JOSH STEIN
Governor
D. REID WILSON
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

XXXX, 2025

Mr. Jonathan Parker
Site Director
Nouryon Surface Chemistry LLC – Salisbury Plant
485 Cedar Springs Road
Salisbury, NC 28147

SUBJECT: Air Quality Permit No. 09900T18
Facility ID: 8000182
Nouryon Surface Chemistry LLC – Salisbury Plant
Salisbury, Rowan County
Fee Class: Title V
PSD Status: Major

Dear Mr. Parker:

In accordance with your completed Air Quality Permit Applications for a Title V renewal and 502(b)(10) notifications of your Title V permit, we are forwarding, herewith, Air Quality Permit No. 09900T18 authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note, the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

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

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

Rowan County has triggered increment tracking under PSD for PM_{10}, $PM_{2.5}$, SO_2, and NO_X. However, this permit renewal does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from XXXX, 2025until XXXX, 2030, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Betty Gatano, P.E., at (919) 707-8405.

Sincerely yours,

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

Enclosure

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

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

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

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

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

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

Daniel S. Hirschman, General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

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

* * *

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

Summary of Changes to Permit

The following changes were made to Air Permit No. 09900T17:*

Page Nos.	Section	Description of Changes
Cover letter and throughout permit	--	• Updated all dates and permit revision numbers. • Changed Area II, II, and III to Area 1, 2, and 3.
4 – 11	Section 1 – Equipment Table	• Removed page numbers from table. • Updated capitalization for consistency. • Removed the first condenser in series (ID No. CD-A1-LDF-C1a) on the Littleford Dryer System No. 1 (ID No ES-A1-1) and modified the description of the dryer system. • Changed description of vessels (ID Nos. S9V and S11V) to "Neutralizing stripper vessel." • Updated capacity of surge vessel (ID No. TK63) to 2,500 gallons. • Moved the emergency generators (ID Nos. IS-EG-02 and IS-EmGen) from the insignificant activities list in Section 3 and changed their ID numbers (ID Nos. EG-02 and EmGen). • Removed storage tank (ID No. ST49). • Added the contents of the storage tanks (ID Nos. T16V, ST46, ST47, T30V, T18, T27, CP103, CP112, CP113, CP104, CP105, CP115, CP116, CP101, CP108, CP109, CP124, and CP102) to their emission source description. • Changed DCE to ethylene dichloride[1] on description of emission sources (ID Nos. S12, DCE-2, S23, S22V, and T13). • Moved the process development laboratory hood exhaust (ID No. HOOD) and the quality control laboratory hood exhaust (ID ES-EH2) to the insignificant activities list in Section 3. • Moved the lagoons (ID Nos. 1, 2, and 3) and the CERCLA groundwater pretreatment system (ID No. CERCLA-3) to the insignificant activities list in Section 3. • Added "GACT VVVVVV" label to ID No. SAT-2-3 is also subject to GACT 6V.
12	2.1 A – Equipment List	• Removed the first condenser (ID No. CD-A1-LDF-C1a) on the Littleford Dryer System No. 1 (ID No ES-A1-1). • Added the term "in series" to the control equipment configuration for the Littleford drying systems (ID Nos. ES-A1-1 and ES-A1-2).
15	2.1 A.3.c	Added a statement indicating the Permittee will be in noncompliance if records are not maintained.
15	2.1 A.3.d	Added a statement that all instances of deviation must be identified in the summary report.
16	2.1 B – Equipment List	Removed the lagoons (ID Nos. 1, 2, and 3), the CERCLA groundwater pretreatment system (ID No. CERCLA-3), the process development laboratory hood exhaust (ID No. HOOD), and the quality control laboratory hood exhaust (ID ES-EH2). These emission sources are insignificant activities.
18	2.1 B.3.b	Modified language to indicate the number of hours venting to the flare (ID No. MV2F) is an operating limit.
18	2.1 B.3.d	Added a statement requiring the Permittee to calculate and record the number of hours emissions from the reactor/process condenser (ID No. MV2) vented to the flare (ID No. MV2F) for the previous 12-month period. Also added a statement indicating the Permittee will be in noncompliance if the number of hours exceed the permitted limit.

[1] Ethylene dichloride is a synonym for 1,2-dichloroethane (DCE).

Page Nos.	Section	Description of Changes
18	2.1 B.3.e	Added a statement requiring the Permittee to calculate and record the NOx emissions from the flare (ID No. MV2F) for the previous 12-month period. Also added a statement indicating the Permittee will be in noncompliance if NOx emissions exceed the permitted limit.
19	2.1 B.3.f	Added a statement requiring the Permittee to report the monthly operating hours of the flare for the previous 17 months and the 12-month rolling operating hours of the flare for each of the six consecutive 12-month periods during the previous calendar half.
24	2.1 C.1.c	Added noncompliance statement.
24	2.1 C.1.d	Clarified noncompliance statement.
28 – 29	2.1 E.4	Updated permit condition for NSPS Subpart Dc.
29	2.1 E.5	Updated permit condition for avoidance of GACT Subpart JJJJJJ.
30	2.1 F – Equipment List	Added the term "in series" to the control equipment configuration for the Littleford drying system (ID No. LDF-3).
31	2.1 F.1.c and d	Updated monitoring, recordkeeping, and reporting condition for 15A NCAC 02D .0515 to reflect current shell language.
33 – 39	2.1 G	Added emergency generators (ID Nos. EG-02 and EmGen) throughout Section 2.1 G. These generators were previously included on the insignificant activities list in Section 3.
33 – 36	2.1 G.3	Updated permit condition for NSPS Subpart IIII.
36	2.1 G.4	Updated permit condition for GACT Subpart ZZZZ.
36 – 39	2.1 G.5	Added permit condition for GACT Subpart ZZZZ for the existing emergency generator (ID No. EmGen).
41	2.2 A.1.e	• Separated out the compliance statement from 2.2 A.1.d. • Added a statement indicating the Permittee will be in noncompliance if HAP emissions exceed the permitted limit. • Renumbered the permit accordingly.
42	2.2 A.4.b	Updated the permit condition for 15A NCAC 02D .1100 for the NC Air Toxics permitted limits.
43	2.2 A.4.e	Removed the condenser (ID No. CD-A1-LDF-C1a) from monitoring requirements under NC Air Toxics. This condenser is considered a process recovery condenser not a control device.
44	2.2 A.5	Updated the permit condition for 15A NCAC 02Q .0711 with most current permit language.
45	2.2 A.7.b and c	Modified the due date of the RMP.
45	2.2 A.8	Added a condition for "Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0308(a)(1) and 15A NCAC 02Q .0309(b)]." This requirement is state-enforceable only.
46	Section 3 – Insignificant Activities List	• Removed the emergency generators (ID Nos. IS-EG-02 and IS-EmGen) from the insignificant activities list. • Moved the process development laboratory hood exhaust (ID No. HOOD) and the quality control laboratory hood exhaust (ID ES-EH2) to the insignificant activities list in Section 3. • Moved the lagoons (ID Nos. 1, 2, and 3) and the CERCLA groundwater pretreatment system (ID No. CERCLA-3) to the insignificant activities list in Section 3.
47 – 54	Section 4 – General Conditions	Updated TV General Conditions with most current version (version 8.0, 07/10/2024).

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

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
09900T18	09900T17	XXXX	XXXX

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than [enter date six months prior to expiration date].

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

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

Permittee:	**Nouryon Surface Chemistry LLC – Salisbury Plant**
Facility ID:	**8000182**
Primary SIC Code:	**2869**
NAICS Code:	**325199**
Facility Site Location:	**485 Cedar Springs Road**
City, County, State, Zip:	**Salisbury, Rowan County, NC 28147**
Mailing Address:	**485 Cedar Springs Road**
City, State, Zip:	**Salisbury, NC 28147**
Application Number(s):	**8000182.24C, 000182.20B, 8000182.22A, 8000182.23A, 8000182.23B, 8000182.23C, 8000182.24A, and 8000182.24B**
Complete Application Date(s):	**November 8, 2024, November 25, 2020, October 19, 2022, March 27, 2023, September 20, 2023, October 2, 2023, July 15, 2024, and October 18, 2024**
Division of Air Quality, Regional Office Address:	**Mooresville Regional Office 610 East Center Avenue, Suite 301 Mooresville, NC 28115**

Permit issued this the XX day of XXXXX, XXXX.

