNE and EVG operations without operating the water spray fume scrubber **(ID No. CD-Z-9215)** and water spray scrubber **(ID NO. CD-Z-9216)** when using non-HAP solvents.

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. Two No. 2 fuel oil-fired boilers (ID Nos. H-101 and H-102), One Propane-fired boiler (ID No. H-104)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	0.37 pounds per million Btu heat input for boilers H-101 and H-102 0.33 pounds per million Btu heat input for boiler H-104	15A NCAC 02D .0503
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity: H-104 only	15A NCAC 02D .0521
	40 percent opacity: H-101 and H-102	
N/A	Notification requirements, and Record and maintain amount of each fuel combusted during each calendar month.	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Hazardous Air Pollutants	**Affected Sources – H-101 and H-102** HCL: 1.1E-03 pounds per million Btu heat input Mercury: 2.0E-06 pounds per million Btu heat input CO: 130ppm by volume on a dry basis corrected to 3 percent oxygen Filterable PM or Total Suspended Metals (TSM): 7.9E-03 lb per MMBtu of heat input or 6.2E-05 lb per MMBtu of heat input (starting May 20, 2019)	15A NCAC 02D .1111 [40 CFR 63 Subpart DDDDD]

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

a. Emissions of particulate matter from the combustion of No. 2 fuel oil that are discharged from these sources **(ID Nos. H-101 and H-102)** into the atmosphere shall not exceed 0.37 pounds per million Btu heat input.

b. Emissions of particulate matter from the combustion of propane that are discharged from this source **(ID No.H-104)** into the atmosphere shall not exceed 0.33 pounds per million Btu heat input.

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

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

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

d. No monitoring, recordkeeping, or reporting is required for particulate emissions from the firing of No. 2 fuel oil or propane in boilers (**ID Nos. H-101, H-102, or H-104).**

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

a. Emissions of sulfur dioxide from these sources **(ID Nos. H-101 and H-102)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

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

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil or propane in boilers **(ID Nos. H-101, H-102, or H-104)**.

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

a. Visible emissions from boilers **(ID Nos. H-101 and H-102)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity.

b. Visible emissions from boiler **(ID No. H-104)** 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)]

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

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

d. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of No. 2 fuel oil or propane in boilers **(ID Nos. H-101, H-102, or H-104)**.

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

a. For boiler **(ID No. H-104)**, 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. The Permittee shall record and maintain records of the amounts of each fuel fired during each month. [40 CFR 60.48c(g)(2)] These records shall be maintained by the Permittee for a period of two years following the date of such record. [40 CFR 60.48c(i)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these recordkeeping requirements are not met.

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

c. The Permittee shall submit a notification of the actual date of initial startup of the boiler to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [40 CFR 60.7, 60.48c(a)] *This notification requirement has been met.*

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

Applicability [40 CFR 63.7485, 63.7490(d), 63.7499(q) and (u)]

a. For these sources **(ID Nos. H-101 and H-102)** (*i.e., existing sources(s) designed to burn light liquid fuel with a heat input capacity of 10 million Btu per hour or greater with no oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental

Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D) and Subpart A "General Provisions."

Definitions and Nomenclature

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

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D. [40 CFR 63.7565]

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

d. At the request of the Permitttee to minimize compliance requirements under MACT DDDDD, the Permittee shall only combust in these boilers ultra-low sulfur liquid fuel, defined in 40 CFR 63.7575 as a distillate oil that has less than or equal to 15 parts per million (ppm) sulfur [40 CFR 63.7515(h)]

Compliance Date [40 CFR 63. 7510(e), 63.56(b)]

e. The Permittee shall:
   i. complete the initial tune up and the one-time energy assessment no later than May 20, 2019.
   ii. complete the initial compliance requirements in Section 2.1 A.5. i below no later than November 16, 2019 and according to the applicable provisions in 40 CFR 63.7(a)(2).

These requirements have been met. Initial tune up on both boilers on July 18, 2019 and one-time energy assessment on both boilers on May 19, 2019.

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

f. The following general compliance requirements apply:
   i. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section 2.1 A.5.g below, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with items 5 and 6 of Table 3 of Subpart 5D. [40 CFR 63.7505(a) and 63.7500(f)]
   ii. At all times, then Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), 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 is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.7500(a)(3)]

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

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

g. The affected units shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid(HCl)	1.1E-03 lb per MMBtu of heat input
Mercury (Hg)	2.0E-06 lb per MMBtu of heat input
Carbon monoxide (CO)	130 ppm by volume on a dry basis corrected to 3 percent oxygen
Filterable Particulate Matter(PM) or Total Suspended Metals (TSM)	7.9E-03 lb per MMBtu of heat input or 6.2E-05 lb per MMBtu of heat input

[40 CFR 63.7500(a)(1), Table 2 to Subpart 5D]

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

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 A.5.g above, the Permittee shall be deemed in

noncompliance with 15A NCAC 02D .1111.

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

i. The Permittee shall submit the following notifications:
   i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [40 CFR 63.7545(d)]
   ii. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility [40 CFR63.9(h)(2)(ii), 63.10(d)(2), 63.7545(e)] *This requirement has been met. Received by Washington Regional Office on October 10, 2019 (cover letter dated October 3, 2019).*

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

Initial compliance requirements [15A NCAC 02Q .0508(b)]

j. The Permittee shall demonstrate compliance with the limits in Section 2.1 A.5.g by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 63.7525, and 63.7530. *This requirement has been met. Initial performance test(s) performed on both boilers on August 20 & 21/2019.*

Subsequent compliance requirements [15A NCAC 02Q .0508(b)]

k. The following compliance requirements apply:
   i. The Permittee shall conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.
   ii. If the affected boiler or process heater combusts ultra-low sulfur liquid fuel, the Permittee does not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Section 2.1 A.5.g providing the Permittee demonstrates ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. [40 CFR 63.7515(h)]
   iii. If the Permittee intends to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, the Permittee shall conduct new performance tests within 60 days of burning the new fuel type. [40 CFR 63.7515(h)]
   iv. The Permittee shall demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

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

l. The following work practice standards apply:
   i. The Permittee shall conduct a tune-up of the boiler(s) annually as specified below. The Permittee shall conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
      (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or 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 air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you 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 NO_X 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.

   [40 CFR 63.7500(a), 63.7540(a)(10)]
   ii. Each tune-up shall be conducted no more than 13 months after the previous tune-up. [40 CFR 63.7515(d)]
   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. [40 CFR 63.7540(a)(13), 63.7515(g)]

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

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

m. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. [40 CFR 63.7500(a)(1), Table 3 to Subpart DDDDD] *This requirement has been met*.

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

n. The following recordkeeping requirements apply. The Permittee shall:
   i. keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [40 CFR 63.7555(a)(1), 63.10(b)(2)(xiv)]
   ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [40 CFR 63.10(b)(2)(viii)]
   iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) 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 boiler or process heater;
      (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 annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

      [40 CFR 63.7540(a)(10)(vi)]
   iv. keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. [40 CFR 63.7555(d)(1), 63.7515(h)]
   v. retain a copy of the fuel supplier certification for any oil fired in the boiler. The fuel supplier certification shall include the following information:
      (A) The name of the oil supplier;
      (B) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c; and
      (C) The sulfur content or maximum sulfur content of the oil.
   vi. keep:
      (A) records in a form suitable and readily available for expeditious review;
      (B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
      (C) 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.

      [40 CFR 63.7560, 63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these recordkeeping requirements are not met or if the sulfur content of the fuel exceeds the limit in Section 2.1 A.5.d above

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

o. The following reporting requirements apply:
   i. The Permittee shall submit compliance reports to the DAQ on an annual basis. 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. [40 CFR 63.7550(a) and (b)]
   ii. 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. [40 CFR 63.7550(h)(3)]

iii. The compliance report shall contain the following information:
(A) company name and address;
(B) process unit information, emissions limitations, and operating parameter limitations;
(C) date of report and beginning and ending dates of the reporting period;
(D) include the date of the most recent tune-up for each unit required according to Section 2.1 A.5.l. Include the date of the most recent burner inspection; and
(E) 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.
[40 CFR 63.7550(a) and (c), Table 9 to 40 CFR 63 Subpart DDDDD]

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

6. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, 63.7490(b), 63.7499(l)]

a. For this source **(ID No. H-104)** (*i.e., units designed to burn gas 1 fuels with no oxygen trim*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions."

Definitions and Nomenclature

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

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD. [40 CFR 63.7565]

Compliance Date

d. The Permittee shall comply with the applicable requirements upon startup of this source. [40 CFR 63.7495(a)]
This requirement has been met.

Notifications

e. As specified in 40 CFR 63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source. [40 CFR 63.7545(c)]
This requirement has been met on February 25, 2019.

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

f. The following work practice standards apply:
i. The Permittee shall conduct a tune-up every year while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:
(A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or 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 air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown).
(D) optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOx requirement to which the unit is subject.
(E) measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be

taken using a portable CO analyzer.
[40 CFR 63.7500(a), 63.7540(a)(10)

ii. Each tune-up shall be conducted no more than 13 months after the previous tune-up. The initial tune-up shall be conducted no later than 13 months after the initial startup of the source. [40 CFR 63.7515(d)]

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.[40 CFR 63.7540(a)(13), 63.7515(g)]

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

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

g. The Permittee shall:

i. keep 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 compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]

ii. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:

(A) the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(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.

[40 CFR 63.7540(a)(10)(vi)]

iii. keep the associated records for Section 2.1 A.6.f.

iv. keep:

(A) records in a form suitable and readily available for expeditious review;

(B) keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and

(C) 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.

[40 CFR 63.7560, 63.10(b)(1)]

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

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

h. The following reporting requirements apply:

i. The Permittee shall submit compliance reports to the DAQ on an annual basis. The first report shall cover the period beginning on start-up and ending on the earliest December 31st less than one year from the compliance date. Subsequent annual reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30 for the previous compliance period. [40 CFR 63.7550(a) and (b)]

ii. The compliance 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/).) The Permittee shall use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, the Permittee 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, the Permittee shall submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. the Permittee shall begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h)(3)]

iii. The compliance report must contain the following information:

(A) Company name and address;

(B) Process unit information, emissions limitations, and operating parameter limitations;

(C) Date of report and beginning and ending dates of the reporting period;

(D) Include the date of the most recent tune-up for each unit required according to Section 2.1 A.6.f. Include

the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.

(E) 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.

[40 CFR 63.7550(a) and (c), Table 9 to Subpart DDDDD]

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

B. One diesel-fired emergency generator (ID No. E105) and one associated catalytic oxidizer (ID No. CD-CatOx1)

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(d)
Hazardous Air Pollutants	Maximum Achievable Control Technology	15A NCAC 02D .1111 (40 CFR Part 63, Subpart ZZZZ)

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

a. Emissions of sulfur dioxide from the emergency generator **(ID No. E105)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in the emergency generator **(ID No. E105)**.

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

a. Visible emissions from the emergency generator **(ID No. E105)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of No. 2 fuel oil in the emergency generator **(ID No. E105)**.

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY [40 CFR Part 63, Subpart ZZZZ]

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

a. For this emission source **(ID No. E105)** *(existing stationary RICE with a site rating of more than 500 brake GP located at a major source of HAP emissions)*, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)" including Subpart A "General Provisions."

Stationary RICE subject to limited requirements [40 CFR 63.6590(b)]

b. Pursuant to 40 CFR 63.6590(b)(3)(iii), these sources do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

C. Rotocel Operations, including:

- **Rotocel extractor, desolventizer, and solvent separation/recovery (ID No. ES-1001-2-1-P) and one associated chilled water condenser (ID No. CD-31209) venting to one packed tower scrubber (ID No. CD-1001-2-S-1);**
- **Two storage and recycle tanks (ID No. ES-M-125A and M-125B) and one associated chilled water condenser (ID No. CD-1001-2-C-1) venting to one packed tower scrubber (ID No. CD-1001-2-S-1);**
- **Process equipment leaks (ID No. ES-1001-2-1-F); and**
- **Rotocel Operations wastewater stream (ID No. ES-1001-2-1-WW)**

Recovery Operations, including:

- **Arcon process tank M-1 (ID No. ES-1001-1-1-P1) and one associated chilled water condenser (ID No. CD-1001-1-3) venting to one packed tower scrubber (ID No. CD-1001-2-S-1);**
- **One chilled water condenser (ID No. CD-1001-1-T5B) venting to packed tower scrubber (ID No. CD-1001-2-S-1) controlling emissions from:**
  - **Stripper T-5 and receiver M-21 (ID No. ES-1001-1-1-P2); and**
  - **Seven fixed roof process tanks of various capacities and one fixed roof methanol storage tank (ID No. ES-1001-1-1-P3);**
- **Process equipment leaks (ID No. ES-1001-1-1-F); and**
- **Recovery Operations wastewater stream (ID No. ES-1001-1-1-WW)**

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Best Available Control Technology See Sections 2.2 B.1 and 2.2 B.2 Excluding two solvent recycle process tanks **(ID Nos. ES-M-125A and M-125B)**	15A NCAC 02D .0530
	Compliance Assurance Monitoring Rotocel and Recovery Operations only	15A NCAC 02D .0614
Toxic Air Pollutants	**State-Enforceable Only** See Section 2.2 A.2	15A NCAC 02D .1100
Odorous emissions	**State-Enforceable Only** See Section 2.2 A.3	15A NCAC 02D .1806
Hazardous Air Pollutants	Maximum Achievable Control Technology	15A NCAC 02D .1111 (40 CFR Part 63, Subpart FFFF)

1. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

Applicability [15A NCAC 02D .0614 and 40 CFR 64.2]

a. For the Rotocel Operations and the Recovery Operations the Permittee shall comply with 40 CFR Part 64 and 15A NCAC 02D .0614 and shall ensure that this source complies with the volatile organic compound (VOC) emission limits of 15A NCAC 02D .0530 by complying with this Condition.