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

Table of Contents

List of Acronyms

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

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Area 1			
ES-A1-1	Littleford Drying System No. 1 with a process recovery condenser (CD-A1-LDF-Cl1a)	CD-A1-LDF-BF1 CD-A1-LDF-C1b	Internal fabric filter (43 square feet of filter area) Condenser (25 square feet of surface area)
ES-A1-2	Littleford Drying System No. 2	CD-A1-LDF-BF2 CD-A1-LDF-C2	Internal fabric filter (24 square feet of filter area) Condenser (220 square feet of surface area)
ES-A1-3	Littleford packout system	CD-A1-LDF-BF3	Internal fabric filter (33 square feet of filter area)
C-1	Centrifuge process	CD-A3-2-X2-C-1	Condenser (75 square feet of surface area)
C-102	Vertical batch centrifuge	C-102C-1	Condenser (150 square feet of surface area) (voluntary use only)
CP-12	Process vessel	N/A	N/A
TK9	Slurry vessel (6,000 gallons)	TK9C-1	Condenser (150 square feet of surface area) (voluntary use only)
R1	Chemical reactor vessel (5,500 gallon capacity)	R1C	Condenser (125 square feet of surface area)
R2	Chemical reactor vessel (5,500 gallon capacity)	R2C	Condenser (125 square feet of surface area)
R5	Chemical reactor vessel (2,000 gallon capacity) with process condenser R5C-1	R5C-2	Condenser (104 square feet of surface area)
R6	Chemical reactor vessel (1,500 gallon capacity) with process condenser R6C-1	R6C-2	Condenser (80 square feet of surface area)
R7	Mixing vessel (6,000 gallons)	R7C-1	Condenser (150 square feet of surface area) (voluntary use only)
R8	Reactor (4,000 gallon capacity) with process condenser R8C-1	R8C-2	Condenser (125 square feet of surface area)
B2	Natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu per hour heat input) built in 1970	N/A	N/A
B3	Natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu per hour heat input) built in 1978	N/A	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
B6	Natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu per hour heat input) built in 1978	N/A	N/A
B8 **NSPS Dc**	Natural gas/No. 2 fuel oil-fired boiler (14.938 million Btu per hour maximum heat input) with low NOx burners	N/A	N/A
EG-01 **NSPS IIII** **GACT ZZZZ**	Diesel-fired emergency generator (1,250 kW)	N/A	N/A
EG-02[1] **NSPS IIII,** **GACT ZZZZ**	Diesel-fired emergency generator (400 kW)	N/A	N/A
EmGen[1] **GACT ZZZZ**	Natural gas-fired emergency generator constructed in 1978 (12.5 kW)	N/A	N/A
Area 1: Firebird Process			
R-90 **RACT**	Reactor (4,000 gallon capacity)	C900-X1	Condenser (129 square feet of surface area)
C-900 **RACT**	Centrifuge		
V-91, V-92, V-93 **RACT**	Three wash tanks		
V-94, V-95, V-96, V-97	Four filtrate tanks (10,000 gallon capacity each) located at the Tank Farm	N/A	N/A
V-98, V-99 **RACT**	Two IPA reclaim tanks (15,000 gallon capacity each)	V98-X1	Condenser (60 square feet of surface area)
CP-900	98% IPA storage tank (20,000 gallon capacity)	N/A	N/A
T51	86% IPA storage tank (10,000 gallon capacity)	N/A	N/A
T64	10% IPA storage tank (2,000 gallon capacity)	N/A	N/A
T48	IPA test tank (10,000 gallon capacity)	N/A	N/A
SRSF1 **RACT**	One solvent recovery system	DC9001-X2	Condenser (526 square feet of surface area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
S14	One glycerin storage tank for SRSF1 (1,500 gallon capacity)	N/A	N/A
TK63	78% IPA surge control vessel for SRSF1 (2,500 gallon capacity)	V98-X1	Condenser (60 square feet of surface area)
DC9001	98% IPA column tops receiver vessel for SRSF1 (500 gallon capacity)	V98-X1	Condenser (60 square feet of surface area)
DC9003	86% IPA column tops receiver vessel for SRSF1 (225 gallon capacity)	DC-9003REC-X4	Condenser (104 square feet of surface area)
LDF-3 **RACT**	Littleford drying system No. 3	CD-LDF3 LDF3-X1 and LDF3-X2	Internal fabric filter Condensers (308 and 129 square feet of surface area, respectively)
ES-FBPO	Packout station	CD-FBPO	Cartridge filter (190 square feet of filter area)
Area 2			
MV1 **GACT VVVVVV**	Reactor vessel (4,000 gallons) with process condenser MV1C-1	MV1C-2 OR V-VRU1	Condenser (150 square feet of surface area) OR Refrigerated vapor recovery unit
MV2 **GACT VVVVVV**	Reactor vessel (4,000 gallons) with process condenser MV2C-1	MV2C-2 OR V-VRU1 OR MV2F OR CD-A2-2-T20PS	Condenser (250 square feet of surface area) OR Refrigerated vapor recovery unit OR Ammonia flare used during Hydrovance® production OR Packed-tower scrubber (7 gallons per minute liquid injection of caustic solution)
MV3	Chemical reactor vessel (4,000 gallons) with reflux column/condenser MV3C-1 and/or process condenser MV3C-2	CD-A2-2-MV3C-3	Condenser (250 square feet of surface area)
MV4	Chemical reactor vessel (4,000 gallons) with process condenser MV4C-1	CD-A2-2-MV4C3 OR CD-A2-2-T20PS (optional)	Condenser (80 square feet of surface area) OR Packed-tower scrubber (7 gallons per minute liquid injection of caustic solution)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
S4V, S7V, S10V **GACT VVVVVV**	Three lacquer tanks	V-VRU1	Refrigerated vapor recovery unit
S12V **GACT VVVVVV**	Ethylene dichloride[2] stripper		
S9V **GACT VVVVVV**	Neutralizing stripper vessel		
S11V **GACT VVVVVV**	Neutralizing stripper vessel		
S25V **GACT VVVVVV**	Neutralizer vessel		
T16V, ST46, ST47, T30V **GACT VVVVVV**	SPS Lacquer Tank, Dry Ethylene dichloride Tank, Wet ethylene dichloride Tank, SPS Lacquer Tank		
DCE-1 **GACT VVVVVV**	Ethylene dichloride[2] distillation column S23 bottoms receiver (wet receiver tank)		
S23 **GACT VVVVVV**	Ethylene dichloride[2] distillation column with condenser/ overheads receiver (dry receiver tank)		
S20V **GACT VVVVVV**	Batch distillation vessel		
S12 **GACT VVVVVV**	Distillate tank for S20V		
SAT-1-1, SAT-1-2, SAT-1-3, SAT-2-3 **GACT VVVVVV** <u>AND</u> SAT-2-1, SAT-2-2, D14	Seven slow add tanks		
T18, T27 **GACT VVVVVV**	SPS Lacquer Tank Flexan Tank		
S22V **GACT VVVVVV**	Water/ Ethylene dichloride[2] storage vessel		
T13 **GACT VVVVVV**	Water/ Ethylene dichloride[2] flashing unit		
RCV-1 **GACT VVVVVV**	Distillate receiver for reactors (ID Nos. MV1 and MV2 when used as stripping vessels)		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
T20V **GACT VVVVVV**	Sulfonated polystyrene (SPS) stripper vessel (4,000 gallon capacity) with process condenser T20VC-1	T20VC-2 OR CD-A2-2-T20PS OR V-VRU1	Condenser (360 square feet of surface area) OR Packed-tower scrubber (7 gallons per minute liquid injection of caustic solution) OR Refrigerated vapor recovery unit
S-13-V **GACT VVVVVV**	Chemical reactor with process condenser S-13-VC1	S-13-VC2	Condenser (100 square feet of surface area)
S5V **GACT VVVVVV**	Sulfonation vessel venting to atmosphere OR Reactor; 4,000 gallons with process condenser A2-1-1S5V-C	N/A OR S5VC-2	N/A OR Condenser (30 square feet of surface area)
S1R and S6V **GACT VVVVVV**	Two sulfonation vessels	N/A	N/A
Area 3			
R04	Process tank	CD-A3-1-R04C	Condenser (250 square feet of surface area)
R-02	Chemical reactor	R-02-C	Condenser (282 square feet of surface area)
V09	Process tank	N/A	N/A
V22	Acrylonitrile storage tank equipped with loading-vapor return and conservation vent (20,000 gallons maximum capacity)	N/A	N/A
B4, B5	Two natural gas/No. 2 fuel oil-fired boilers (12.5 million Btu per hour maximum heat input each) built in 1978	N/A	N/A
ES-A3-2-B7 **NSPS Dc**	Natural gas/No. 2 fuel oil-fired boiler (16.3 million Btu per hour maximum heat input)	N/A	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Area 4 - Cosmetics and Resyn			
A3FD	Fluid bed dryer with product receiver cyclone	A3FDCD1 OR A3FDCD2	Rotoclone scrubber (3.5 gallon per minute minimum water injection; 6,500 cfm) OR Fabric filter (1,320 square feet of filter area)
A4SD	Spray dryer with two parallel product receiver cyclones	A4SDCD1	Vortex scrubber (110 gallon per minute minimum water injection, 20,000 cfm)
A4CAHS	Crotonic acid pneumatic transfer system; weigh bin to receiving hopper (work bin)	CDA4CAHS	Fabric filter (60 square feet of filter area)
CP-0	12,000 gallon reactor including process condenser (ID No. CP-0C-1; 2,000 square feet of surface area)	CP-0C-2	Condenser (100 square feet of surface area)
CP-1	12,000 gallon reactor with process condenser	CD-A3-2-X2-CP-1	Condenser (100 square feet of surface area)
CP-4	Pearlization process	CD-A3-2-X2-CP-4	Condenser (204 square feet of surface area)
CP-6	Pearlization process	CD-A3-2-X2-CP-6	Condenser (204 square feet of surface area)
CP-2, CP-13	Two 4,000-gallon monomer slow add tanks	N/A	N/A
CP-3, CP-14	Two 750-gallon catalyst slow add tanks	N/A	N/A
CP-11	Process vessel	N/A	N/A
CP103, CP112, CP113	VV10 Monomer Tank, (10,000-gallon) Ethanol Test Tank (10,000-gallon), IPAc Test Tank (10,000-gallon) (VOC)	N/A	N/A
CP104, CP105	HPMA Tank (6,000-gallon) TBAEMA Tank (6,000-gallon) (VOC)	N/A	N/A
CP115, CP116	Two Amphomer Solvent Recover tanks (1,377 gallons, each) (VOC)	N/A	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
CP101	MMA Tank (15,000 gallons) (HAPs)	N/A	N/A
CP108, CP109	IPAc Tank Ethanol Tank (20,000 gallon storage tanks) (VOC)	N/A	N/A
CP124	Vinyl acetate storage tank (20,000 gallon capacity)	N/A	N/A
CP102	Acrylic acid storage tank (10,000 gallon capacity)	N/A	N/A
Area 4 - Ethyl Acetate Recovery System			
DEC1	Decanter; 250 gallons	N/A	N/A
DEC2	Decanter; 125 gallons	N/A	N/A
V15	Rich phase tank; 1,200 gallons	N/A	N/A
S01	Ethyl acetate azeotrope 200 gallon still with reflux condenser (overheads to DEC-2; bottoms to CP-107)	CDS01	Condenser (100 square feet of surface area)
CP107	10,000 gallon reclaim tank (ethyl acetate)	N/A	N/A
CP106	30,000 gallon reclaim tank (ethyl acetate)	N/A	N/A
V18	Water rich phase tank; 1,200 gallons	N/A	N/A
S02	Wastewater still with reflux condenser (overheads to DEC-2; bottoms to wastewater treatment plant)	CDS02	Condenser (75 square feet of surface area)
Area 4 – Isopropyl Acetate/ Ethanol Recovery System			
CP-300SC1	Isopropyl acetate/ethanol stripping column with reflux condenser and tank	CD-A3-2-X3-DC5001	Condenser (67 square feet of surface area)
CP-300DC2	Ethanol/water distillation column/reflux condenser and tank	CD-A3-2-X3-DC5003	Condenser (16 square feet of surface area)
CP-300EC3	Isopropyl acetate/ethanol liquid extraction column with associated phase tanks	N/A	N/A
Miscellaneous Storage Tanks			
CP123	20,000 gallon 2-ethylhexyl acrylate storage tank	N/A	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ST31	10,000 gallon vinyl acetate storage tank	N/A	N/A
T610	Toluene storage tank; 9,000 gallons	N/A	N/A
T650	Heptane storage tank; 9,000 gallons	N/A	N/A

1. These emission sources are insignificant for Title V purposes; however, they are permitted at the request of the Permittee.
2. Ethylene dichloride is a synonym for 1,2-dichloroethane (DCE).

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. Area 1

- **Littleford drying system No.1 (ID No. ES-A1-1) with internal fabric filter (ID No. CD-A1-LDF-BF1) in series with a vent condenser (ID No. CD-A1-LDF-C1b);**
- **Littleford drying system No. 2 (ID No. ES-A1-2) with internal fabric (ID No. CD-A1-LDF-BF2) in series with vent condenser (ID No. CD-A1-LDF-C2);**
- **Littleford packout system (ID No. ES-A1-3) with internal fabric filter (ID No. CD-A1-LDF-BF3);**
- **Centrifuge (ID No. C-1) with vent condenser (ID No. CD-A3-2-X2-C-1);**
- **Vertical batch centrifuge (ID No. C-102) with vent condenser (ID No. C-102C-1);**
- **Process vessel (ID No. CP-12);**
- **Slurry vessel (ID No. TK9) with vent condenser (ID No. TK9C-1);**
- **Chemical reactor vessel (ID No. R1) with vent condenser (ID No. R1C);**
- **Chemical reactor vessel (ID No. R2) with vent condenser (ID No. R2C);**
- **Chemical reactor vessel with process condenser R5C-1 (ID No. R5) with vent condenser (ID No. R5C-2);**
- **Chemical reactor vessel with process condenser R6C-1 (ID No. R6) with vent condenser (ID No. R6C-2);**
- **Mixing vessel (ID No. R7) with condenser (ID No. R7C-1); and**
- **Chemical reactor vessel with process condenser R8C-1 (ID No. R8) with vent condenser (ID No. R8C-2)**

The following table provides a summary of limits and standards for the emission sources described above:

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**Affected Sources:** **ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3, only** $E = 4.10 \times P^{0.67}$, 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	**Affected Sources:** **ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3, only** 20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds	**Affected Sources: ID No. ES-A1-2, only** VOC emissions shall be less than 40 tons per consecutive 12-month period	15A NCAC 02Q .0317 (PSD Avoidance)

Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)
Volatile organic compounds	VOC work practices See Section 2.2 A.2	15A NCAC 02D .0958
Odors	**State-enforceable only** See Section 2.2 A.3	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources. See Section 2.2 A.4	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Facility-wide TPER limits. See Section 2.2 A.5	15A NCAC 02Q .0711
Volatile organic compounds	RACT is no additional control See Section 2.2 A.6	15A NCAC 02D .0951 (VOC RACT)

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

a. Emissions of particulate matter from the affected sources **(ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from the affected sources **(ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3)** shall be controlled with fabric filters as delineated in the permit equipment list. 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 structural integrity of each baghouse including bag condition;

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

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

d. The results of inspection and maintenance activities required by Section 2.1 A.1.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;
ii. the results of each inspection;
iii. the results of any maintenance performed on the control devices; and
iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

e. The Permittee shall submit the results of any maintenance performed on the control devices within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 A.1.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

a. Visible emissions from the affected sources **(ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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 .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.2.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring required by Section 2.1 A.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

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

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

a. In order to avoid applicability of this regulation, the Littleford drying system No. 2 **(ID No. ES-A1-2)** shall discharge into the atmosphere less than 40 tons of VOCs per consecutive 12-month period.

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

b. Calculations of VOC emissions per month shall be made at the end of each month. VOC emissions shall be determined by mass balance calculations comparing the masses entering and leaving the Littleford drying system No. 2 **(ID No. ES-A1-2)**. 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.

c. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained or the VOC emissions exceed the limit in Section 2.1 A.3.a above.

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

d. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 A.3.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and for July 30 for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly VOC emissions for the previous 17 months. The emissions shall be calculated for each of the six 12-month periods over the previous 17 months,
   ii. The total hours of operation and total monthly VOC emissions of the Littleford drying system No. 2 **(ID No.ES-A1-2)**,
   iii. The control efficiency for VOC emissions of the Littleford drying system No. 2 **(ID No.ES-A1-2)**, and
   iv. All instances of deviations from the requirements of this permit must be clearly identified.

B. Area 2, Area 3:

Area 2:

- **Reactor vessel with process condenser MV1C-1 (ID No. MV1) with vent condenser (ID No. MV1C-2) or refrigerated vapor recovery unit (ID No. V-VRU1)**
- **Reactor vessel with process condenser MV2C-1 (ID No. MV2) with vent condenser (ID No. MV2C-2) or refrigerated vapor recovery unit (ID No. V-VRU1) or ammonia flare (ID No. MV2F) or packed-tower scrubber (ID No. CD-A2-2-T20PS);**
- **Chemical reactor vessel with reflux column/condenser MV3C-1 and/or process condenser MV3C-2 (ID No. MV3) with vent condenser (ID No. CD-A2-2-MV3C-3);**
- **Chemical reactor vessel with process condenser MV4C-1 (ID No. MV4) with vent condenser (ID No. CD-A2-2-MV4C-3) or packed-tower scrubber (ID No. CD-A2-2-T20PS);**
- **Refrigerated Vapor Recovery Unit (ID No. V-VRU1) on:**
  - **Three lacquer tanks (ID Nos. S4V, S7V, and S10V);**
  - **Ethylene dichloride stripper (ID No. S12V);**
  - **Two neutralizing stripper vents (ID Nos. S9V and S11V);**
  - **Neutralizing vessel (ID No. S25V)**
  - **Four storage tanks (ID Nos. T16V, ST46, ST47, and T30V);**
  - **Ethylene dichloride distillation column S23 bottoms receiver (wet receiver tank) (ID No. DCE-1);**
  - **Ethylene dichloride distillation column with condenser/overheads (dry) receiver (ID No. S23);**
  - **Batch distillation vessel (ID No. S20V);**
  - **Distillate tanks for S20V (ID No. S12);**
  - **Seven slow add tanks (ID Nos. SAT-1-1, SAT-1-2, SAT-1-3, SAT-2-1, SAT-2-2, SAT-2-3, and D14);**
  - **Two storage tanks (ID Nos. T18 andT27);**
  - **Water/ Ethylene dichloride storage vessel (ID No. S22V);**
  - **Water/ Ethylene dichloride flashing unit (ID No. T13); and**
  - **Distillate receivers for reactors MV1 and MV2 used as stripping vessels (ID No. RCV-1);**
- **Sulfonated polystyrene stripper vessel with process condenser T20VC-1 (ID No. T20V) with vent condenser (ID No. T20VC-2) or packed-tower scrubber (ID No. CD-A2-2-T20PS), or refrigerated vapor recovery unit (ID No. V-VRU1);**
- **Chemical reactor with process condenser S-13-VC1 (ID No. S-13-V) with vent condenser (ID No. S-13-VC2);**
- **Vessel (ID No. S5V) operating as a sulfonation vessel venting to the atmosphere or as a reactor with process condenser A2-1-1S5V-C with vent condenser (ID No. S5VC-2);**
- **Two sulfonation vessels (ID Nos. S1R and S6V)**

<u>Area 3:</u>

- **Process tank (ID No. R04) with vent condenser (ID No. CD-A3-1-R04C);**
- **Reactor (ID No. R-02) with vent condenser (ID No. R-02-C);**
- **Process Tank (ID No. V09);**
- **Acrylonitrile storage tank (ID No. V22)**

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	**Affected Source: Ammonia Flare (ID No. MV2F) only** 2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	**Affected Source: Ammonia Flare (ID No. MV2F) only** 20 percent opacity	15A NCAC 02D .0521
Nitrogen oxides	**Affected Source: Ammonia Flare (ID No. MV2F) only** Nitrogen oxide emissions from the ammonia flare shall be less than 40 tons per rolling 12-month period	15A NCAC 02Q .0317 (PSD/NSR Avoidance)
Hazardous Air Pollutants	**Affected Sources: Area 2 sources as delineated in Section 1** Work Practices	15A NCAC 02D .1111 (40 CFR 63, Subpart VVVVVV)
Hazardous Air Pollutants	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)
Volatile organic compounds	VOC work practices See Section 2.2 A.2	15A NCAC 02D .0958
Odors	**State-enforceable only** See Section 2.2 A.3	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources, and maintenance and inspection of Ammonia Flare (ID No. MV2F). See Section 2.2 A.4	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Facility-wide TPER limits. See Section 2.2 A.5	15A NCAC 02Q .0711
Volatile organic compounds	RACT is no additional control See Section 2.2 A.6	15A NCAC 02D .0951 (VOC RACT)

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

a. Emissions of sulfur dioxide from the flare **(ID No. MV2F)** 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 02D .0508(f)]

c. No monitoring, recordkeeping, or reporting is required to demonstrate compliance with sulfur dioxide emissions from this emission source **(ID No. MV2F)**.