Control Requirements/Parameter ranges [15A NCAC 02Q .0508(f)]

b. VOC emissions from the rotocel extractor, desolventizer, and solvent separation/recovery **(ID No. ES-1001-2-1-P)**, arcon process tank M-1 **(ID No. ES-1001-1-1-P1)**, stripper T-5 and receiver M-21 **(ID No. ES-1001-1-1-P2),** and eight process and storage tanks **(ID No. ES-1001-1-1-P3)** shall be controlled by the associated packed tower

scrubber **(ID No. CD-1001-2-S-1)**, except as allowed pursuant to Sections 2.2 B.1.c and e below. In addition, the Permittee shall maintain a daily average mineral oil temperature at the inlet of the packed scrubber **(ID No. CD-1001-2-S-1)** of less than or equal to 100 degrees Fahrenheit (100 °F) whenever the associated sources are operational.

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

c. **For VOC emissions:** The Permittee shall perform the monitoring requirements of Sections 2.1 C.1.c.i through iii below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if the monitoring and recordkeeping requirements of Sections 2.1 C.1.c.i through iii below, are not performed.
   i. The Permittee shall monitor the inlet mineral oil temperature of mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** at least once each day that the sources listed in Section 2.1 C.1.b above, operate;
   ii. The Permittee shall inspect, maintain, and operate mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** in accordance with Section 2.2 B.1.j below; and
   iii. The Permittee shall install, maintain, operate, and calibrate the temperature gauge associated with mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** in accordance with Section 2.2 B.1.k below.

d. **For excursions:** In the event of an excursion the Permittee shall take appropriate action to correct the excursion as soon as practicable. Further, if mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** operates under conditions qualifying as an excursion for more than 5 percent of the operational time of the sources listed in Section 2.1 C.1.b above, during a consecutive 6-month period, then the Permittee shall develop a Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8. For the purposes of this permit condition excursions are defined as operation of mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** with an inlet mineral oil temperature that exceeds the limit cited in Section 2.1 C.1.b above, while the associated emission sources are operating, except as allowed pursuant to Sections 2.2 B.1.c and e below.

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

e. The results of monitoring, inspections, maintenance and calibrations conducted pursuant to Sections 2.1 C.1.c and d above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of the monitoring, noting any excursions along with any actions taken to correct the inlet mineral oil temperature of packed tower scrubber **(ID No. CD-1001-2-S-1)**;
   iii. The results of any inspections or maintenance performed on mineral oil packed tower scrubber **(ID No. CD-1001-2-S-1)** or the associated temperature and flow rate gauges; and
   iv. Any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if these records are not maintained.

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section(s) 2.1 C.1.c, d, and e above postmarked or delivered 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. Botanical Extraction Operations, including:

- **Immersion extractor Z-1001, desolventizer Z-1002, day tank 90024, first-stage evaporator EX-1012, second stage evaporator EX-1013, distillation column EX-90008 and nine process tanks of various capacities (ID No. ES-1001-11-1-P) and one associated chilled water condenser (ID No. CD-1001-11-EX1002) venting to one cryogenic (nitrogen) condenser system (ID No. CD-1001-11-EX1003);**
- **Plant Material Grinder (ID No. MHZ-1002) and one associated bagfilter (ID No.CD-1003-4-1);**
- **Process equipment leaks (ID No. ES-1001-11-1-F); and**
- **Botanical extraction operations wastewater stream (ID No. ES-1001-11-WW)**

Biomass Extraction Operations, including:

- **Biomass extraction debagging (ID No. ES-1004-1) and one associated cartridge filter (ID No. CD-1004-1-FF1);**

Primary Operating Scenario

- **Immersion extractor Z-41001, desolventizer Z-41002, day tank 490025, storage tank 490024, first-stage evaporator EX-41012, second stage evaporator EX-41013, distillation column EX-490008 and nine process tanks of various capacities (ID No. ES-1004-2-P) and one associated chilled water condenser (ID No. CD-1004-2EX1002) venting to one cryogenic (nitrogen) condenser system (ID No. CD-1004-2EX1003);**

Secondary Operating Scenario

- **Immersion extractor Z-41001, day tank 490025, storage tank 490024, first-stage evaporator EX-41012, second stage evaporator EX-41013, distillation column EX-490008, nine process tanks of various capacities (ID No. ES-1004-2-P); tray dryer (RV-1002) equipped with bagfilter (DC-1001) vented to a vent condenser (HX-1001) and a solvent knockout pot (TK-1002); all vented to one associated chilled water condenser (ID No. CD-1004-2EX1002) venting to one cryogenic (nitrogen) condenser system (ID No. CD-1004-2EX1003);**
- **Process equipment leaks (ID No. ES-1004-2-F);**
- **Wastewater tanks and other similar vessels (ID No. ES-1004-2-WW);**
- **Biomass extraction operations wastewater stream (ID No. ES-1003-10-WW);**
- **Biomass silo loadout (ID No. ES-1004-2Silo) and one associated bagfilter (ID No. CD-1004-2-FF2); and**
- **Molecular sieve (ID No. ES-MSDU-1024)**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Plant material grinder, biomass extraction debagging, tray dryer, and biomass silo loadout: $E=4.10P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds	Best Available Control Technology See Sections 2.2 B.1 and 2.2 B.2	15A NCAC 02D .0530
	Compliance Assurance Monitoring	15A NCAC 02D .0614

Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	**State-Enforceable Only** See Section 2.2 A.2	15A NCAC 02D .1100
Odorous emissions	**State-Enforceable Only** See Section 2.2 A.3	15A NCAC 02D .1806
Hazardous Air Pollutants	Maximum Achievable Control Technology See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart FFFF)

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

a. Emissions of particulate matter from the plant material grinder **(ID No. MHZ-1002)**, the biomass extraction debagging operation **(ID No. ES-1004-1),** tray dryer (**ID No. RV-1002**) and the biomass silo loadout **(ID No. ES-1004-2-Silo)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

c. Particulate matter emissions from the plant material grinder, the biomass extraction debagging operation, tray dryer, and the biomass storage silo shall be controlled by a bagfilter **(ID No. CD-1003-4-1),** a cartridge filter **(ID No. CD-1004-1-FF1**), a bagfilter (**ID No. DC-1001**), and a bagfilter **(ID No. CD-1004-2-FF2)**, respectively. 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 cartridge filter and bagfilters for structural integrity.

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

d. The results of inspections 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. Variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 D.1.c and d above postmarked or delivered 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 the biomass debagging operation (**ID No. ES-1004-1**) and biomass silo (**ID No. ES-1004-**

2Silo) 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 per semi-annual period the Permittee shall observe the emission points of these sources **(ID Nos. ES-1004-1 and ES-1004-2Silo)** for any visible emissions above normal. The semi-annual observation must be made for each semiannual period of the calendar year period to ensure compliance with this requirement. If visible emissions from a source 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 semi-annual 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 Section 2.1 D.2.c and d above postmarked or delivered 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.

3. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING
(Botanical Extraction Operations and Biomass Extraction Operations Primary Operating Scenario)
Applicability [15A NCAC 02D .0614 and 40 CFR 64.2]

a. For the immersion extractor **(ID No. Z-1001)**, desolventizer **(ID No. Z-1002)**, day tank **(ID No. 90024)**, first-stage evaporator **(ID No. EX-1012)**, second stage evaporator **(ID No. EX-1013)**, distillation column **(ID No. EX-90008)** and nine process tanks (**ID No. ES-1001-11-1-P**) and the immersion extractor **(ID No. Z-41001)**, desolventizer **(ID No. Z-41002)**, day tank **(ID No. 490025)**, isohexane storage tank **(ID No. 490024)**, first-stage evaporator **(ID No. EX-41012)**, second stage evaporator **(ID No. EX-41013)**, distillation column **(ID No. EX-490008)** and nine process tanks of various capacities (**ID No. ES-1004-2-P**), the Permittee shall comply with 40 CFR Part 64 and 15A NCAC 02D .0614 and shall ensure that this source complies with the volatile organic compound (VOC) emission limits of 15A NCAC 02D .0530 by complying with this Condition.

Control Requirements/Parameter ranges [15A NCAC 02Q .0508(f)]

b. VOC emissions from the subject botanical extraction operations sources (**ID No. ES-1001-11-1-P**) shall be controlled by the associated cryogenic condenser system (**ID No. CD-1001-11-EX1003**). VOC emissions from the subject biomass extraction operations sources (**ID No. ES-1004-2-P**) shall be controlled by the associated cryogenic condenser system (**ID No. CD-1004-2EX1003**). In addition:
   i. The Permittee shall maintain a 12-hour average outlet temperature of less than or equal to -40 °F for cryogenic condenser system **CD-1001-11-EX1003** whenever the associated sources are operational when using non-water soluble solvents. The 12-hour average outlet temperature must be maintained at less than or equal to 17

degrees Fahrenheit (17 ºF) when using water soluble solvents; and

ii. The Permittee shall maintain a 12-hour average outlet temperature of less than or equal to -40 °F for cryogenic condenser system **(ID No. CD-1004-2EX1003)** whenever the associated sources are operational when using non-water soluble solvents. The 12-hour average outlet temperature must be maintained at less than or equal to 17 degrees Fahrenheit (17 ºF) when using water-soluble solvents

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

c. **For VOC emissions:** The Permittee shall perform the monitoring requirements of Sections 2.1 D.3.c.i through iv, below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if the monitoring and recordkeeping requirements of Sections 2.1 D.3.c.i through iv below, are not performed.
   i. The Permittee shall monitor the outlet temperature of cryogenic condenser system **(ID No. CD-1001-11-EX1003)** at least once each hour, and calculate the average outlet temperature for the consecutive 12-hour period ending with that hour, when the associated sources listed in Section 2.1 D.3.b above, operate;
   ii. The Permittee shall monitor the outlet temperature of cryogenic condenser system **(ID No. CD-1004-2EX1003)** at least once each hour, and calculate the average outlet temperature for the consecutive 12-hour period ending with that hour, when the associated sources listed in Section 2.1 D.3.b above, operate; and
   iii. The Permittee shall inspect, maintain, and operate cryogenic condenser systems **(ID Nos. CD-1001-11-EX1003 and CD-1004-2EX1003)** in accordance with Section 2.2 B.1.h below; and
   iv. The Permittee shall install, maintain, operate, and calibrate the temperature sensors associated with cryogenic condenser systems **(ID Nos. CD-1001-11-EX1003 and CD-1004-2EX1003)** in accordance with Section 2.2 B.1.j below.

d. **For excursions:** In the event of an excursion the Permittee shall take appropriate action to correct the excursion as soon as practicable. Further, if cryogenic condenser system **(ID No. CD-1001-11-EX1003 or CD-1004-2EX1003)** operate under conditions qualifying as an excursion for more than 5 percent of the operational time of their associated sources listed in Section 2.1 D.3.b above, during a consecutive 6-month period, then the Permittee shall develop a Quality Improvement Plan (QIP) for that cryogenic condenser system in accordance with 40 CFR 64.8. For the purposes of this permit condition excursions are defined as operation of cryogenic condenser system **(ID No. CD-1001-11-EX1003 or CD-1004-2EX1003)** with a 12-hour average outlet temperature that exceeds the associated limit cited in Section 2.1 D.3.b.i and ii above, while the associated emission sources are operating.

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

e. The results of monitoring, inspections, maintenance and calibrations conducted pursuant to Section 2.1 D.3.c and d above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of the monitoring, noting any excursions along with any actions taken to correct the outlet temperature of cryogenic condenser system **(ID No. CD-1001-11-EX1003 or CD-1004-2EX1003)**;
   iii. The results of any inspections or maintenance performed on cryogenic condenser system **(ID No. CD-1001-11-EX1003)**, cryogenic condenser system **(ID No. CD-1004-2EX1003)**, or the associated temperature gauges; and
   iv. Any variance from manufacturer's recommendations, if any, and corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if these records are not maintained.