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

a. Visible emissions from the flare **(ID No. MV2F)** 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, then the Permittee shall be deemed in noncompliance.

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

c. To ensure compliance, once per month the Permittee shall observe the emission point of this emission source **(ID No. MV2F)**, while the flare is operating, for any visible emissions above normal. The monthly observation must be made for each month of the calendar year 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 point of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring required by Section 2.1 B.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

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

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

a. To avoid applicability of 15A NCAC 02D .0530, nitrogen oxide emissions from flare **(ID No. MV2F)** shall be less than 40 tons during any consecutive 12-month period.

b. As an operation limit to comply with the limit specified in Section 2.1 B.3.a above, the number of hours emissions from the reactor/process condenser **(ID No. MV2)** may be vented to the flare **(ID No. MV2F)** shall not exceed 6,400 hours during any consecutive 12-month period.

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

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.3.a, then the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d. Each month the Permittee shall create and retain a record of the number of hours during the previous calendar month and the previous consecutive 12-month period that emissions from the reactor/process condenser **(ID No. MV2)** were vented to the flare **(ID No. MV2F)**. Monthly records shall be retained in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not created and retained or if the number of hours emissions from the reactor/process condenser **(ID No. MV2)** vented to the flare **(ID No. MV2F)** exceed the hours in Section 2.1 B.3.b above.

e. Each month the Permittee shall calculate and record in a logbook (written or electronic format) the NOx emissions from the flare **(ID No. MV2F)** during the previous calendar month and the previous consecutive 12-month period. The NOx emissions from the flare **(ID No. MV2F)** during the previous calendar month shall be calculated according to the following equation:

$$E = \frac{N_{NOx} \times H}{2{,}000}$$

Where:

E = NOx emissions (in tons/month);
N_{NOx} = NOx emission rate, determined to be 12.5 pounds/hour (stack test reference number 2009-065ST)
H = Total number of hours (in hours/month) that emissions from the reactor/process condenser **(ID No. MV2)** were vented to the flare **(ID No. MV2F)**, recorded in accordance with Section 2.1 B.3.e above.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the required calculations are not created and retained or if the NOx emissions exceed the limit in Section 2.1 B.3.a above.

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 B.3.e and f 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 months between January and June. The report shall contain the following information:
   i. Monthly NOx emission totals and total operating hours of the flare for the previous 17 months;
   ii. 12-month rolling NOx emissions and operating hours of the flare for each of the six consecutive 12-month periods during the previous calendar half; and,
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .1111: Maximum Available Control Technology

a. For all chemical manufacturing process units (CMPUs) in Area 2 as delineated in the permitted equipment list in Section 1, the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111, "Maximum Achievable Control Technology," as promulgated in 40 CFR 63, Subpart VVVVVV, "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources," including Subpart A "General Provisions."

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

b. The Permittee submitted the initial compliance notification on June 4, 2013.

Operational Limits and Management Practices [15A NCAC 02Q .0508(f)]

c. At all times, the Permittee shall operate and maintain any affected CMPU, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR 63.11495(d)]
d. The Permittee shall equip each process vessel with a cover or lid that is closed at all times when it is in organic hazardous air pollutant (HAP) service, except for manual operations that require access, such as material addition and removal, inspection, sampling and cleaning. [40 CFR 63.11495(a)(1)]
e. The Permittee shall operate the heat exchange systems such that the minimum pressure on the cooling water side is at least 35 kilopascals (5.1 psi) greater than the maximum pressure on the process side. [40 CFR 63.104(a) and 40 CFR 63.11495(b)]
f. For batch process vents, the Permittee shall meet the following:
   i. The Permittee shall determine the organic HAP emissions from all batch process vents within a CMPU in accordance with the procedures in 40 CFR 63.11496(a)(1) and (2).
   ii. For CMPUs with less than 10,000 lb/yr of uncontrolled HAP emissions from batch process vents, total emissions must be reevaluated prior to making any process changes that affect the emissions calculations in 40 CFR 63.11496(a)(1) and (2). If projected emissions increase to 10,000 lb/yr or more, the Permittee shall comply with the requirements for CMPUs with emissions greater than 10,000 lb/yr upon initiating operation under the new operating conditions. [40 CFR 63.11496(a)(3) and (4)]
g. The Permittee shall limit the concentration of the HAPs listed in 40 CFR 63, Subpart VVVVVV, Table 1, in each wastewater stream to less than 10,000 parts per million by weight and shall discharge each wastewater stream to onsite or offsite wastewater treatment or hazardous waste treatment. [40 CFR 63.11498 and Table 6 of 40 CFR Part 63 Subpart VVVVVV]

h. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1.B.4.c through g are not met.

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

i. The Permittee shall conduct quarterly inspections while each CMPU is operating to determine that process vessels and equipment in organic HAP service are covered as specified in Section 2.1 B.4.d above, are sound and are free of leaks. For these inspections, the Permittee may use detection methods incorporating sight, sound, or smell in accordance with 40 CFR 63.11495(a)(3) or follow Method 21 of 40 CFR part 60, appendix A-7, with a leak definition of 500 ppmv, to detect leaks. If the CMPU operates at all during a calendar quarter, an inspection is required. No inspection is needed if the CMPU does not operate for the entire calendar quarter and is not in organic HAP service.

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

k. The Permittee shall be deem in noncompliance with 15A NCAC 02D .1111 if the required quarterly inspection is not performed or if documentation is not maintained for any leaks not repaired within 15 calendar days.

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

l. For each CMPU subject to Subpart VVVVVV, the Permittee shall keep records specified in Sections 2.1 B.4.l.i through vi below, as applicable:
   i. Records of management practice inspections, repairs, and reasons for any delay of repair, as specified in 40 CFR 63.11495(a)(5).
   ii. For batch process vent emissions that are less than 10,000 lb/yr for a CMPU, records of batch process vent emission calculations, as specified in 40 CFR 63.11496(a)(1), the number of batches operated each month, as specified in 40 CFR 63.11496(a)(3), and any updated emissions calculations, as specified in 40 CFR 63.11496(a)(3).
   iii. Records identifying wastewater streams and the type of treatment they receive.
   iv. Records of the date, time, and duration of each malfunction of operation of process equipment, control devices, recovery devices, or continuous monitoring systems used to comply with this subpart that causes a failure to meet a standard. The record must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate the emissions.
   v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.11495(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

m. All documentation supporting initial notifications and notifications of compliance status.

n. The Permittee shall maintain all records for a period of five years during which time the records shall be kept onsite for at least the first two years and made available to DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

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

o. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.4.i through n above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
   i. For any process equipment not repaired within 15 days of identification, the reason for the delay in the leak repair and the date the leak was repaired.
   ii. For each process change, a description of the process change, how the process change affects compliance with 40 CFR 63, Subpart VVVVVV, and, when applicable, a new certification of compliance in accordance with 40 CFR 63.11501(b).
   iii. If there are no delays in leak repair and/or no process changes, provide a statement that there were no delays in leak repair and/or no process changes during the reporting period.
   iii. If a malfunction occurred during the reporting period, the report must include the number of instances of malfunctions that caused emissions in excess of a standard. For each malfunction that caused emissions in excess of a standard, the report must include a list of the affected sources or equipment, an estimate of the volume of each regulated pollutant emitted over the standard, and a description of the method used to estimate

the emissions. The report must also include a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.11495(d), including actions taken to correct a malfunction.

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

C. Area 4

Area 4 - Cosmetics and Resyn:

- **Fluid bed dryer with product receiver cyclone (ID No. A3FD) with rotoclone scrubber (ID No. A3FDCD1) or fabric filter (ID No. A3FDCD2);**
- **Spray dryer with two parallel product receiver cyclones (ID No. A4SD) with vortex scrubber (ID No. A4SDCD1);**
- **Crotonic acid pneumatic transfer system (ID No. A4CAHS) with fabric filter (ID No. CDA4CAHS);**
- **Reactor including process condenser CP-0C-1 (ID No. CP-0) with vent condenser (ID No. CP-0C-2);**
- **Reactor with process condenser (ID No. CP-1) with vent condenser (ID No. CD-A3-2-X2-CP-1);**
- **Pearlization process (ID No. CP-4) with vent condenser (ID No. CD-A3-2-X2-CP-4);**
- **Pearlization process (ID No. CP-6) with vent condenser (ID No. CD-A3-2-X2-CP-6);**
- **Two monomer slow add tanks (ID Nos. CP-2 and CP-13);**
- **Two catalyst slow add tanks (ID Nos. CP-3 and CP-14);**
- **Process vessel (ID No. CP-11);**
- **Eight storage tanks (ID Nos. CP103, CP112, CP113, CP104, CP105, CP115, and CP116);**
- **Four storage tanks (ID Nos. CP101, CP108, CP109, and CP124); and**
- **Acrylic acid storage tank (ID No. CP102)**

Area 4 - Isopropyl Acetate/Ethanol Recovery System:

- **Isopropyl acetate/ethanol stripping column/reflux condenser/condensate tank (ID No. CP-300SC1) with vent condenser (ID No. CD-A3-2-X3-DC5001);**
- **Ethanol/water distillation column/reflux condenser/condensate tank (ID No. CP-300DC2) with vent condenser (ID No. CD-A3-2-X3-DC5003); and**
- **Isopropyl acetate/ethanol liquid extraction column and phase tanks (ID No. CP-300EC3)**

Area 4 - Ethyl Acetate Recovery System:

- **Decanter (ID No. DEC1);**
- **Decanter (ID No. DEC2);**
- **Rich phase tank (ID No. V15);**
- **Ethyl acetate azeotrope still/reflux condenser (ID No. S01) with vent condenser (ID No. CDS01);**
- **Ethyl acetate reclaim tank (ID No. CP107);**
- **Ethyl acetate reclaim tank (ID No. CP106);**
- **Water rich phase tank (ID No. V18); and**
- **Wastewater still/reflux condenser (ID No. S02)**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**Affected Sources:** **ID Nos. A3FD, A4SD, and A4CAHS, only** $E = 4.10 \times P^{0.67}$, 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	**Affected Sources:** **ID Nos. A3FD, A4SD, and A4CAHS, only** 20 percent opacity	15A NCAC 02D .0521
Hazardous air Pollutants	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)
Volatile organic compounds	VOC work practices See Section 2.2 A.2	15A NCAC 02D .0958
Odors	**State-enforceable only** See Section 2.2 A.3	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources, and maintenance and inspection of Ammonia Flare (ID No. MV2F). See Section 2.2 A.4	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Facility-wide TPER limits. See Section 2.2 A.5	15A NCAC 02Q .0711
Volatile organic compounds	RACT is no additional control See Section 2.2 A.6	15A NCAC 02D .0951 (VOC RACT)

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

a. Emissions of particulate matter from the affected sources **(ID Nos. A3FD, A4SD, and A4CAHS)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from these emissions sources **(ID Nos. A3FD, A4SD, and A4CAHS)** shall be controlled by scrubbers and bagfilters **(ID Nos. A3FDCD1 or A3FDCD2, A4SDCD1, and CDA4CAHS)** as delineated in the permit equipment list. 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 structural integrity of each baghouse **(ID No. A3FDCD2 and CDA4CAHS)** and scrubber body **(ID Nos. A3FDCD1 and A4SDCD1)** including bag or spray nozzle condition.

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

d. The Permittee shall monitor the pressure drop and flow rate to the vortex scrubber **(ID No. A4SDCD1)** on the spray dryer daily. The pressure drop across the scrubber shall be maintained between 8 and 20 inches of water and the minimum flow rate of water to the scrubber shall not be less than 110 gallons per minute. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the scrubber pressure drop is not recorded or operated within the approved ranges.

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

e. The results of inspection, maintenance, and parametric monitoring required by 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 each inspection;
   iii. the results of any maintenance performed on the control devices; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

f. The Permittee shall submit the results of any maintenance performed on the control devices within 30 days of a written request by the DAQ.
g. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 C.1.c through e above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

a. Visible emissions from the affected sources **(ID Nos. A3FD, A4SD, and A4CAHS)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. A3FD, A4SD, and A4CAHS)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring activities required by Section 2.1 C.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Sections 2.1 C.2.c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. Miscellaneous Storage Tanks

- **2-ethylhexyl acrylate storage tank (ID No. CP123)**
- **Vinyl acetate storage tank (ID No. ST31)**

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	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)
Volatile organic compounds	VOC work practices See Section 2.2 A.2	15A NCAC 02D .0958
Odors	**State-enforceable only** See Section 2.2 A.3	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources, and maintenance and inspection of Ammonia Flare (ID No. MV2F). See Section 2.2 A.4	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Facility-wide TPER limits. See Section 2.2 A.5	15A NCAC 02Q .0711
Volatile organic compounds	RACT is no additional control See Section 2.2 A.6	15A NCAC 02D .0951 (VOC RACT)

E. Boilers:

Area 1:

- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B2),**
- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B3),**
- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B6), and**
- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B8)**

Area 3:

- **Natural gas/No. 2 fuel oil-fired boiler (ID No. ES-A3-2-B7),**
- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B4), and**
- **Natural gas/No. 2 fuel oil-fired boiler (ID No. B5).**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**Affected Sources:** **ID Nos. B2, B3, B4, B5, B6, and ES-A3-2-B7** 0.34 pounds per million Btu heat input	15A NCAC 02D .0503
	Affected Source: ID No. B8 0.33 pounds per million Btu heat input	
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Sulfur dioxide	**Affected Sources: ID Nos. ES-A3-2-B7 and B8** Fuel oil firing 0.5 percent sulfur content fuel oil	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Hazardous air pollutants	Fire liquid fuel only during periods of gas curtailment, gas supply interruptions, startups, or for periodic testing.	15A NCAC 02Q .0317 (Avoidance of 40 CFR Part 63, Subpart JJJJJJ)
Hazardous air pollutants	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)

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

a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from boilers **(ID Nos. B2, B3, B4, B5, B6, and ES-A3-B7)** into the atmosphere shall not exceed 0.34 pounds per million Btu heat input.

b. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from boiler **(ID No. B8)** 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 General Condition JJ. If the results of this test are above the applicable limit given in Sections 2.1 E.1.a and b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

d. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources **(ID Nos. B2, B3, B4, B5, B6, ES-A3-B7, and B8)**.

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

a. Emissions of sulfur dioxide from these boilers **(ID Nos. B2, B3, B4, B5, B6, ES-A3-2-B7 (when firing natural gas only), and B8 (when firing natural gas only))** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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 or reporting is required for sulfur dioxide emissions from natural gas and No. 2 fuel oil for these sources **(ID Nos. B2, B3, B4, B5, B6, ES-A3-2-B7, and B8, as applicable)**.

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

a. Visible emissions from the boilers **(ID Nos. B2, B3, B4, B5, B6, ES-A3-2-B7, and B8)** 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/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/No. 2 fuel oil in these sources **(ID Nos. ID Nos. B2, B3, B4, B5, B6, ES-A3-2-B7, and B8).**

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

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 New Source Performance Standards 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."

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

b. The Permittee shall not combust oil in the affected boilers **(ID Nos. ES-A3-2-B7 and B8)** that contains greater than 0.5 weight percent sulfur. [40 CFR 60.42c(d)]

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

c. The following monitoring and recordkeeping requirements apply:
   i. Compliance with the fuel oil sulfur limits in Section 2.1 E.4.b may be determined based on a certification from the fuel supplier, as described below.[40 CFR 60.42c(h)(1)]
   ii. The Permittee shall keep records, including the following information:
      (A) Calendar dates covered in the reporting period.
      (B) Fuel supplier certifications including the following information.
         (1) The name of the oil supplier;
         (2) 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
         (3) The sulfur content or maximum sulfur content of the oil.

      [40 CFR 60.48c(f)(1)]
      [40 CFR 60.48c(e)(1) and (11)]
   iii. The Permittee shall maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60.48c(g)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these monitoring and recordkeeping requirements are not met or the sulfur content of the oil exceeds the limit in Section 2.1 E.4.b above.

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

d. The following reporting requirements apply:
   i. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
   ii. The summary report shall contain the following information in Section 2.1 E.4.c above.[40 CFR 60.48c(e)(1) and (11)]
   iii. A certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the distillate fuel combusted during the reporting period. [40 CFR 60.48c(e)(11)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these reporting requirements are not met.

5. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY, and 40 CFR Part 63, Subpart JJJJJJ

a. In order to avoid the applicability of 40 CFR 63 Subpart JJJJJJ "National Emission Standards for Hazardous Air Pollutants for Area sources: Industrial, Commercial, and Institutional Boilers," the Permittee shall operate the existing boilers **(ID Nos. B2, B3, B4, B5, B6, ES-A3-2-B7, and B8)** as follows:
   i. Gaseous-fuels are not combined with any solid fuels.
   ii. Liquid fuels are burned only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel.
   iii. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

   [40 CFR 63.11195(e), 63.11237]

Definitions and Nomenclature

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

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

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

d. If the Permittee:
   i. fails to keep the records in Section 2.1 E.5.c above;
   ii. combusts any solid fuels;
   iii. burns liquid fuels outside the periods indicated in Section 2.1 E.5.a.ii above; or
   iv. tests the source burning liquid fuel for longer than 48 hours during any calendar year;

   the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1111.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 E.5.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.