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 D.3.c, d, and e above postmarked or delivered 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. Two biomass boilers (ID Nos. ES-BB1 and ES-BB2) controlled by a bagfilter (ID No. CD-BB1BH)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Boilers **(ID Nos. ES-BB1 and BB2)**: $E = 1.1698 \times Q^{-0.2230}$ Where E = allowable emission rate in pounds per million Btu Q = maimum heat input rate in million Btu per hour	15A NCAC 02D .0504
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity when averaged over a six-minute period	15A NCAC 02D .0521
N/A	Initial notification requirements, Notification of boiler size and fuel combusted, and Record and maintain amount of each fuel combusted during each calendar month.	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
PM, HCl, CO, Hg	Boilers **(ID Nos. ES-BB1 and BB2)**: Emission limits as specified in 40 CFR Part 63, Subpart DDDDD	15A NCAC 02Q .1111 MACT (40 CFR Part 63, Subpart DDDDD)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOODBURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of wood that are discharged from the boilers (**ID Nos. ES-BB1 and BB2**) into the atmosphere shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0504(c)].

$E = 1.1698 \times Q^{-0.2230}$

Where E = allowable emission rate in pounds per million Btu
Q = maximum heat input rate in million Btu per hour

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

a. 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 .0504.

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

c. Particulate matter emissions from the boilers **(ID Nos. ES-BB1 and ES-BB2)** shall be controlled with a bagfilter **(ID No. CD-BB1BH)**. 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. monthly external inspection of the ductwork and bagfilter noting the structural integrity; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the bagfilter and ductwork is 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. a report 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 .0504 if these records are not maintained.

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

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 E.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

a. Emissions of sulfur dioxide from the boilers **(ID Nos. ES-BB1 and ES-BB2)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

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

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

c. No monitoring/recordkeeping is required for sulfur dioxide emissions from the firing of wood in the boilers **(ID Nos. ES-BB1 and ES-BB2)**.

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

a. Visible emissions from the boilers **(ID Nos. ES-BB1 and ES-BB2)** 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.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 day the Permittee shall observe the emission points of the boilers **(ID Nos. ES-BB1 and ES-BB2)** for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If visible emissions from this source 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.3.a. above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required daily 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 Section 2.1 E.3.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

a. For boilers **(ID Nos. ES-BB1 and ES-BB2)**, 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. The Permittee shall record and maintain records of the amounts of each fuel fired during each month. [40 CFR 60.48c(g)(2)] These records shall be maintained by the Permittee for a period of two years following the date of such record. [40 CFR 60.48c(i)] The Permittee shall be deemed in noncompliance wirh 15A NCAC 02D .0524 if these recordkeeping requirements are not met.

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

c. The Permittee shall submit a notification of the actual date of initial startup of the boiler to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [40 CFR 60.7, 60.48c(a)] *This notification requirement has been met.*

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

Applicability [40 CFR 63.7485, 63.7490(b), 63.7499(i), (p)]

a. For these sources **(ID Nos. ES-BB1 and ES-BB2)** (*i.e., new Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater with oxygen trim system and controlled by bagfilter*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D) and Subpart A "General Provisions."

Definitions and Nomenclature

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

40 CFR Part 63 Subpart A General Provisions

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D. [40 CFR 63.7565]

Compliance Date [40 CFR 63.7495(a), 63.7510(f), (g)]

d. The Permittee shall:
   i. complete the initial tune up by the date specified in Section 2.1 E.5.l.ii below; and
   ii.. complete the initial compliance testing and monitoring requirements in Section 2.1 E.5.i below within 180 days after startup.

   These requirements have been met.

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

e. The following general compliance requirements apply:
   i. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section 2.1 E.5.f below except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with Section 2.1.E.5.m and n below. [40 CFR 63.7505(a), 63.7500(f)]
   ii.. At all times, then Permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490),

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 is 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 these requirements are not met.

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

f. The affected unit(s) shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid(HCl)	2.2E-02 lb per MMBtu of heat input
Mercury (Hg)	8.0E-07 lb per MMBtu of heat input
Carbon monoxide (CO)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.0E-02 lb per MMBtu of heat input

[40 CFR 63.7500(a)(1), Table 1 to Subpart 5D]

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

g. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 E.5.f above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications

h.. The following notification requirements apply:

i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [40 CFR 63.7545(d)]

ii. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status (NOCS), including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. [40 CFR63.9(h)(2)(ii), 63.10(d)(2), 63.7545(e)] *This requirement has been met on February 12, 2020.*

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

Initial compliance requirements [15A NCAC 02Q .0508(f)]

i. The Permittee shall demonstrate compliance with the limits in Section 2.1 E.5.g above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to 40 CFR 63.7510, 63.7525 and 63.7530. *These requirements have been met. Initial performance test on both boilers on June 26, 2012, re-test February 21, 2013, re-test December 19, 2013. Established operating parmeters for both boilers on December 18, 2019.*

Subsequent compliance requirements [15A NCAC 02Q .0508(f)]

j. The following compliance requirements apply:

i. The Permittee shall conduct subsequent performance tests and fuel analyses as necessary according to 40 CFR 63.7515.

(A) The Permittee shall conduct all applicable performance tests according to 40 CFR 63.7520 on an annual basis, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in 40 CFR 63.7515(b) through (e), (g), and (h).

(B) If the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous

performance test.

ii.. The Permittee shall demonstrate continuous compliance with each emission limit and operating limit that applies according to 40 CFR 63.7540.

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

Monitoring Requirements and Operating Limits [15A NCAC 02Q .0508(f)]

k The following operating limits and monitoring requirements apply. The Permittee shall:

i. install, operate, and maintain an oxygen trim system, as defined in 40 CFR 63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. [40 CFR 63.7525(a)(7)]. The oxygen level shall be set as follows:
   (A) For biomass boiler **(ID No. ES-BB1)**, no lower than 10.2 percent O_2.
   (B) For biomass boiler **(ID No. ES-BB2)**, no lower than 8.6 percent O_2.

ii. install, calibrate, maintain and continuously operate bag leak detection system(s) according to 40 CFR 63.7525(j)(1) through(6). The Permittee shall initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. [40 CFR 63.7540(a)(7), Table 4 to Subpart 5D]

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. [40 CFR 63.7500(a), Table 4 to MACT 5D]. The 30-day rolling average operating loads shall not exceed 25,735 pounds of steam per hour.

iv. meet the requirements for all monitoring systems (CMS) as applicable according to 40 CFR 63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in 40 CFR 63.7505(d)(1) through (4) for the use of any CMS. [40 CFR 63.7505(d)].

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [40 CFR 63.7540(a)(1)]

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

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

Five Year Tune-up

l. The following work practice standards apply:

i. The Permittee shall conduct a tune-up of the boilers(s) every five years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:
   (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;
   (B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   (C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown);
   (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.

   [40 CFR 63.7500(a), 63.7540(a)(10) and (12)]

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source.

[40CFR 63.7515(d)]

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. [40 CFR 63.7540(a)(13), 63.7515(g)]

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

Startup Requirements [Table 3 to Subpart 5D]

m. During startup, the Permitee shall:
   i. operate all CMS during startup.
   ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
   iii. have the option of complying using either of the following work practice standards.
      (A) If the Permittee chooses to comply using definition (1) of "startup" in 40 CFR 63.7575, once the Permittee starts firing fuels that are not clean fuels, the Permittee shall vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). The Permittee shall start the limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR
      (B) If the Permittee chooses to comply using definition (2) of "startup" in 40 CFR 63.7575, once the Permittee starts to feed fuels that are not clean fuels, the Permittee shall vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. The Permittee shall engage and operate PM control within one hour of first feeding fuels that are not clean fuels. The Permittee shall start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. The Permittee shall develop and implement a written startup and shutdown plan, as specified in 40 CFR 63.7505(e).
   iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time the Permittee shall meet this work practice. The Permittee shall collect monitoring data during periods of startup, as specified in 40 CFR 63.7535(b). The Permittee shall keep records during periods of startup. The Permittee shall provide reports concerning activities and periods of startup, as specified in 40 CFR 63.7555.

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

Shutdown Requirements [Table 3 to Subpart 5D]

n. During shutdown, the Permittee shall:
   i. operate all CMS during shutdown.
   ii. while firing fuels that are not clean fuels during shutdown, the Permittee shall vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.
   iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
   iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. The Permittee shall collect monitoring data during periods of shutdown, as specified in 40 CFR 63.7535(b). The Permittee shall keep records during periods of shutdown. The Permittee shall provide reports concerning activities and periods of shutdown, as specified in 40 CFR 63.7555.

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

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

o. The following recordkeeping requirements apply. The Permittee shall:

i. keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [40 CFR 63.7555(a)(1), 63.10(b)(2)(xiv)]
ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [40 CFR 63.10(b)(2)(viii)]
iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) 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 boiler or process heater;
   (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 annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
   [40 CFR 63.7540(a)(10)(vi)]
iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of 40 CFR 63.7555as applicable.
v. keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.
vi. keep the records in paragraphs (d)(1) through (13) of 40 CFR 63.7555 as applicable.
vii. keep:
   (A) records in a form suitable and readily available for expeditious review;
   (B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   (C) 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.
   [40 CFR 63.7560, 40 CFR 63.10(b)(1)]

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

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

p. The following reporting requirements apply:
i. The Permittee shall submit a compliance report to the DAQ on a semi-annual basis, 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. [40 CFR 63.7550(a) and (b)]
ii. The compliance reports shall also be submitted electronically to the EPA via the procedures in 40 CFR 63.7550(h)(3).
iii. The compliance report shall contain:
   (A) The information in 40 CFR 63.7550(c) as applicable.
   (B) For each deviation from an emission limit or operating limit, the report shall contain the information in 40 CFR 63.7550(d) and (e) as applicable.
iii. Within 60 days after the date of completing each performance test (defined in 40 CFR 63.2) required by Subpart 5D, including any associated fuel analyses and/or CEMS performance evaluation (defined in 40 CFR 63.2), the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in 40 CFR 63.7550(h)(1) or (h)(2) as applicable.
   (A) This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to 40 CFR 63.7530 and Table 7 to Subpart 5D, as applicable. The reports for all subsequent performance tests must include all applicable information required in 40 CFR 63.7550. [40 CFR 63.7515(f)]
   (B) If performance testing indicates that compliance with the emission limits is demonstrated with revisions to the operating limits that are more stringent than the established minimum or maximum operating limits in Section 2.1 E.5 k. i above, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
   (C) If performance testing indicates that compliance with the emission limits is demonstrated with revisions to the operating limits that are less stringent than the established minimum or maximum operating limits

in Section 2.1 E.5 k. iii above, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

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

F. Sclareol Recrystallization (SFG) Operations, including:

- **One process tank (ID No. T-3001)***
- **Four process tanks (ID Nos. T-3002 through 3005)***
- **One storage tank (ID No. T-3006)***
- **One process tank (ID No. T-3007)***
- **Two centrifuges (ID Nos. C-3001 and C-3002)***
- **One reactor (ID No. R-3001) equipped with two process chilled water condensers (EX-3001 and EX-3002) with control chilled water condenser (ID No. CD-3001)***
- **One reactor (ID No. R-3002) equipped with a process chilled water condenser (EX-3003)***
- **One reactor (ID No. R-3003) equipped with a process chilled water condenser (EX-3004)***
- **One reactor (ID No. R-3004) equipped with a process chilled water condenser (EX-3005)***
- **One steam heated dryer (ID No. D-3001) equipped with a process chilled water condenser (EX-3002) with control chilled water condenser (ID No. CD-3001)***
- **One steam heated dryer (ID No. D-3002) equipped with a process chilled water condenser (EX-3006) with control chilled water condenser (ID No. CD-3002)***
- **Process equipment leaks (ID No. ES-1003-10-F)**
- **SFG Operations wastewater stream (ID No. ES-1003-10-WW)**

* These emission sources may be controlled with a chilled water condenser **(ID No. CD-3003)** in series with a mineral oil scrubber **(ID No. CD-3004-S)**. These control devices are optional controls. The Permittee has the option to construct or not construct these devices and has the option to operate or not operate these devices.

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Best Available Control Technology Less than 217.4 tons per consecutive 12-month period	15A NCAC 02D .0530
Toxic Air Pollutants	**State-Enforceable Only** See Section 2.2 A.2	15A NCAC 02D .1100
Odorous emissions	**State-Enforceable Only** See Section 2.2 A.3	15A NCAC 02D .1806

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to comply with Best Available Control Technology (BACT), the SFG operations shall discharge no more than 217.4 tons volatile organic compounds per consecutive 12 month period.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. Calculations of VOC emissions per month shall be made at the end of each month. 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.

d. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format).

e. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of VOC containing materials or the VOC emissions are not monitored and recorded as specified in Section 2.1.F.1.c and d or if the VOC emissions exceed the limit in Section 2.1. F.1.a above.

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

f. The Permittee shall submit a semiannual report of the monitoring and recordkeeping activities given in Section 2.1 F.1.c, d, and 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. The report shall contain the following:
   i. the monthly volatile organic compound emissions for each of the previous 17 months; and
   ii. the yearly volatile organic compound emissions for each consecutive 12-month period ending on each month of the previous six-month period.

G. Sclareolide (SDE-1) Operations, including:

- **Eleven (11) process tanks of various capacities (ID No. ES-1001-1-3-P, Tank ID Nos. M-2, M-4, M-4A, M-39, M-44, M-15, M-17, M-17A, M-16, M-11, and TK-1210);**
- **One centrifuge (ID No. G-17);**
- **One steam-heated dryer with process condenser (ID No. D-1202);**
- **Filters (ID No. ES-1001-1-3-Filters);**
- **SDE-1 process equipment leaks (ID No. ES-1001-3-F); and**
- **SDE-1 wastewater stream (ID No. ES-1001-1-3-WW)**

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

Pollutant	Limits/Standards	Applicable Regulation
Odorous emissions	**State-Enforceable Only** See Section 2.2 A.3	15A NCAC 02D .1806
Hazardous Air Pollutants	Maximum Achievable Control Technology See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart FFFF)

H. Sclareolide (SDE-2) Operations, including:

- **One chilled water condenser (ID No. CD-4002) in series with a mineral oil scrubber (ID No. CD-4003-S) controlling emissions from the following:**
  - **One 17,900 gallon virgin solvent tank (ID No. T-4001);**
  - **Two 6,000 gallon process tanks (ID Nos. T-4017 and T-4018);**
  - **One 4,200 gallon reactor with process condenser (EX-4001) (ID No. R-4004);**
  - **One 4,200 gallon reactor with process condenser (EX-4002) (ID No. R-4005);**
  - **One 4,200 gallon reactor with process condenser (EX-4003) (ID No. R-4044);**
  - **One 1,500 gallon reactor (ID No. R-4015); and**
  - **One centrifuge (ID No. C-4001)**
- **One dryer with process condenser (EX-4004) with associated chilled water condenser (ID No. CD-4001) in series with a chilled water condenser (ID No. CD-4002) and mineral oil scrubber (ID No. CD-4003-S)**
- **SDE-2 process equipment leaks (ID No. ES-4000-F); and**
- **SDE-2 wastewater stream (ID No. ES-4000-WW)**

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Best Available Control Technology Less than 354.4 tons per consecutive 12-month period	15A NCAC 02D .0530
Odorous emissions	**State-Enforceable Only** See Section 2.2 A.3	15A NCAC 02D .1806
Hazardous Air Pollutants	Maximum Achievable Control Technology See Section 2.2 C.1	15A NCAC 02D .1111 (40 CFR Part 63, Subpart FFFF)

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to comply with Best Available Control Technology (BACT), the SDE-2 operations shall discharge no more than 354.4 tons volatile organic compounds per consecutive 12 month period.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. Calculations of VOC emissions per month shall be made at the end of each month. 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.

d. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format).

e. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of VOC containing materials or the VOC emissions are not monitored and recorded as specified in Section 2.1.H.1. c and d or if the VOC emissions exceed the limit in Section 2.1. H.1.a above.

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

f. The Permittee shall submit a semiannual report of the monitoring and recordkeeping activities given in Section 2.1 H.1.c, d, and 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. The report shall contain the following:
   i. the monthly volatile organic compound emissions for each of the previous 17 months; and
   ii. the yearly volatile organic compound emissions for each consecutive 12-month period ending on each month of the previous six-month period.

I. One Flaker Deconditioner (ID No. ES-DEC-2001)

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 $E = 55.0 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from this source (**ID No. ES-DEC-2001**) 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; and
P = process weight in tons per hour

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

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

b. If 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 I.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from the Flaker deconditioner **(ID No. ES-DEC-2001)** shall be controlled by a simple cyclone (**ID No. CD-MHZ-2001**). 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

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

d. The results of inspections 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;
   ii. The results of any maintenance performed on any control device; and
   iv. Variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 I.1.c, d, and e above postmarked or delivered 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 the Flaker deconditioner **(ID No. ES-DEC-2001)** 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 I.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 for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source 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 I.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 Section 2.1 I.2.c and d above postmarked or delivered 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.

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

A. Facility-Wide Affected Sources [all permitted sources except for the emergency generator E105 and boilers H-101, H-102, and H-104]

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

Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutants	**State-Enforceable Only** Air Toxics evaluation for non-NESHAP emission sources	15A NCAC 02D .1100
Odorous emissions	**State-Enforceable Only** Odorous emissions must be controlled	15A NCAC 02D .1806

STATE-ENFORCEABLE ONLY

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. For any non-NESHAP source, any increase in toxic air pollutants must be evaluated.

STATE-ENFORCEABLE ONLY

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

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

B. Two No. 2 fuel oil-fired boilers, as described in Section 2.1 A, above; Rotocel Operations, as described in Section 2.1 C, above; Recovery Operations, as described in Section 2.1 C, above; Biomass Extraction Operations, as described in Section 2.1 D, above; Botanical Extraction Operations, as described in Section 2.1 D, above; and Wastewater Treatment Plant Aeration Tank No. 1 (63,500 gallon capacity; ID No. WWTP-AT1)

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds (VOC)	Best Available Control Technology	15A NCAC 02D .0530

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limits shall not be exceeded:

Emission Source	Pollutant	BACT Emission Limits		Control Technology
Rotocel extractor, desolventizer, and solvent separation/recovery **(ID No. ES-1001-2-1-P1)**	VOC	10.8 pounds per hour	47.31 tons per consecutive 12-month period	Condenser CD-31209 and packed tower scrubber CD-1001-2-S-1
Rotocel equipment leaks **(ID No. ES-1001-2-1-F)**	VOC (Fugitive)	N/A		Leak detection and repair (LDAR)
Rotocel wastewater stream **(ID No. ES-1001-2-1-WW)**	VOC	N/A		Fixed roofs on wastewater treatment tanks
Recovery arcon tank M-1 **(ID No. ES-1001-1-1-P1)**	VOC	*When Rotocel is Operating*: 0.80 pounds per hour and 3.50 tons per consecutive 12-month period *When Rotocel is NOT Operating and Recovery Process is processing Concrete*: 8.76 pounds per hour and 0.63 tons per consecutive 12-month period		Condenser CD-1001-1-3 and packed tower scrubber CD-1001-2-S-1 Condenser CD-1001-1-3
Recovery stripper T-5 and receiver M-21 **(ID No. ES-1001-1-1-P2)**	VOC	*When Rotocel is Operating*: 0.85 pounds per hour and 3.72 tons per consecutive 12-month period *When Rotocel is NOT Operating and Recovery Process is processing Concrete*: 4.89 pounds per hour and 1.99 tons per consecutive 12-month period		Condenser CD-1001-1-T5B and packed tower scrubber CD-1001-2-S-1 Condenser CD-1001-1-T5B
Recovery process/storage tanks **(ID No. ES-1001-1-1-P3)**	VOC	N/A		Fixed roofs
Recovery equipment leaks **(ID No. ES-1001-1-1-F)**	VOC (Fugitive)	N/A		LDAR

Emission Source	Pollutant	BACT Emission Limits		Control Technology
Recovery wastewater stream **(ID No. ES-1001-1-1-WW)**	VOC	95% mass removal from wastewater stream consisting of methanol-wash		Fixed roofs on wastewater treatment tanks and biological treatment
Botanical extraction immersion extractor, desolventizer, first and second stage evaporators, distillation column, day tank, and multiple process tanks **(ID No. ES-1001-11-P)**	VOC	14.1 pounds per hour	61.76 tons per consecutive 12-month period	Condenser CD-1001-11-EX1002 and condenser CD-1001-11-EX1003
Botanical extraction equipment leaks **(ID No. ES-1001-11-F)**	VOC (Fugitive)	N/A		LDAR
Botanical extraction wastewater stream **(ID No. ES-1001-11-WW)**	VOC	N/A		Fixed roofs on wastewater treatment tanks
Biomass extraction **(ID No. ES-1004-2-P)** **Primary Operating Scenario:** immersion extractor, desolventizer, day tank, storage tank, first and second stage evaporators, distillation column, and multiple process tanks **Secondary Operating Scenario:** immersion extractor, day tank, storage tank, first and second stage evaporators, distillation column, and multiple process tanks Tray dryer, dust collector, vent condenser, and knockout pot	VOCs	14.1 pounds per hour	61.8 tons per consecutive 12-month period	Condenser CD-1004-2EX1002 and condenser CD-1004-2EX1003
Biomass extraction equipment leaks **(ID No. ES-1004-2-F)**	VOCs	N/A		LDAR
Biomass extraction wastewater stream **(ID No. ES-1004-2-WW)**	VOCs	N/A		Fixed roofs on wastewater treatment tanks
No. 2 fuel-oil fired boilers **(ID Nos. H-101 and H-102)**	VOC	0.2 pounds per 1,000 gallons		Combustion control

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. The Permittee shall only fill the Rotocel solvent recycle tanks **(ID No. M125A and M125B)** from tanker trucks when emission source **ES-1001-2-1-P1** is operating.

d. The Permittee shall limit the operation of the recovery stripper T-5 and receiver M-21 **(ID No. ES-1001-1-1-P2)** while source **(ID No. ES-1001-2-1-P1)** is not operating to no greater than 34 days in any consecutive 12-month period.

e. The Permittee shall limit the total number of days during which the liquid flow into the recovery arcon tank M-1 **(ID No. ES-1001-1-1-P1)** exceeds the liquid flow out of the arcon tank (i.e., days when the liquid level in the tank rises) while source **(ID No. ES-1001-2-1-P1)** is not operating to no greater than 6 days in any consecutive 12-month period.

f. The Permittee shall implement the leak detection and repair (LDAR) program of 40 CFR Part 63, Subpart UU, as per the requirements Section 2.2 B.2 below. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530, if the LDAR program requirements are not implemented.

g. The Permittee shall determine once a week, the mass removal efficiency of the on-site biological wastewater treatment plant (i.e. Wastewater Treatment Plant Aeration Tank No. 1; **ID No. WWTP-AT1**) for volatile organic compounds (VOC), when the wastewater stream consisting of methanol-wash from the recovery operations **(ID No. ES-1001-1-1-WW)** is discharged to it. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the mass removal efficiency of the on-site biological wastewater treatment plant **(ID No. WWTP-AT1)** for VOC is not determined every week or if the mass removal efficiency is less than 95%.

h. Volatile organic compound (VOC) emissions from the emission sources listed in Section 2.2 B.1.a above, shall be controlled by the associated condensers. To ensure compliance, the Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. In addition, the Permittee shall perform an annual inspection of each condenser system, including the following:
   i. The Permittee shall inspect and maintain the structural integrity of each condenser, including inspection for leakage of coolant and, if the system is under positive gauge pressure, leakage of the contaminated gas stream. In order to monitor leakage of the coolant, the condensate shall be inspected for the presence of coolant; and
   ii. The Permittee shall inspect and maintain the structural integrity of ductwork and piping leading to and coming from each condenser.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the condensers are not inspected and maintained.

i. To ensure compliance, the Permittee shall install, maintain, operate, and calibrate, in accordance with manufacturer's recommendations, a sensor to continuously measure the outlet temperature of each condenser listed in Section 2.2 B.1.a above. Each sensor shall be installed in an accessible location and shall be maintained by the Permittee such that it is in proper working order at all times. The temperatures output from the sensors shall be continuously monitored and hourly values used to determine the 24-hour average temperature at the condenser outlets. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the outlet temperatures of the condensers are not maintained below the limits in the table below; or the condensers are not equipped with sensors to continuously measure the outlet temperatures; or if those sensors are not inspected and maintained.

Emission Source	Condenser ID No.	Required Outlet Temperature
Recovery arcon tank M-1 **(ID No. ES-1001-1-1-P1)**	CD-1001-1-3	45 ^{0}F, 24-hour average, when source ES-1001-2-1-P1 is not operating and the tanks are used for concrete processing in the recovery operation
Recovery stripper T-5 and receiver M-21 **(ID No. ES-1001-1-1-P2)**	CD-1001-1-T5B	
Botanical extraction operations **(ID No. ES-1001-11-P)**	CD-1001-11-EX1003	-40 ^{o}F, 24-hour average for non water soluble solvents, and 17 ^{o}F, 24-hour average for water soluble solvents

Emission Source	Condenser ID No.	Required Outlet Temperature
Biomass extraction operations **(ID No. ES-1004-2-P)**	CD-1004-2EX1003	-40 ºF, 24-hour average for non water soluble solvents, and 17 ºF, 24-hour average for water soluble solvents

j. Volatile organic compound (VOC) emissions from the emission sources listed in Section 2.2 B.1.a above, shall also be controlled by the associated packed tower scrubber **(ID No. CD-1001-2-S-1),** except as allowed pursuant to Sections 2.2 B.1.c and e above. To ensure compliance, the Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. An annual inspection of spray nozzles and packing materials, chemical feed system (if so equipped), and perform maintenance and repair when necessary to ensure proper operation of the packed tower scrubber; and
   ii. An annual inspection, cleaning, and calibration of all associated instrumentation.
   iii. Additionally, whenever the packing is replaced, the Permittee shall inspect for nozzle plugging and settling of the packing.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the packed tower scrubber is not inspected and maintained.

k. The Permittee shall install, maintain, operate, and calibrate a scrubbing liquid flow meter, a scrubbing liquid inlet temperature sensor, and an emission stream inlet temperature sensor for packed tower scrubber CD-1001-2-S-1 in accordance with manufacturer's recommendations. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the flow meter and temperature sensors are not installed, maintained, and calibrated, or if, except as allowed pursuant to Sections 2.2 B.1.c and e above:
   i. The scrubbing liquid injection rate is not maintained at or above eight gallons per minute;
   ii. The scrubbing liquid inlet temperature exceeds 105 °F;
   iii. The emission stream inlet temperature exceeds 90 °F; or
   iv. The flow meter and temperature sensors are not operated.