F. Firebird Process

- **Reactor (ID No. R-90), centrifuge (ID No. C-900), and three wash tanks (ID Nos. V-91 through V-93) with vent condenser (ID No. C900-X1);**
- **Four filtrate tanks (ID Nos. V-94 through V-97);**
- **Two IPA reclaim tanks (ID Nos. V-98 and V-99), one 78% IPA surge control vessel for SRSFI (ID No. TK63), and one 98% IPA column tops receiver vessel for SRSF1 (ID No. DC9001) with vent condenser (ID No. V98-X1);**
- **Five IPA storage tanks (ID Nos. CP-900, T51, T64, T48, and S14);**
- **Solvent recovery system (ID No. SRSF1) with vent condenser (ID No. DC9001-X2);**
- **86% IPA column tops receiver vessel (ID No. DC9003) with vent condenser (ID No. DC-9003REC-X4);**
- **Littleford drying system (ID No. LDF-3) with internal fabric filter (ID No. CD-LDF3) in series with two vent condensers (ID Nos. LDF3-X1 and LDF3-X2); and**
- **Packout station (ID No. ES-FBPO) with cartridge filter (ID No. CD-FBPO)**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**Affected Source: ID No. LDF-3 and ES-FBPO** $E = 4.10 \times P^{0.67}$, 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	**Affected Source: ID No. LDF-3 and ES-FBPO** 20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds	**Reasonable Achievable Control Technology (RACT)** Control emissions from the reactor, condenser, dryer, and solvent recovery system with process condensers.	15A NCAC 02D .0951
Hazardous air pollutants	Facility-wide: Less than 10 tons per consecutive 12-month period of each individual hazardous air pollutant, Less than 25 tons per consecutive 12-month period of all hazardous air pollutants combined See Section 2.2 A.1	15A NCAC 02Q .0317 (MACT Avoidance)
Volatile organic compounds	VOC work practices See Section 2.2 A.2	15A NCAC 02D .0958
Odors	**State-enforceable only** See Section 2.2 A.3	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources, and maintenance and inspection of Ammonia Flare (ID No. MV2F). See Section 2.2 A.4	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Facility-wide TPER limits. See Section 2.2 A.5	15A NCAC 02Q .0711

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

a. Emissions of particulate matter from affected sources **(ID Nos. LDF-3 and ES-FBPO)** shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

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

d. No reporting is required for particulate emissions from these sources **(ID Nos. LDF-3 and ES-FBPO)**.

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

a. Visible emissions from the affected sources **(ID Nos. LDF-3 and ES-FBPO)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. LDF-3 and ES-FBPO)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 F.2 above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required or if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made.

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

d. The results of the monitoring required by Section 2.1 F.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities in Sections 2.1 F.2.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.

3. 15A NCAC 02D .0951: RACT FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. Volatile organic emissions from emission sources **(ID Nos. R-90, C-900, V-91, V-92, V-93, V-98, V-99, SRSF1, TK63, DC9001, DC9003, and LDF-3)** shall be controlled with condensers **(ID Nos. C900-X1, V98-X1, DC9001-X2, DC-9003REC-X4, LDF3-X1, and LDF3-X2)**, as delineated in Section 1 above. Condensers **(ID Nos. C900-X1, V98-X1, DC9001-X2, DC-9003REC-X4, and LDF3-X2)** shall operate at an exit gas temperature of no more than 25 degrees Celsius.

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

b. Each condenser delineated in Section 2.1 F.3.a above shall be equipped with a device to continuously measure the exit gas temperature. The device 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.

c. The Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. In addition, the Permittee shall perform the following inspections and maintenance for each condenser system:
   i. The Permittee shall inspect and maintain the structural integrity of the condenser, including inspection for leakage of coolant and, if the system is under positive gauge pressure, leakage of the contaminated gas stream.
   ii. The Permittee shall calibrate the exit gas temperature gauge annually.
   iii. The Permittee shall conduct a bi-annual clean out of the condenser shell sides and tube sides.
   iv. The Permittee shall inspect and maintain the structural integrity of ductwork and piping leading to and coming from the condenser.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0951 if the above inspections and maintenance are not performed or the exit gas temperature exceeds the limit in Section 2.1 F.3.a.

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

d. Records of all monitoring, inspection, and maintenance activities required by Sections 2.1 F.3.b and c above shall be recorded in a logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0951 if the records are not maintained.

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping required by Sections 2.1 F.3.c through 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.

G. Emergency generators:

- **One diesel-fired emergency generator (ID No. EG-01)**
- **One diesel-fired emergency generator (ID No. EG-02)**
- **One natural gas-fired emergency generator (ID No. EmGen)**

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
Multiple pollutants	See Section 2.1 G.3	15A NCAC 02D .0524 (40 CFR Part 60, Subpart IIII)
Hazardous air pollutants	Meet the requirements of NSPS Subpart IIII	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 generators **(ID Nos. EG-01, EG-02, and EmGen)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

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

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of diesel fuel in the emergency generators **(ID Nos. EG-01 and EG-02)** or natural gas in the emergency generator **(ID No. EmGen)**.

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

a. Visible emissions from the emergency generators **(ID No. EG-01, EG-02, and EmGen)** shall not be more than 20 percent opacity each 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 provided in Section 2.1 G.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of diesel fuel in the emergency generators **(ID No. EG-01 and EG-02)** or natural gas in the emergency generator **(ID No. EmGen)**.

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

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

a. For emergency generators **(ID Nos. EG-01 and EG-02)**, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines” including Subpart A “General Provisions.”

Definitions and Nomenclature

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

General Provisions

c. The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 8 to 40 CFR 60 Subpart IIII. [40 CFR 60.4218]

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

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

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

e. The Permittee shall use diesel fuel in the engine that meets the requirements of 40 CFR 1090.305 including:
   i. a maximum sulfur content of 15 ppm; and
   ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
   [40 CFR 60.4207(b)]

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

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

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

g. The engine has the following monitoring requirements:
   i. The engines shall be equipped with a non-resettable hour meter prior to startup. [40 CFR 60.4209(a)]
   ii. The engine, if equipped with a diesel particulate filter, must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

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

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

h. The Permittee shall:
   i. operate and maintain the engines and control devices according to the manufacturer's emission related-written instructions over the entire life of the engine;
   ii. change only those emission-related settings that are permitted by the manufacturer; and
   iii. meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable.
   [40 CFR 60.4206 and 60.4211(a)]

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

j. In order for the engine to be considered an emergency stationary internal combustion engine (ICE) as defined in Section 2.1 G.3.b above, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.
   i. There is no time limit on the use of emergency stationary ICE in emergency situations.
   ii. The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraph j.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph j.(iii) below counts as part of the 100 hours per calendar year allowed by this paragraph j.(ii).
      (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph j.(ii) above. Except as provided in paragraph j.iii.(A) below, the 50 hours per calendar year for non- emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(4) The power is provided only to the facility itself or to support the local transmission and distribution system.

(5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[40 CFR 60.4211(f)]

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

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

l. The following records shall be maintained:

i. The results of inspection and maintenance made pursuant to Section 2.1 G.3.h 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:

(A) the date and time of each recorded action;

(B) the results of each inspection;

(C) the results of any maintenance performed on the engine;

(D) any variance from manufacturer's recommendations, if any, and corrections made;

(E) the hours of operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time [40 CFR 60.4214(b)]; and

(F) if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR 60.4214(c)];

ii. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 G.3.d above; and

iii. records showing the fuel combusted meets the requirements in Section 2.1 G.3.e above.

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

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

m. The Permittee shall meet the following reporting requirements:

i. The Permittee shall submit a summary report of monitoring and recordkeeping activities in Section 2.1 G.3.d g through l above to the DAQ postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance with the requirements of this permit shall be clearly identified.

ii. If the Permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in Section 2.1 G.3.j.iii(A) above, the Permittee shall submit an annual report to the DAQ according to the requirements at 40 CFR 60.4214(d). [40 CFR 60.4214(d)]

iii. The report in paragraph m.ii above shall also be submitted directly to the EPA electronically pursuant to 40 CFR 60.4214(g). [40 CFR 60.4214(d)(3)]

(A) The Permittee may assert a claim of EPA system outage for failure to timely comply with this electronic reporting requirement if the requirements outlined in 40 CFR 60.4214(h) are met. [40 CFR 60.4214(h)]
(B) The Permittee may assert a claim of force majeure for failure to timely comply with this electronic reporting requirement if the requirements outlined 40 CFR 60.4214(i) are met. [40 CFR 60.4214(i)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the reporting requirements in paragraphs m.ii and iii above are not met.

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

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

a. For emergency generators **(ID Nos. EG-01 and EG-02)** (*new stationary RICE located at an area source of HAP emissions*) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

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

b. Pursuant to 40 CFR 63.6590(c)(1), this source shall meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart IIII (see Section 2.1 G.3 above). No further requirements apply for this engine under 40 CFR 63 Subpart ZZZZ and Subpart A. If these requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

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

Applicability

a. For emergency generator **(ID No. EmGen)** (*existing, spark ignition, emergency stationary reciprocating internal combustion engines[RICE] located at an area source of HAP emissions*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions." [40 CFR 63.6585, 63.6590(a)(1)(iii)]

Definitions and Nomenclature

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

Applicability Date

c. The Permittee shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. [40 CFR 63.6595(a)(1)]

Notifications

d. The Permittee has no notification requirements. [40 CFR 63.6645(a)(5)]

General Provisions [

e. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart ZZZZ. 40 CFR 63.6665]

Operating and Maintenance Requirements [15A NCAC 02Q .0508(b)]

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

g. Except during periods of startup of the engine, the Permittee shall:
   i. change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first;

ii. inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and
iii. inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

[40 CFR 63.6603(a), Table 2d to 40 CFR 63 Subpart ZZZZ]

h. The Permittee shall have the option to utilize the oil analysis program as described in 40 CFR 63.6625(i) in order to extend the specified oil change requirement in Section 2.1 G.5.g above. [40 CFR 63.6603(a), Table 2d to 40 CFR 63 Subpart ZZZZ, 63.6625(i)]

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

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

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

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

m. In order for the engine to be considered an emergency stationary RICE as defined in Section 2.1 G.5.b above, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs m.i through m.iii below, is prohibited.
   i. There is no time limit on the use of emergency stationary RICE in emergency situations.
   ii. The Permittee may operate emergency stationary RICE for any combination of the purposes specified in paragraph m.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph iii below counts as part of the 100 hours per calendar year allowed by this paragraph m.ii.
      (A) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
   iii. Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph m.ii above. Except as provided in paragraph m.iii.(A) below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
      (A) The 50 hours per year for non- emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
         (1) the engine is dispatched by the local balancing authority or local transmission and distribution system operator.