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

l. The Permittee shall maintain the following records:
   i. VOC emissions for each calendar month, and for the consecutive 12-month period ending with each calendar month, from the following sources:
      (A) Rotocel and recovery operations **(ID Nos. ES-1001-2-1-P1, ES-1001-1-1-P1, ES-1001-1-1-P2, and ES-1001-1-1-P3)** when source ES-1001-2-1-P1 is operating;
      (B) Rotocel and recovery operations **(ID Nos. ES-1001-2-1-P1, ES-1001-1-1-P1, ES-1001-1-1-P2, and ES-1001-1-1-P3)** when source ES-1001-2-1-P1 is not operating and the recovery process is processing concrete;
      (C) Botanical extraction operations **(ID No. ES-1001-11-P);** and
      (D) Biomass extraction operations **(ID No. ES-1004-2-P).**
   ii. Results of any inspections, maintenance, and monitoring conducted pursuant to Sections 2.2 B.1.c through k above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall be updated at least monthly and record the following:
      (A) The date and time of each recorded action;
      (B) The actual hours of operation of the recovery arcon tank M-1 **(ID No. ES-1001-1-1-P1)**, and recovery stripper T-5 and receiver M-21 **(ID No. ES-1001-1-1-P2),** when source ES-1001-2-1-P1 is not operating;
      (C) The actual hours of operation of recovery arcon tank M-1 **(ID No. ES-1001-1-1-P1)**, when the liquid flow into the arcon tank exceeds the liquid flow out of recovery arcon tank M-1 and source **(ID No. ES-1001-2-1-P1)** is not operating;
      (D) The mass removal efficiency of the on-site biological wastewater treatment plant **(ID No. WWTP-AT1)** for VOC calculated once a week at a minimum when the wastewater stream consisting of methanol-wash from the recovery operation **(ID No. ES-1001-1-1-WW)** is discharged to it;
      (E) The 24-hour average outlet temperature of the associated condenser(s) listed in Section 2.2 B.1.i above:

(1) When source **(ID No. ES-1001-2-1-P1)** is not operating and the Concrete Operations tanks **(ID No. ES-1001-1-2-P)** are used for concrete processing in the recovery operation; and/or
(2) When the biomass extraction operations **(ID No. ES-1004-2-P)** is operating.

(F) The scrubbing liquid injection rate, scrubbing liquid inlet temperature, and emission stream inlet temperature of scrubber **(ID No. CD-1001-2-S-1)** at least once each day that source **(ID No. ES-1001-2-1-P1)** operates;
(G) The results of maintenance performed on the condensers and scrubber listed in Section 2.2 B.1.a above, and the associated temperature sensors and flow rate gauges; and
(H) Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

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

m. Within 30 days of a request from the DAQ, the Permittee shall submit a report of any maintenance performed on the condensers and scrubber listed in Section 2.2 B.1.a above.
n. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section(s) 2.2 B.1.c through l above postmarked or received 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. In addition, the semiannual reports shall also contain the following:
i. The monthly VOC emissions from each of the following sources for each of the previous 17 months; and
(A) Rotocel and recovery operations **(ID Nos. ES-1001-2-1-P1, ES-1001-1-1-P1, ES-1001-1-1-P2, and ES-1001-1-1-P3)** when source **(ID No. ES-1001-2-1-P1)** is operating;
(B) Rotocel and recovery operations **(ID Nos. ES-1001-2-1-P1, ES-1001-1-1-P1, ES-1001-1-1-P2, and ES-1001-1-1-P3)** when source **(ID No. ES-1001-2-1-P1)** is not operating and the recovery process is processing concrete;
(C) Botanical extraction operations **(ID No. ES-1001-11-P)**; and
(D) Biomass extraction operations **(ID No. ES-1004-2-P)**.
ii. The cumulative total VOC emissions from each of the sources listed in Section 2.2 B.1.n.i above, for each of the consecutive 12-month periods ending during the reporting period.

2. Leak Detection and Repair

[**15A NCAC 02D .0530: Prevention of Significant Deterioration**]

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

a. Affected process equipment shall be identified. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods. In addition to the above, the following equipment shall be specifically identified:
i. Connectors that are:
(A) Buried, insulated in a manner that prevents access by a monitor probe,
(B) Obstructed by equipment or piping that prevents access by a monitoring probe,
(C) Unable to be reached by a lift up to 25 feet above ground level,
(D) Inaccessible because it would require elevating the monitoring personnel more than seven feet above a permanent support surface or would require the erection of scaffolding, or
(E) Not able to be accessed in a safe manner to perform monitoring;
(Connectors need not be individually identified if all connectors in a designated area or length of pipe are identified as a group, and the number of connectors subject is indicated.)
ii. Pressure relief devices that are equipped with rupture disk upstream of the pressure device;
iii. Valves, pumps, and connectors that are designated unsafe-to-monitor (i.e., Permittee has determined that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements); and
iv. Valves that are difficult-to-monitor (i.e., Permittee has determined that the valve cannot be monitored without elevating the monitoring personnel more than seven feet above a support surface or it is not accessible in a safe manner when it is in regulated material service.
b. The Permittee shall record the identity of equipment designated as unsafe-to-monitor and/or difficult-to-monitor and the planned schedule for monitoring this equipment. The Permittee shall include an explanation why the equipment is unsafe or difficult-to-monitor. These records must be kept at the plant and be available for review by an inspector.

i. The Permittee shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment if a leak is detected.
ii. The Permittee shall have a written plan that requires monitoring of difficult to monitor equipment at least once per calendar year and repair of the equipment if a leak is detected.

c. Connectors that are designated as unsafe-to-repair will be repaired before the end of the next process unit shutdown. The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded.

Instrument and sensory monitoring for leaks [15A NCAC 02Q .0508(f)]

d. Instrument monitoring shall be conducted for
i. Valves in gas/vapor or light liquid service;
ii. Pumps in light liquid service;
iii. Connectors in gas/vapor or light liquid service; and
iv. Pressure relief devices in gas/vapor service.

e. Sensory monitoring for leaks shall be conducted for pumps in light liquid service. Sensory monitoring consists of visual, audible, olfactory, or any other detection method used to determine a potential leak to the atmosphere.

f. Instrument monitoring shall comply with the following requirements,
i. Monitoring shall comply with Method 21 of 40 CFR part 60, appendix A.
ii. The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2, paragraph (a) of Method 21 shall be for the representative composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, air, water or other inerts that are not VOC, the representative stream response factor shall be determined on an inert-free basis. The response factor may be determined at any concentration for which monitoring for leaks will be conducted. If there is no instrument commercially available that will meet the performance criteria specified above, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis.
iii. The detection instrument shall be calibrated annually by the manufacturer by the procedures specified in Method 21 of 40 CFR part 60, appendix A.
iv. Calibration gases shall be zero air (less than 10 parts per million of hydrocarbon in air); and the gases shall be mixtures of methane in air at a concentration no more than 2,000 parts per million greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 parts per million above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified Method 21 of 40 CFR part 60, appendix A. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.
v. Monitoring shall be performed when the equipment is in VOC service.

g. The Permittee may elect to adjust or not to adjust the instrument readings for background.
i. If the Permittee elects not to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified above in Section 2.2 B.2.f of this permit, above. In such cases, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with operational standards for pressure relief devices.
ii. If the Permittee elects to adjust instrument readings for background, the Permittee shall
(A) Monitor the equipment according to the procedures specified above in Section 2.2 B.2.f above;
(B) Determine the background level using the procedures in Method 21 of 40 CFR part 60, appendix A;
(C) Traverse the potential leak interfaces with the instrument probe as close to the interface as possible as described in Method 21 of 40 CFR part 60, appendix A; and
(D) Compare the arithmetic difference between the maximum concentration indicated by the instrument and the background level to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance operational standards for pressure relief devices.

h. When a leak is detected:
i. A weatherproof and readily visible identification, shall be attached to the leaking equipment, and
ii. Leak repair records shall be made that include the following:
(A) The date of first attempt to repair the leak;

(B) The date of successful repair of the leak;
(C) The maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be non-repairable;
(D) Dates of process unit shutdowns that occur while the equipment is unrepaired; and
(E) Any delay of repair and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
(1) The Permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the startup, shutdown, and malfunction plan, or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure (i.e. season operation).
(2) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

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

i. The Permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided for in delay of repair and/or unsafe to repair connectors. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing.
j. The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in this permit and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in this permit and no leak has been detected during that monitoring. Identification that has been placed on equipment determined to have a leak, except for a valve or for a connector in gas/vapor or light liquid service, may be removed after it is repaired.
k. Delay of repair is allowed for any of the conditions specified below. The Permittee shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown.
i. Delay of repair of equipment for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible without a process unit or affected facility shutdown. Repair of this equipment shall occur as soon as practical, but no later than the end of the next process unit shutdown. However, delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, and valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than six months after the first process unit shutdown.
ii. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in VOC service.
iii. Delay of repair for valves and connectors is also allowed if:
(A) The Permittee determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and
(B) When repair procedures are effected, the purged material cannot be collected and destroyed or reused in the process.
iv. Delay of repair for pumps is also allowed if repair requires replacing the existing seal design with a new system that the Permittee has determined under a quality improvement program (Sections 2.2 B.2.bb through 2.2 B.2.gg below) will provide better performance, or the repair is completed as soon as practical, but not later than 6 months after the leak was detected and one of the following is used;
(A) A dual mechanical seal system;
(B) A pump that meets has no external shaft penetrating the pump housing; or
(C) A system that routes emissions to a process or a fuel gas system or a closed vent system and control device;

Valves in Gas/Vapor/Light Liquid Service [15A NCAC 02Q .0508(f)]

l. The Permittee shall monitor all valves using the method specified in this permit at the intervals, except unsafe to monitor valves and maintain records as specified below. The instrument reading that defines a leak is 500 parts per million or greater.
   i. If at least the greater of two valves or two percent of the valves in a process unit leak, the Permittee shall monitor each valve once per month.
   ii At process units with less than the greater of two leaking valves or two percent leaking valves, the Permittee shall monitor each valve once each quarter, except as provided below.
      (A) The Permittee may elect to monitor each valve once every two quarters for process units with less than one percent leaking valves.
      (B) The Permittee may elect to monitor each valve once every four quarters for process units with less than 0.5 percent leaking valves.
      (C) The Permittee may elect to monitor each valve once every two years for process units with less than 0.25 percent leaking valves.
   iii. The Permittee shall keep a record of the monitoring schedule for each process unit.

m. The Permittee may choose to subdivide the valves in the group of process units and apply the monitoring frequency provisions to each subgroup. If the Permittee subdivides the valves in the group of process units, then the following provisions apply.
   i. The overall performance of total valves in the group of process units to be subdivided shall be less than two percent leaking valves.
   ii. The initial assignment or subsequent reassignment of valves to subgroups shall be governed as follows.
      (A) The Permittee shall determine which valves are assigned to each subgroup. Valves with less than one year of monitoring data or valves not monitored within the last twelve months must be placed initially into the most frequently monitored subgroup until at least one year of monitoring data have been obtained.
      (B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with that less frequently monitored subgroup's associated percent leaking valves calculation for that monitoring event.
      (C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Non-repairable valves may not be reassigned to a less frequently monitored subgroup.
   iii. The Permittee shall determine every six months if the overall performance of total valves in the applicable process unit or group of process units is less than two percent leaking valves and so indicate the performance in the next periodic report. If the overall performance of total valves in the applicable process unit or group of process units is two percent leaking valves or greater, the Permittee shall no longer subgroup and shall revert to the program required in Section 2.2 B.2.p for that group of process units. The Permittee can again elect to comply with the valve subgrouping procedures if future overall performance of total valves in the process unit or group of process units is again less than two percent. The overall performance of total valves in the applicable process unit or group of process units shall be calculated as a weighted average of the percent leaking valves of each subgroup according to following equation:

$$\%V_{LO} = \left[\frac{\sum_{i=1}^{n} \left(\%V_{Li} \times V_i \right)}{\sum_{i=1}^{n} V_i} \right]$$

Where: $\%V_{LO}$ = Overall performance of total valves in the applicable process unit or group of process units
$\%V_{Li}$ = Percent leaking valves in subgroup i, most recent value
V_i = Number of valves in subgroup i
n = Number of subgroups.

   iv. The Permittee shall maintain the following records:
      (A) Which valves are assigned to each subgroup;

(B) Monitoring results and calculations made for each subgroup for each monitoring period;
(C) Which valves are reassigned, the last monitoring result prior to reassignment, and when they were reassigned; and
(D) The results of the semiannual overall performance calculation.

v. The Permittee shall notify the DAQ no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating process units and the number of valves assigned to each subgroup, if applicable, and may be included in the next semiannual periodic report.

vi. The Permittee shall submit in the semiannual periodic reports the following information:
(A) Total number of valves in each subgroup, and
(B) The results of the semiannual overall performance calculation.

n. The Permittee perform percentage calculations for each process group (i.e., botanical extraction, biomass extraction, and Rotocel/recovery) for comparison with the sub grouping criteria specified in Section 2.2 B.2.m above, and the percent leaking valves for each monitoring period for each process unit or valve subgroup shall be calculated using the following equation:

$$\%V_L = \left(\frac{V_L}{V_T}\right) \times 100$$

Where: $\%V_L$ = Percent leaking valves.
V_L = Number of valves found leaking, excluding non-repairable valves and including those valves found whose repair was not confirmed with both post leak repair monitoring and periodic monitoring.
V_T = The sum of the total number of valves monitored.

o. When determining monitoring frequency for each process unit or valve subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each process unit or valve subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.

i. Non-repairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and non-repairable. Otherwise, a number of non-repairable valves (identified and included in the percent leaking valves calculation in a previous period) up to a maximum of one percent of the total number of valves in VOC service at a process unit may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

ii. If the number of non-repairable valves exceeds one percent of the total number of valves in regulated material service at a process unit or affected facility, the number of non-repairable valves exceeding one percent of the total number of valves in regulated material service shall be included in the calculation of percent leaking valves.

p. If a leak is determined, then the leak shall be repaired. After a leak has been repaired, the valve shall be monitored at least once within the first three months after its repair.

i. This monitoring is in addition to the monitoring required to satisfy the definition of repaired and first attempt at repair. The monitoring shall be conducted to determine whether the valve has resumed leaking.

ii. Periodic monitoring may be used to satisfy this if the timing of the monitoring period coincides with the time specified. Alternatively, other monitoring may be performed to satisfy the requirement regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time above.

iii. If a leak is detected by monitoring that is conducted after leak repair, the Permittee shall:
(A) Use periodic monitoring to satisfy the requirement above, then the valve shall be counted as a leaking valve, or
(B) If the Permittee elected to use other monitoring, prior to the periodic monitoring, to satisfy the above requirement, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

q. Any valve that is designated as an unsafe-to-monitor or difficult to monitor valve is exempt from the requirements of Section 2.2 B.2.l above, and the Permittee shall monitor the valve according to the written plan specified in Section 2.2 B.2.b above.

Pumps in light liquid service standards [15A NCAC 02Q .0508(f)]

r. The pumps shall be instrumentally monitored monthly to detect leaks by the method specified in this permit. The instrument reading that defines a leak is 1,000 parts per million or greater. Repair is not required unless an instrument reading of 2,000 parts per million or greater is detected. Any pump that is designated as an unsafe-to-monitor pump is exempt from this requirement and shall be monitored and inspected according to the written plan specified in Section 2.2 B.2.b above.

s. Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the Permittee shall:
   i. Monitor the pump as specified in this permit and if the instrument reading indicates a reading of 2,000 parts per million (ppm) or greater it shall be repaired using the procedures in Sections 2.2 B.2.i through 2.2 B.2.k above; or
   ii. Eliminate the visual indications of liquids dripping.

   Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection provided that each pump is visually inspected as often as practical and at least monthly.

t. If, when calculated on a 6-month rolling average for the percent leaking pumps, at least the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Permittee shall implement a quality improvement program for pumps Sections 2.2 B.2.bb through 2.2 B.2.gg below. The Permittee shall not alter the process grouping used in calculating this percentage.
   i. The number of pumps at a process unit shall be the sum of all the pumps in VOC service, except that pumps found leaking in a continuous process unit within one month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.
   ii. Percent leaking pumps shall be determined by the following equation:

$$\%P_L = \left[\frac{(P_L - P_S)}{P_T} - P_S \right] \times 100$$

Where: $\%P_L$ = Percent leaking pumps
P_L = Number of pumps found leaking as determined through monthly monitoring. Do not include results from inspection of unsafe-to-monitor pumps.
P_S = Number of pumps leaking within one month of start-up during the current monitoring period.
P_T = Total pumps in VOC, including pumps with duel mechanical seals, pumps with no external shaft penetrating the pump housing, and unsafe to monitor pumps.

Connectors in gas and vapor service and in light liquid service standards [15A NCAC 02Q .0508(f)]

u. The Permittee shall monitor all connectors in gas and vapor and light liquid using instrumentation as specified in this permit. If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected. Any connector that is designated as unsafe-to-monitor is exempt from this requirement and shall be monitored and inspected according to the written plan specified in Section 2.2 B.2.b, above.

v. The Permittee shall perform monitoring as specified below.
   i. If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (one year).
   ii. If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within four years. The Permittee may comply with this requirement by monitoring at least 40 percent of the connectors within two years of the start of the monitoring period, provided all connectors have been monitored by the end of the four year monitoring period.
   iii. If the percent leaking connectors in the process unit was less than 0.25 percent the Permittee shall monitor at least 50 percent of the connectors within four years of the start of the monitoring period and
      (A) Monitor as soon as practical, but within the next six months, all connectors that have not yet been monitored during the monitoring period if the percent leaking connectors is greater than or equal to 0.35 percent of the monitored connectors [At the conclusion of monitoring, a new monitoring period shall be started based on the percent leaking connectors of the total monitored connectors.], or
      (B) Monitor all connectors that have not yet been monitored within eight years of the start of the monitoring period if the percent leaking connectors is less than 0.35 percent of the monitored connectors.
   iv. If, during the monitoring, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

v. The Permittee shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

w. Monitoring frequency shall be determined based on the percent leaking connectors and calculated as follows:

$$\%C_L = \frac{C_L}{C_T} \times 100$$

Where: $\%C_L$ = Percent leaking connectors as determined through periodic monitoring.
C_L = Number of connectors measured at 500 parts per million or greater.
C_t = Total number of monitored connectors in the process unit.

x. Connectors that are:
   i. Buried, insulated in a manner that prevents access by a monitor probe,
   ii. Obstructed by equipment or piping that prevents access by a monitoring probe,
   iii. Unable to be reached by a lift up to 25 feet above ground level,
   iv. Inaccessible because it would require elevating the monitoring personnel more than seven feet above a permanent support surface or would require the erection of scaffolding, or
   v. Not able to be accessed in a safe manner to perform monitoring are exempt from monitoring requirements. However, if any inaccessible, ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

Pressure relief devices in gas and vapor service standards [15A NCAC 02Q .0508(f)]

y. Except during pressure releases as specified below, each pressure relief device in gas and vapor service shall be operated with an instrument reading of less than 500 parts per million.

z. After each pressure release:
   i. The pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million, as soon as practical, but no later than five calendar days after each pressure release, except as provided for in delay of repair provisions of this permit;
   ii. The pressure relief device shall be monitored no later than five calendar days after the restoration to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, and
   iii. The Permittee shall record the dates and results of the monitoring following a pressure release including the background level measured and the maximum instrument reading measured during the monitoring.

aa. Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from monitoring provided the Permittee installs a replacement rupture disk upstream of the pressure relief device as soon as practical after each pressure release but no later than five calendar days after each pressure release, except as provided for in delay of repair.

Quality improvement program for pumps [15A NCAC 02Q .0508(f)]

bb. If, on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Permittee shall implement a quality improvement plan until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps in the process unit, calculated as a 6-month rolling average. Once the performance level is achieved, the Permittee shall comply with the requirements in Sections 2.2 B.2.r through 2.2 B.2.t above.

cc. The Permittee shall collect the following data and maintain records for each pump in each process unit subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit, affected facility, or plant site basis.
   i. Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.
   ii. Service characteristics of the stream such as discharge pressure, temperature, flow rate, and annual operating hours.
   iii. The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.
   iv. If a leak is detected, the repair methods used and the instrument readings after repair.

   The Permittee shall continue to collect data on the pumps as long as the process unit or affected facility (or plant site) remains in the quality improvement program.

dd. The Permittee shall inspect all pumps or pump seals that exhibited frequent seal failures and were removed from the process unit due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

ee. The Permittee shall analyze the data collected to comply with the requirements of Section 2.2 B.2.cc above, to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process-specific factors.

i. The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process unit. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit.

ii. The analysis shall include consideration of the following information:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

iii. The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

iv. The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using data collected for a minimum of six months. An analysis of the data shall be done each year the process unit or affected facility is in the quality improvement program.

ff. The Permittee shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under paragraph Section 2.2B.2.ee above, and the operating conditions in the process unit. The quality assurance program shall be updated each year as long as the process unit has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

i. The quality assurance program shall implement the following procedures.

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters.

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal.

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications.

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate so that emissions are minimized.

ii. The quality assurance program shall be established no later than the start of the third year of the quality improvement program.

gg. Three years after the start of the quality improvement program, the Permittee shall replace the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance that when combined with appropriate process, operating, and maintenance practices, will

result in less than 10 percent leaking pumps for specific applications in the process unit. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

i. Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of Sections 2.2 B.2.r through 2.2 B.2.t above, are pumps determined to be superior performance technology.
ii. The Permittee may delay replacement of pump seals or pumps with superior technology until the next planned process unit shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.
iii. The pumps shall be maintained as specified in the quality assurance program.

hh. The Permittee shall maintain records for the period of the quality improvement program for the process unit prescribed below.
   i. When using a pump quality improvement program, the Permittee shall record:
      (A) The rolling average percent leaking pumps;
      (B) Documentation of all inspections conducted under the requirements of Section 2.2 B.2.dd above, and any recommendations for design or specification changes to reduce leak frequency; and
      (C) The beginning and ending dates while meeting the quality improvement plan requirements.
   ii. If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.
   iii. Records of all analyses required in the quality improvement plan including a list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices.
   iv. All records documenting the quality assurance program for pumps as specified in the quality assurance program, including records indicating that all pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance.
   v. Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified in Section 2.2 B.2.gg above.

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

ii. The Permittee shall keep general and specific equipment identification if the equipment is not physically tagged and the Permittee is electing to identify the equipment through written documentation such as a log or other designation.
jj. The Permittee shall keep a written plan for any equipment that is designated as unsafe- or difficult-to-monitor.
kk. The Permittee shall maintain a record of the identity and an explanation for any equipment that is designated as unsafe-to-repair.
ll. The Permittee shall keep records for leak repair and records for delay of repair.
mm. For valves, the Permittee shall maintain the monitoring schedule for each process unit and the valve subgrouping records.
nn. For pumps, the Permittee shall maintain documentation of pump visual inspections.
oo. For connectors, the Permittee shall maintain the monitoring schedule for each process.
pp. For pressure relief devices in gas and vapor or light liquid service, the Permittee shall keep records of the dates and results of monitoring following a pressure release.
qq. For a pump QIP program, the Permittee shall maintain the following records:
   i. Individual pump records as specified in Section 2.2 B.2.cc above;
   ii. Quality assurance program documentation as specified in Section 2.2 B.2.ff above; and
   iii. Quality improvement program records as specified in Section 2.2 B.2.hh above.

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

rr. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked or received 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 in summary format by equipment type (i.e., valves in gas/vapor/light liquid service, Pumps in light liquid service, and connectors in gas/ vapor/light liquid):
   i. The number of components for which leaks were detected
   ii. The percent leakers for valves, pumps and connectors, and

iii. The total number of components monitored

The report shall also include the number of leaking components that were not repaired, and for valves and connectors, identify the number of components that are determined to be non-repairable.

ss. Where any delay of repair is utilized, report that delay of repair has occurred and report the number of instances of delay of repair.

tt. Report the valve subgrouping information.

uu. For pressure relief devices in gas and vapor service that are to be operated at a leak detection instrument reading of less than 500 parts per million, report the results of all monitoring to show compliance conducted within the semiannual reporting period.

vv. Report, if applicable, the initiation of a monthly monitoring program for valves.

ww. Report, if applicable, the initiation of a quality improvement program for pumps.