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

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

n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 G.5. e through m are not met.

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

o. RESERVED

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

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

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

q. The Permittee shall keep the following:
   i. a copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv)[40 CFR 63.6655(a)(1)];
   ii. records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment [40 CFR 63.6655(a)(2)];
   iii. records of all required maintenance performed on the air pollution control and monitoring equipment [40 CFR 63.6655(a)(4)];
   iv. records of actions taken during periods of malfunction to minimize emissions in accordance with Section 2.1 G.5.k above, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation [40 CFR 63.6655(a)(5)];
   v. records of the maintenance conducted on the RICE pursuant to Section 2.1 G.5.l above [40 CFR 63.6655(d) and (e)];
   vi. records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation [40 CFR 63.6655(f)];
   vii. if` the engine is used for the purposes specified in Section 2.1 G.5.m.iii(A) above, records of the notification of the situation, and the date, start time, and end time of engine operation for these purposes [40 CFR 63.6655(f)]; and
   viii. each record in a form suitable and readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a), (b), and (c)]

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

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

r. The following reporting requirements apply:
   i. The Permittee shall submit to the DAQ a semiannual compliance report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance must be clearly identified. [40 CFR 63.6640(b), (e), and 63.6650(b)(5)(f)]
   ii. The compliance report in i above shall include:
      (A) Company name and address.

(B) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
(C) Date of report and beginning and ending dates of the reporting period.
(D) If you had a malfunction during the reporting period, the compliance report must include the starting and ending date and time, the duration (in hours), and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with Section 2.1 G.5.k above (i.e., 40 CFR 63.6605(b)), including actions taken to correct a malfunction.
(E) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.
(F) If there were no periods during which the continuous monitoring system (CMS) (i.e., non-resettable hour meter), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
(G) Engine site rating in brake HP, year construction of the engine commenced (as defined in 40 CFR 63.2, where the exact year is not known, provide the best estimate), and type of engine (CI, SI 2SLB, SI 4SLB, or SI 4SRB).
(H) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
[40 CFR 63.6650(c)(1) through (8)]

iii. For each deviation from an emission or operating limitation that occurs for a stationary RICE where the Permittee is not using a CMS to comply with the emission or operating limitations in this subpart, the compliance report must also contain the following information:
(A) The total operating time (in hours) of the stationary RICE at which the deviation occurred during the reporting period.
(B) Information on the number, duration (in hours), and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.
(C) A description of any changes in processes, or controls since the last reporting period.
[40 CFR 63.6650(d)(1)]

iv. For each deviation from an emission or operating limitation occurring for a stationary RICE where the Permittee is using a CMS to comply with the emission and operating limitations in this subpart, the compliance report must also contain the following information you must include information in in 40 CFR 63.6650(e)(1) through (e)(13). [40 CFR 63.6650(e)]

iv. The compliance report shall also include any reporting required under Section 2.1 G.5.i above, as necessary. [Table 2d to 40 CFR 63 Subpart ZZZZ]

v. If the Permittee owns or operates an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in Section 2.1 G.5.m.iii(A) above, the Permittee shall submit an annual report according to the requirements at 40 CFR 63.6650(h). This report must be submitted to the DAQ and electronically to the EPA. [40 CFR 63.6650(h) and (i)]

vi. Beginning on February 26, 2025 for the annual report specified in paragraph v above and February 26, 2025 or one year after the report becomes available in CEDRI, whichever is later, for all other reports, the Permittee shall also submit the semiannual compliance report required in paragraph i above using the appropriate electronic report template on the CEDRI website (https:// www.epa.gov/electronic-reporting-air-emissions/cedri) for this subpart and following the procedure specified in 40 CFR 63.9(k), except any CBI must be submitted according to the procedures in 40 CFR 63.6645(h). The date report templates become available will be listed on the CEDRI website. The semiannual reports shall be submitted by the dates specified in i above. [40 CFR 63.6650(i)]

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

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-Wide

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

Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	Facility-wide: 10 tons per year of each individual hazardous air pollutant, 25 tons per year of all hazardous air pollutants combined	15A NCAC 02Q .0317 (Avoidance of 15A NCAC 02D .1111)
Volatile organic compounds	VOC work practice standards.	15A NCAC 02D .0958
Odors	**State-enforceable only** Odorous emissions must be controlled	15A NCAC 02D .1806
Toxic air pollutants	**State-enforceable only** TAP emission limits for facility-wide and Industrial Park-wide sources, and maintenance and inspection of Ammonia Flare (ID No. MV2F).	15A NCAC 02D .1100
Toxic air pollutants	**State-enforceable only** Requirement for Industrial Park Wide Emission of a toxic air pollutant to remain below its respective Toxic Pollutant Exemption Rates	15A NCAC 02Q .0711
Volatile organic compounds	RACT is no additional control	15A NCAC 02D .0951 (VOC RACT)
Acrylonitrile, Sulfur trioxide, Vinyl acetate	Requirements under 40 CFR Part 68.	15A NCAC 02D .2100

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

a. In order to remain classified a minor source for hazardous air pollutants and avoid applicability of this regulation, facility emissions shall be less than:
   i. 10 tons per consecutive 12-months of each individual hazardous air pollutant, and
   ii. 25 tons per consecutive 12-months of all hazardous air pollutants combined.

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

b. Individual HAP Emissions. Each month the Permittee shall calculate the facility-wide emission rates of each, individual HAP during the previous calendar month and during the previous consecutive 12-months. The emissions estimations shall include all HAP emission sources, including but not limited to combustion sources, storage tanks, pilot plant operations, fugitive emissions, and chemical manufacturing equipment. The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format). Acceptable emissions estimation methodologies include:
   i. Engineering estimates for chemical operations, based on chemical properties, operating conditions, and production rates;
   ii. US EPA-approved emission factors for fuel combustion (i.e., AP-42 emission factors); and,
   iii. US EPA-approved TANKS software for chemical storage operations.

c. Total, Combined HAP Emissions. Each month the Permittee shall calculate the facility-wide emission rate of total, combined HAP during the previous calendar month and during the previous consecutive 12-months. The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format).

d. The Permittee shall keep records of the MACT applicability determination, as provided above, on site at the source for a period of five years after the determination, or until the source becomes an affected source. The determination must include the analysis demonstrating why the Permittee believes the source is unaffected pursuant to 40 CFR Part 63.10(b)(3).

e. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring and recordkeeping requirements in Sections 2.2 A.1.b through d above are not completed or if the HAP emissions exceed the limit in Section 2.2 A.1.a above.

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

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.2 A.1.b through d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for months between January and June. The report shall contain the following information:
   i. For each consecutive 12-month period ending during the previous calendar half:
      (A) Provide the highest individual HAP emission rate (in tons/12-months) and indicate the identity of the highest emitting HAP; and,
      (B) Provide the total, combined HAP emission rate (in tons/12-months).
   ii. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. For all sources that use volatile organic compounds (VOC) as solvents, carriers, material processing media, or industrial chemical reactants, or in similar uses that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions; the Permittee shall:
   i. store all material, including waste material, containing volatile organic compounds in tanks or in containers covered with a tightly fitting lid that is free of cracks, holes, or other defects, when not in use,
   ii. clean up spills of volatile organic compounds as soon as possible following proper safety procedures,
   iii. store wipe rags containing volatile organic compounds in closed containers,
   iv. not clean sponges, fabric, wood, paper products, and other absorbent materials with volatile organic compounds,
   v. transfer solvents containing volatile organic compounds used to clean supply lines and other coating equipment into closable containers and close such containers immediately after each use, or transfer such solvents to closed tanks, or to a treatment facility regulated under section 402 of the Clean Water Act,
   vi. clean mixing, blending, and manufacturing vats and containers containing volatile organic compounds by adding cleaning solvent and close the vat or container before agitating the cleaning solvent. The spent cleaning solvent shall then be transferred into a closed container, a closed tank or a treatment facility regulated under section 402 of the Clean Water Act.

   [15A NCAC 02D .0958(c)]

b. When cleaning parts with a solvent containing a volatile organic compound, the Permittee shall:
   i. flush parts in the freeboard area,
   ii. take precautions to reduce the pooling of solvent on and in the parts,
   iii. tilt or rotate parts to drain solvent and allow a minimum of 15 seconds for drying or until all dripping has stopped, whichever is longer,
   iv. not fill cleaning machines above the fill line,
   v. not agitate solvent to the point of causing splashing.

   [15A NCAC 02D .0958(d)]

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

c. To ensure compliance with Sections 2.2 A.2.a and b above, the Permittee shall, at a minimum, perform a visual inspection once per month of all operations and processes utilizing volatile organic compounds. The inspections shall be conducted during normal operations. If the required inspections are not conducted the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0958.

d. The results of the inspections required by Section 2.2 A.2.c above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each inspection; and
   ii. the results of each inspection noting whether or not noncompliant conditions were observed.

   If the required records are not maintained the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0958.