C. Sclareolide (SDE-1) Operations, including:

- **Eleven (11) process tanks of various capacities (ID No. ES- 1001-1-3-P; Tank ID Nos. M-2, M-4, M-4A, M-39, M-44, M-15, M-17, M-17A, M-16, M-11, and TK-1210);**
- **One centrifuge (ID No. G-17);**
- **One steam-heated dryer with process condenser (ID No. D-1202);**
- **Filters (ID No. ES-1001-1-3-Filters);**
- **SDE-1 process equipment leaks (ID No. ES-1001-3-F); and**
- **SDE-1 wastewater stream (ID No. ES-1001-1-3-WW)**

Sclareolide (SDE-2) Operations, including:

- **A chilled water condenser (ID No. CD-4002) in series with a mineral oil scrubber (ID No. CD-4003-S) controlling emissions from the following:**
  - **One 17,900 gallon virgin solvent tank (ID No. T-4001);**
  - **Two 6,000 gallon process tanks (ID Nos. T-4017 ant T-4018);**
  - **One 4,200 gallon reactor with process condenser (EX-4001) (ID No. R-4004);**
  - **One 4,200 gallon reactor with process condenser (EX-4002) (ID No. R-4005);**
  - **One 4,200 gallon reactor with process condenser (EX-4003) (ID No. R-4044);**
  - **One 1,500 gallon reactor (ID No. R-4015); and**
  - **One centrifuge (ID No. C-4001)**
- **One dryer with process condenser (EX-4004) (ID No. D-4001) associated with a chilled water condenser (ID No. CD-4001), in series with a chilled water condenser (ID No. CD-4002) in series with a mineral oil scrubber (ID No. CD-4003-S);**
- **SDE-2 process equipment leaks (ID No. ES-4000-F); and**
- **SDE-2 process wastewater stream (ID No. ES-4000-WW)**

Ethyl Vanillin Glucoside (EVG) Operations, including:

- **One water spray fume scrubber (0.5 gallon per minute minimum water injection rate; ID No. CD-Z-9215) venting to one water spray fume scrubber (0.5 gallon per minute minimum water injection rate; ID No. CD-Z-9216) controlling emissions from the following:**
  - **Three reactors (ID Nos. D-2202, D-1215, and D-1218); and**
  - **One steam-heated dryer (ID No. D-1201);**
- **Process equipment leaks (ID No. ES-1003-2-2-F); and**
- **EVG Operations wastewater stream (ID No. ES-1003-2-2-WW)**

Plant Nutrient Extraction (PNE) Operations, including one water spray fume scrubber (0.5 gallon per minute minimum water injection rate; ID No. CD-Z-9215) venting to one water spray fume scrubber (0.5 gallon per minute minimum water solution injection rate; ID No. CD-Z-9216) controlling emissions from the following:

- **One product extract reactor (ID No. D31214) and one associated chilled water condenser (ID No. EX2203);**
- **Seven processing tanks of various capacities (ID No. ES-1003-2-1-P);**
- **One centrifuge (ID No. C-31203);**
- **One dryer equipped with a process condenser (ID No. D-1002);**
- **One process solvent tank (ID No. ES-TK-PNE-1)**

- **Process equipment leaks (ID No. ES-1003-2-1-F);**
- **One waste solids separator vessel (1,333 gallon capacity; ID No. D31211) and one associated chilled water condenser (ID No. EX2205); and**
- **PNE Process wastewater stream (ID No. ES-1003-2-1-WW)**

Concrete Operations, including:

- **Process equipment leaks (ID No. ES-1001-1-2-F);**
- **Six process tanks of various capacities (ID No. ES-1001-1-2-P) and one associated chilled water condenser (ID No. CD-1001-1-2); and**
- **Concrete Operations wastewater stream (ID No. ES-1001-1-2-WW)**

Rotocel Operations, as described in Section 2.1 C, above;
Two Storage and Recycle Tanks (ID No. ES-M-125A and M-125B)
Recovery Operations, as described in Section 2.1 C, above;
Biomass Extraction Operations, as described in Section 2.1 D, above except for secondary operating scenario of extraction process;
Botanical Extraction Operations, as described in Section 2.1 D, above; and
Wastewater Treatment Plant Aeration Tank No. 1 (63,500 gallon capacity; ID No. WWTP-AT1)

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

Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants (HAP)	Maximum Achievable Control Technology	15A NCAC 02D .1111 (40 CFR Part 63, Subpart FFFF)

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

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, monitoring, and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63, Subpart FFFF, "NESHAP for Miscellaneous Organic Chemical Manufacturing," including Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR 63.2550]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.2550 shall apply.

40 CFR Part 63, Subpart A General Provisions [40 CFR 63.2540]

c. The Permittee shall comply with the requirements of 40 CFR Part 63, Subpart A, "General Provisions," as specified in Table 12 to 40 CFR Part 63, Subpart FFFF.

Compliance Date [40 CFR 63.2445(a), 40 CFR 63.56(b)]

d. The Permittee shall be in compliance with the requirements of 40 CFR Part 63, Subpart FFFF for the SDE-2 operations upon startup. [40 CFR 63.2445(a)(2)]

Notifications [40 CFR 63.2515, 40 CFR 63.2520]

e. The Permittee shall submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in Table 2 of 40 CFR Subpart FFFF, the Permittee shall also submit the test plan required by 40 CFR 63.7(c)http://www.cyberregs.com/cgi-exe/cpage.dll?pg=x&rp=/pseudo.htm&sid=20160330115359932 53&aph=1&Hi=4&qy=12&hlc=FFFF00&srchm=1&cid=ncdd&uid=ncdd0012&clrA=307ee9&clrV=307ee9&clrX=307ee9&ref=/indx/CFR/40CFR/CFR_40_63_-_5_FFFF.htm&pseudo=UN1%2C%2CCFR%2CCFR_40_63_-_5_A%2Cg=5~c=7~h=~i=%2C(c) -g=5~c=7~h=~i=~(c) and the emission profile with the notification of the performance test. [40 CFR 63.2515(c)]

f. The Permittee shall submit a Notification of Compliance Status (NOCS) Report for the SDE-2 operations no later than 150 days after startup. The NOCS must include the following information, as applicable:

i. The results of any applicability determinations, emission calculations, or analyses used to identify and quantify

HAP usage or HAP emissions from the affected source.

ii. The results of emissions profiles, performance tests, engineering analyses, design evaluations, inspections and repairs, and calculations used to demonstrate initial compliance according to 40 CFR 63.2445 through 63.2485. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures.

iii. Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the established levels.

iv. All operating scenarios.

v. Descriptions of worst-case operating and/or testing conditions for control devices.

vi. The information specified in 40 CFR 63.1039(a)(1) through (3) for each process subject to the work practice standards for equipment leaks in Table 6 to 40 CFR Part 63, Subpart FFFF.

[40 CFR 63.985(c)(1), 40 CFR 63.2520(d)]

g. The Permittee must submit a NOCS Report for the Botanical Extraction Operations, Concrete Operations, the Biomass Extraction Operations, and/or the PNE Operations prior to the operation of those operations in organic HAP service (as defined at 40 CFR 63.2250) and such that provisions of 40 CFR Part 63, Subpart FFFF apply to those operations, pursuant to 40 CFR 63.2520(d). The NOCS must include the information referenced above in Section 2.2 C.1.f above, as applicable.

h. The Permittee shall notify DAQ at least 60 days before operating Group 2 batch process vents as Group 1 batch process vents in accordance with 40 CFR 63.2460(b)(6)(ii) and 40 CFR 63.2520(e)(10)(ii).

i. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the notification requirements in Sections 2.2 C.1.e through h above are not met.

General Compliance Requirements [40 CFR 63.2450, 40 CFR 63.2445]

j. The Permittee shall be in compliance with the emission limits and work practice standards in Tables 1 through 7 to 40 CFR Part 63, Subpart FFFF at all times, except during periods of startup, shutdown, and malfunction. [40 CFR 63.2450(a)]

k. The Permittee shall comply with the applicable control requirements found in 40 CFR 63.2455 through 63.2490 for the affected sources. [40 CFR 63.2450(a)]

l. Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions. [40 CFR 63.2450(p)]

m. If a Group 2 emission point becomes a Group 1 emission point, the Permittee shall be in compliance with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR Part 63, Subpart FFFF must be conducted within 150 days after the switch in group status occurs. [40 CFR 63.2445(d)]

n. The Permittee shall develop a written startup, shutdown, and malfunction plan (SSM Plan) that complies with 40 CFR 63.6(e) for the affected sources. The Permittee is not, however, required to address equipment leaks (except for control devices) or Group 2 emission points in the SSM Plan. The SSM Plan must describe, in detail, procedures for operating and maintaining the affected sources during periods of startup, shutdown, and malfunction; and corrective actions for malfunctioning process, control, and monitoring equipment used to comply with Subpart FFFF. The SSM Plan does not need to address any scenario that would not cause an affected source to exceed an applicable emission limit in Subpart FFFF. The SSM Plan must be maintained on site and made available for inspection by authorized personnel. [40 CFR 63.6(e)(3) and 63.2525(j)]

o. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the requirements in Sections 2.2 C.1.j through n above are not met.

Emission Limits [15A NCAC 02Q .0508(f), 40 CFR 63.2450, 40 CFR 63.2460, Table 2]

p. The Permittee has elected to combine organic HAP emissions from different emission types in the SDE-2 operations (e.g., storage tanks and batch process vents). In accordance with 40 CFR 63.2450(c)(2)(i), the Permittee shall comply with the requirements for Group 1 batch process vents in Table 2 of 40 CFR Part 63, Subpart FFFF and 40 CFR 63.2460 for the combined streams, including applicable monitoring, recordkeeping, and reporting.

q. In accordance with Table 2 of 40 CFR Part 63, Subpart FFFF, the Permittee shall reduce collective uncontrolled organic HAP emissions from the sum of all vents within SDE-2 operations by ≥95 percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to the chilled water condenser **(ID No. CD-4002)** in series with the mineral oil scrubber **(ID No. CD-4003-S)** (recovery devices as defined in 40 CFR 63.2550(i)). [40 CFR 63.2450(c)(2)(i), 40 CFR 63.2460(a), Table 2 (1)(a) in 40 CFR Part 63, Subpart FFFF]

Testing [15A NCAC 02Q .0508(f), 40 CFR 63.2460]

r. In accordance with General Condition JJ, the Permittee shall conduct one additional compliance test for the SDE-2 emission source, which is controlled with a chilled water condenser **(ID No. CD-4002)** in series with the mineral oil scrubber **(ID No. CD-4003-S).** The testing shall be conducted to demonstrate compliance with 40 CFR Part 63, Subpart FFFF for batch process vents. This testing shall be completed only after the daily average inlet air temperature to the scrubber exceeds 90°F under normal operating conditions; and such testing shall be completed within 365 days of such event. If the Permittee fails to conduct testing in accordance with this requirement, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Monitoring Requirements [15A NCAC 02Q .0508(f), 40 CFR 63.2460]

s. The Permittee shall comply with the specific requirements of Sections 2.2 C.1.s.i through vii, below:

i. **Continuous process vents:** To ensure compliance, the Permittee shall perform the monitoring of Sections 2.2 C.1.s.i(A) and (B) below, for the affected continuous process vents:

(A) For the continuous process vents associated with the Rotocel Operations and the Recovery Operations, the Permittee shall perform the monitoring found in Sections 2.2 B.1.h through k above.

(B) For continuous process vent associated with the Botanical Extraction Operations and Biomass Extraction Operations, the Permittee shall perform the monitoring found in Sections 2.2 B.1.h and i above.

ii. **Group 1 batch process vents**: The Permittee has established operating limits listed below for the chilled water condenser **(ID No. CD-4002)** in series with the mineral oil scrubber **(ID No. CD-4003-S)** in accordance with 40 CFR 63.2460(c)(3). To ensure compliance, the Permittee shall perform the following monitoring for the process vents and storage tanks (i.e. combined process streams) in the SDE-2 operations:

(A) The Permittee shall monitor the vent (process gas) temperature into the absorber to ensure that the maximum inlet gas temperature is not above 105°F (daily average basis).

(B) The Permittee shall monitor the temperature of the mineral oil into the absorber to ensure that the maximum inlet temperature is not above 105°F (daily average basis).

(C) The Permittee shall monitor the mineral oil temperature into the stripper to ensure that the minimum inlet oil temperature is not less than 200°F (daily average basis).

(D) The Permittee shall monitor the oil flow rate to the stripper to ensure that the minimum oil flow rate is greater than 10 gallons per minute (GPM) (daily average basis).

(E) Because flow to the chilled water condenser **(ID No. CD-4002)** in series with the mineral oil scrubber **(ID No. CD-4003-S)** could be intermittent, the Permittee shall install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. Periods of no flow may not be used in daily averages or in fulfilling a minimum data availability requirement [40 CFR 63.2460(c)(7)]

(F) Each monitoring device shall be capable of providing a continuous record (*i.e.*, a minimum of at least one recorded measurement per 15 minute block period).

iii. **Group 2 batch process vents:** To ensure compliance, the Permittee shall perform the monitoring of Sections 2.2 C.1.s.iii(A) and (B) below, for the affected batch process vents:

(A) For the batch process vents associated the EVG Operations and SDE-1 operations, the Permittee shall comply with the requirements of 40 CFR 63.2460. To maintain Group 2 classification for these emission sources, the organic HAP emissions must be less than 10,000 pounds per consecutive 365-day period, each source. The Permittee shall monitor the organic HAP emissions from each of these emission sources, monthly, as follows:

(1) Organic HAP emissions from the EVG Operations shall calculated using the following equation:

$$Organic\ HAP = \left[1.0\left(\frac{pounds}{batch}\right)\times B\right]$$

Where: B = The number of batches processed in the EVG Operations

(2) Organic HAP emissions from the SDE-1 operations shall calculated using the following equation:

$$Organic\ HAP = \left[2.27\left(\frac{pounds}{\tan kfill}\right)\times Btf\right] + \left[4.80\left(\frac{pounds}{batch}\right)\times B_{reg}\right] + \left[3.66\left(\frac{pounds}{batch}\right)\times B_{rec}\right] + \left[4.19\left(\frac{pounds}{batch}\right)\times B_{tc}\right]$$

Where: B_{reg} = The number of regular batches processed in the SDE-1 Operations; and
B_{rec} = The number of recrop batches processed in the SDE-1 Operations
Btc = The number of third crop batches processed in the SDE-1 Operations; and
Btf = The number of hexane tank (M-2) fills.

(B) Upon DAQ's approval of revised organic HAP emission factors cited in the equations in Sections 2.2 C.1.t.iii(A)(1) and (2) above, the Permittee shall attach the approval memorandum to this permit and shall use the revised emission factors in calculating the organic HAP emissions from the EVG Operations and the SDE-1 Operations.

ii. **Storage tanks (except those associated with the SDE-2 operations):** For the storage tanks that are part of the affected source, the Permittee shall comply with the requirements of 40 CFR 63.2470 and Table 4 of 40 CFR Part 63, Subpart FFFF.

iii. **Equipment leaks:** For the process equipment leaks from the affected sources, the Permittee shall comply with the requirements of 40 CFR 63.2480 and Table 6 of 40 CFR Part 63, Subpart FFFF. The Permittee shall comply with the monitoring requirements of the leak detection and repair (LDAR) program found in Section 2.2 B.2 above, for the equipment associated with the affected sources.

iv. **Wastewater streams:** For the wastewater streams associated with the affected miscellaneous organic chemical manufacturing processes (MCPU), the Permittee shall comply with the requirements of 40 CFR 63.2485 and Table 7 of 40 CFR Part 63, Subpart FFFF, including:

(A) Identifying any operations that may generate maintenance wastewater and the procedures for properly managing that maintenance wastewater in the SSM Plan developed for this Avoca LLC facility [40 CFR 63.105]; and

(B) Maintaining the conditions necessary for classification of the process wastewater from the affected sources as Group 2, unless the conditions of Section 2.2 C.1.m above, have been met.

v. **Heat exchangers:** For the heat exchangers associated with the affected sources, the Permittee shall comply with the requirements of 40 CFR 63.2490 and Table 10 of Subpart FFFF, including:

(A) Preparation and implementation of a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. This plan shall require monitoring of one or more surrogate indicators (e.g., pH, conductivity, etc.) or monitoring of one or more process parameters or other conditions that indicate a leak. The plan shall include the following:

(1) A description of the parameter or condition to be monitored and an explanation of how the selected parameter or condition will reliably indicate the presence of a leak;

(2) The parameter level(s) or conditions(s) that shall constitute a leak. This shall be documented by data or calculations showing that the selected levels or conditions will reliably identify leaks. The monitoring must be sufficiently sensitive to determine the range of parameter levels or conditions when the system is not leaking. When the selected parameter level or condition is outside that range, a leak is indicated;

(3) The monitoring frequency which shall be no less frequent than monthly for the first 6 months and quarterly thereafter to detect leaks;

(4) The records that will be maintained to document compliance with the requirements of 40 CFR 63.104.

(B) If a substantial leak is identified by methods other than those described in the heat exchanger monitoring plan and the method(s) specified in the plan could not detect the leak, the Permittee shall revise the plan and document the basis for the changes no later than 180 days after discovery of the leak.

(C) The Permittee shall maintain a copy of the heat exchanger monitoring plan on-site. If the monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation.

(D) If a leak is detected in any heat exchanger system, it shall be repaired as soon as practical but not later than 45 calendar days after the Permittee receives results of monitoring tests indicating a leak, unless the Permittee demonstrates that the results are due to a condition other than a leak. Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later, except where the Permittee appropriately applies the delay of repair provisions found in Section 2.2 C.1.s.vii.(E), below.

(E) Delay of repair of heat exchange systems is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions listed in 40 CFR 63.104(e)(1) through (2) is met.

[40 CFR 63.2490, 40 CFR 63.104]

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the Permittee does not meet the requirements of Sections 2.2 C.1.s.i through vii above.

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

t. The Permittee shall comply with the following requirements:
   i. Create and retain a record of each time a safety device is opened to avoid unsafe conditions.
   ii. Create and retain the following records on each affected MCPU:
      (A) A description of the process and the type of process equipment used;
      (B) An identification of related process vents (including associated emissions episodes), wastewater points of determination (PODs), and storage tanks;
      (C) The applicable control requirements pursuant to 40 CFR Part 63, Subpart FFFF, including the level of required control, and for vents, the level of control for each vent;
      (D) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device;
      (E) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process;
      (F) The applicable monitoring requirements of this subpart and any parametric level that ensures compliance for all emissions routed to the control device or treatment process; and,
      (G) Calculations and engineering analyses required to demonstrate compliance.
      [40 CFR 63.2525(b)]
   iii. Create and retain a schedule or log of operating scenarios for the batch operations updated each time a different operating scenario is put into effect. [40 CFR 63.2525(c)]
   iv. For each affected MPCU with a Group 1 batch process vent (i.e., combined process streams in the SDE-2 Operations), the Permittee shall keep records of daily averages of each continuously monitored parameter specified in Section 2.2.C.1.s.ii above. The Permittee shall calculate and/or maintain records of the following:
      (A) The Permittee shall maintain records of values as specified in 40 CFR 63.998(b)(1);
      (B) Except as specified in Section 2.2.C.1.t.iv.(E) below, daily average values of each continuously monitored parameter shall be calculated from data meeting the specifications of 40 CFR 63.998(b)(2) for each operating day and retained for 5 years.
      (C) The daily averages shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the period of operation per operating day if operation is not continuous. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the daily average instead of all measured values. [40 CFR 63 63.998(b)(3)]
      (D) Periods of no flow may not be used in daily averages, and they may not be used in fulfilling a minimum data availability requirement. [40 CFR 63.2460(c)(7)]
      (E) The Permittee shall not exclude monitoring data during periods of startup, shutdown, and malfunction. [40 CFR 63.2450(l)]
      (F) Actual concentration for supplemental gases must be corrected using Equation 1 of 40 CFR Part 63, Subpart FFFF. [40 CFR 63.2460(c)(6)]
      (G) The operating day shall be the period defined in the operating permit or in the NOCS. It may be from midnight to midnight or another daily period. [40 CFR 63.988(b)(3)]
      (H) If all recorded values for a monitored parameter during an operating day are within the limits established in the NOCS or in the operating permit, the Permittee may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average. [40 CFR 63 63.998(b)(3)]
      (I) The Permittee shall maintain records of the results of each continuous parameter monitoring system calibration check and the maintenance performed, as specified in 40 CFR 63.2450(k)(1).
      [40 CFR 63.2450, 40 CFR 63.2525, 40 CFR 63.998(b)(1) through (3)]
   v. For each affected MPCU with a Group 2 batch process vent, the Permittee shall retain the following records:
      (A) A record of the day each batch was completed;
      (B) A record of whether each batch operated was considered a standard batch;
      (C) The estimated uncontrolled and controlled emissions for each batch that is considered to be a non-standard batch; and
      (D) Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (e.g., number of batches), calculated no less frequently than monthly.
      [40 CFR 63.2525(e)]
   vi. For the process equipment leaks from the affected sources, the Permittee shall retain each applicable record required by 40 CFR Part 63, Subpart UU. The Permittee shall comply with the recordkeeping requirements of

the LDAR program found in Sections 2.2 B.2.ii. through jj above, for the equipment associated with the affected sources. [40 CFR 63.2525(a)]

vii. For each affected Group 2 wastewater stream, the Permittee shall retain the following records:
(A) MPCU identification and description;
(B) Stream identification code;
(C) Concentration of compounds listed in Table 8 and Table 9 of 40 CFR Part 63, Subpart FFFF (in ppmw), including documentation of the methodology used to determine concentration; and,
(D) Stream flow rate (in liters/min).
[40 CFR 63.147(b)(8)]

viii. For each affected heat exchanger system, the Permittee shall retain the following records:
(A) Monitoring data indicating a leak, the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;
(B) Records of any leaks detected by procedures other than those provided in the written heat exchanger monitoring plan, including the date the leak was discovered;
(C) The dates of efforts to repair leaks; and,
(D) The method or procedure used to confirm repair of a leak and the date repair was confirmed.
[40 CFR 63.104(f)(1)]

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111 if the Permittee does not meet the requirements of Sections 2.2 C.1.t.i through viii above.

Reporting [15A NCAC 02Q .0508(f), 40 CFR 63.2520]

u. Advanced Notification of a Process Change. The Permittee shall submit a report 60 days before the scheduled implementation date of any of the changes identified below:
i. Any change to the information contained in the precompliance report.
ii. A change in the status of a control device from small to large.
iii. A change from Group 2 to Group 1 for any emission point except for batch process vents batch process vents that meet the conditions specified in 40 CFR 63.2460(b)(6)(i).
[40 CFR 63.2520(e)(10)]

v. The Permittee shall submit a semiannual compliance report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities given in Sections 2.2 C.1.s and t above postmarked or delivered on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
i. Company name and address.
ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.
iii. Date of report and beginning and ending dates of the reporting period.
iv. If there are no deviations from any emission limit, operating limit or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.
v. For each deviation from an emission limit, operating limit, and work practice standard, include the following information:
(A) The total operating time of the affected source during the reporting period; and,
(B) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
vi. Identification each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the previous compliance report. For the purposes of this paragraph, a revised operating scenario for an existing process is considered to be a new operating scenario.
vii. For the equipment listed below, report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required, and for valves and connectors, identify the number of components that are determined to be non-repairable as described in 40 CFR 63.1025(c)(3).
(A) Valves in gas and vapor service and in light liquid service;
(B) Pumps in light liquid service;
(C) Connectors in gas and vapor service and in light liquid service; and,
(D) Agitators in gas and vapor service and in light liquid service.

viii. Where any delay of repair for leaks is utilized, report that delay of repair has occurred and report the number of instances of delay of repair.

ix. For pressure relief devices, report the results of all leak monitoring to show compliance conducted within the semiannual reporting period.

x. Report, if applicable, the initiation of a monthly leak monitoring program for valves.

xi. For each affected heat exchanger system for which the Permittee invokes the delay of repair, include the following information:

(A) The presence of the leak and the date that the leak was detected.

(B) Whether or not the leak has been repaired.

(C) The reason(s) for delay of repair.

(D) If the leak is repaired, the owner or operator shall report the date the leak was successfully repaired.

(E) If the leak remains unrepaired, the expected date of repair.

[40 CFR 63.104(f)(2)]

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

Emission Source ID No.	Emission Source Description[1,2]	Control Device ID No.	Control Device Description
IWWTP-ET1	Wastewater treatment plant equalization tank No. 1 (65,500 gallon capacity)	N/A	N/A
IWWTP-ET2	Wastewater treatment plant equalization tank No. 2 (65,500 gallon capacity)	N/A	N/A
IWWTP-AT2	Wastewater treatment plant aeration tank No. 2 (63,500 gallon capacity)	N/A	N/A
IWWTP-AT3	Wastewater treatment plant aeration tank No. 3 (63,500 gallon capacity)	N/A	N/A
IWWTP-CLR	Wastewater treatment plant clarifier (1,310 gallon capacity)	N/A	N/A
ITK9238	No. 2 fuel oil storage tank (50,000 gallon capacity)	N/A	N/A
ITK9239	No. 2 fuel oil storage tank (50,000 gallon capacity)	N/A	N/A
ITK102	No. 2 fuel oil storage tank (495 gallon capacity)	N/A	N/A
ITK103	No. 2 fuel oil storage tank (495 gallon capacity)	N/A	N/A
ITKFP	No. 2 fuel oil storage tank (270 gallon capacity)	N/A	N/A
IECS	ECS process: batch preparation of ethylenediamine/ copper sulfate solution	CD-Z-9215 CD-Z-9216	One water spray fume scrubber (0.5 gallons per minute minimum water injection rate) One water spray fume scrubber (0.5 gallons per minute minimum water injection rate)
IES-PV	Propane vaporizer	N/A	N/A
IE101 MACT ZZZZ	One No. 2 fuel oil-fired emergency generator (587 horsepower maximum rated power output)	N/A	N/A
IE102 MACT ZZZZ	One No. 2 fuel oil-fired emergency generator (760 horsepower maximum rated power output)	N/A	N/A
IE103 MACT ZZZZ	One No. 2 fuel oil-fired emergency generator (401 horsepower maximum rated power output)	N/A	N/A
IFP MACT ZZZZ	One No. 2 fuel oil-fired emergency fire water pump (285 horsepower maximum rated power output)	N/A	N/A
I-Briquette	Sage Briquetting Machine	N/A	N/A
I-HB-1 through HB-5	Five steam heated hot boxes	N/A	N/A
I-SFG-PKG	SFG packaging area equipped with a bagfilter	N/A	N/A
I-Biomass-PKG	Biomass Bulk bag packaging area	ADC-1001	Bagfilter (418 square feet of filter area)
I-CVS-2002	Flaker truck unloading	N/A	N/A
I-SH-2001	Flaker storage silo	N/A	N/A

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

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

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

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application(s) and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

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

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

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

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

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation

of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

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

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

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

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

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

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

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

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

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

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

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

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

J. **Emergency Provisions** [40 CFR 70.6(g)]

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

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent

caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]
This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

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

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508(l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the

preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent;
4. the method(s) used for determining the compliance status of the source during the certification period;
5. each deviation and take it into account in the compliance certification; and0
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.