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

e. The Permittee shall submit a summary report of the observations required by Section 2.2 A.2.d above on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of

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

State-enforceable only

3. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

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

State-enforceable only

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

a. The Permittee shall comply with 15A NCAC 02D .1100 as an "Industrial Park" comprised of Nouryon Surface Chemistry LLC – Salisbury Plant, Unit A, Facility ID No. 8000182 (Nouryon), and Henkel US Operations Corporation, Facility ID No. 8000055 (Henkel).

b. The Permittee submitted a toxic air pollutant (TAP) dispersion modeling analysis dated May 12, 2009 for the facility's ammonia emissions as listed in the below table. The modeling analysis was reviewed and approved by the AQAB on May 31, 2009. The Permittee also submitted a TAP dispersion modeling analysis dated September 3, 2021 for the facility's benzene emissions as listed in the below table. The modeling analysis was reviewed and approved by the AQAB on October 22, 2021. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memos.

Pollutant	Emission Source	Allowable Emission Rate
Ethylene dichloride	Industrial Park-Wide	40,141.5 lb/yr
	Nouryon Area 2: S5V	3,034 lb/yr
	Nouryon Area 2: S1R	1,933 lb/yr
	Nouryon Area 2: S6V	1,932 lb/yr
Formaldehyde	Industrial Park-Wide	6.976 lb/hr
	Nouryon Area 1	1.276 lb/hr for each manifold
Ammonia	Nouryon Area 2: V-VRU1 (associated with MV1, MV2, S4V, S7V, S10V, S12V, S9V, S11V, S25V, T16V, ST46, ST47, T30V, DCE-1, S23, S20V, S12, SAT-1-1, SAT-1-2, SAT-1-3, SAT-2-1, SAT-2-2, SAT-2-3, D14, T18, T27, S22V, T13, RCV-1, and T20V)	1.0 lb/hr
	Nouryon Area 2: MV2F (associated with MV2)	21.5 lb/hr
	Nouryon Area 2: MV4, T20V	0.1 lb/hr
	Nouryon Area 3: V09	15.0 lb/hr
Ammonia	Nouryon Area 3: ES-EH2	0.002 lb/hr
	Industrial Park Area 3: Fugitive Sources	3.0 lb/hr
Benzene	Industrial Park-Wide	796.26 lb/yr
Methylene chloride	Industrial Park-Wide	10.5 lb/hr 16,000 lb/yr

c. To ensure compliance with the ethylene dichloride emissions limitations, the following conditions apply:
   i. The total monthly and annual ethylene dichloride emissions from each source shall be recorded in a toxic air pollutant emissions logbook.
   ii. Hours of operation per calendar year **quarter** of the CERCLA Groundwater Pretreatment System **(ID No. ICERCLA-3)** shall be recorded in the toxic air pollutant emissions logbook.
   iii. A mass balance of ethylene dichloride emissions from the facility per calendar year quarter shall be conducted using inventory purchase and storage records and the results recorded in the toxic air pollutant emission logbook. The toxic air pollutant emission logbook shall be made available for inspection by personnel of the DAQ upon request.

d. To ensure compliance with the formaldehyde emissions limitations, the Permittee shall record hourly formaldehyde emission rates from the Area 1. The hourly emissions from each source shall be recorded in a toxic air pollutant

emissions logbook, which shall be made available for inspection by personnel of the DAQ upon request. These emissions can be recorded at the end of each workday.

e. To ensure compliance with the ammonia emissions limitations, the following conditions apply:
   i. Ammonia Flare Requirements - TAP emissions from reactor **(ID No. MV2)** shall be controlled as described in the permitted equipment list;
   ii. Inspection and Maintenance Requirements - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance of the flare **(ID No. MV2F)** as recommended by the equipment manufacturer. In addition, the Permittee shall perform an annual inspection of the flare system, including the following:
      (A) The Permittee shall inspect and maintain the structural integrity of the flare and the ductwork and piping leading to the flare; and
      (B) The Permittee shall perform a maintenance check to ensure the flare control system switches the ammonia gas to backup control system **(ID No. T20V)** when the flame eye does not detect a flame.
   iii. Recordkeeping Requirements - The results of all inspections and any variance from manufacturer's recommendations or from those given in this permit (when applicable) shall be investigated with corrections made and dates of actions recorded in a logbook. Records of all maintenance and monitoring activities shall be recorded in the logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request.
   iv. The Permittee shall comply with the visible emissions monitoring and recordkeeping requirements for the flare **(ID No. MV2F)** in accordance with Section 2.1 B.2.c and d above;
   v. Comply with the existing inspection/maintenance, recordkeeping, and monitoring requirements for the Vapor Recovery Unit **(ID No. V-VRU1)** in Section 2.2 A.4.g below; and,
   vi. No monitoring or recordkeeping is required to demonstrate compliance with the ammonia limits for Area 3 point sources **(ID Nos. ES-ES2 and V09)** or fugitive emissions.

f. To ensure compliance with the benzene emissions limitations, the Permittee shall record monthly and annual facility-wide benzene emission rates. The total shall be recorded in a toxic air pollutant emissions logbook, which shall be made available for inspection by personnel of the DAQ upon request.

g. Condenser/Coldtrap/Refrigerated Vapor Recovery Unit Requirements - TAP emissions shall be controlled as described in the permitted equipment list.
   i. Inspection and Maintenance Requirements - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. In addition, the Permittee shall perform an annual inspection of the condenser system, including the following:
      (A) The Permittee shall inspect and maintain the structural integrity of the 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 indicate leakage of the coolant, the condensate shall be inspected for the presence of coolant;
      (B) The Permittee shall conduct a bi-annual clean out of the condenser shell sides and tube sides; and
      (C) The Permittee shall inspect and maintain the structural integrity of ductwork and piping leading to and coming from the condenser.
   ii. Recordkeeping Requirements - The results of all inspections and any variance from manufacturer's recommendations or from those given in this permit (when applicable) shall be investigated with corrections made and dates of actions recorded in a logbook. Records of all maintenance and monitoring activities shall be recorded in the logbook. The logbook (in written or electronic form) shall be kept on-site and made available to DAQ personnel upon request.
   iii. Monitoring Requirements - Each condenser listed below shall be equipped with a device to continuously measure the exit gas temperature to ensure that it does not exceed the maximum temperature delineated in the following table. The device 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 Permittee shall record the exit gas temperature when the equipment is operating in a logbook (in written or electronic form) once per week. The logbook shall also indicate whether or not the equipment has operated during the week. These gauges shall be calibrated annually:

Condenser ID	Maximum Outlet Temperature	
	°F	°C
CD-A1-LDF-C1b	122	50
CD-A1-LDF-C2	122	50

Condenser ID	Maximum Outlet Temperature	
	°F	°C
V-VRU1	86	30
CD-A2-2-MV3C3	122	50
CD-A2-2-MV4C3	122	50
CD-A3-1-R04C	122	50
CD-A3-2-X2-CP-1	86	30
CD-A3-2-X2-CP-4	86	30
CD-A3-2-X2-CP-6	86	30
CD-A3-2-X2-C-1	122	50
CD-A3-2-X3-DC5001	122	50
CD-A3-2-X3-DC5003	122	50

Reporting Requirements [15A NCAC 02D .0611]

h. The Permittee shall submit a quarterly summary report of monitoring and recordkeeping activities given in Sections 2.2 A.4.c through g above postmarked on or before January 30 (for the preceding October through December), April 30 (for the preceding January through March), July 30 (for the preceding April through June), and October 30 (for the preceding July through September). The report shall identify any deviations with 15A NCAC 02D .1100, including but not limited to:
   i. Any exceedance of any hourly or annual emission limitation,
   ii. Failure to monitor visible emissions for the flare **(ID No. MV2F)**,
   iii. Failure to fulfill inspection/maintenance, recordkeeping, and monitoring requirements for the Vapor Recovery Unit **(ID No. V-VRU1)**; and,
   iv. Failure to operate the Condenser/Coldtrap/Refrigerated Vapor Recovery Unit as provided above.
   v. If there were no deviations during the 3-month reporting period, include a statement as such.

State-enforceable only

5. 15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT

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

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

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

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

TPERs Limitations				
Pollutant (CAS Number)	**Carcinogens (lb/yr)**	**Chronic Toxicants (lb/day)**	**Acute Systemic Toxicants (lb/hr)**	**Acute Irritants (lb/hr)**
Maleic Anhydride (108-31-6)		0.25	0.025	
Ethyl Acetate (141-78-6)			36	
n-Hexane (110-54-3)		23		

TPERs Limitations				
Pollutant (CAS Number)	**Carcinogens (lb/yr)**	**Chronic Toxicants (lb/day)**	**Acute Systemic Toxicants (lb/hr)**	**Acute Irritants (lb/hr)**
Sulfuric Acid (7664-93-9)		0.25	0.025	
Toluene (108-88-3)		98		14.4
Trichloroethylene (79-01-6)	5442.140			
Vinyl Chloride (75-01-4)	35.051			
Xylene (1330-20-7)		57		16.4

6. 15A NCAC 02D .0951: RACT FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

a. The Permittee shall install reasonably available control technology (RACT) pursuant to 15A NCAC 02D .0902 and shall determine the emissions control level according to 15A NCAC 02D. 0951. The Division of Air Quality has determined that RACT for all applicable sources, except for those cited in Section 2.1 F.3 above, is no additional control.

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

b. No additional monitoring recordkeeping or reporting is required for facility-wide emission sources (except those cited in Section 2.1 F.3) to demonstrate compliance with 15A NCAC 02D .0951.

7. 15A NCAC 02D .2100: RISK MANAGEMENT PROGRAM

a. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in 15A NCAC 02D .2100, "Risk Management Program," as promulgated in 40 CFR Part 68.

Recordkeeping/Reporting [15A NCAC 02Q .0508(g), 15A NCAC 02Q .0508(h)]

b. The Permittee shall submit an update to the Risk Management Plan (RMP) to EPA pursuant to 40 CFR 68.150 no later than **May 11, 2025,** or as specified in 40 CFR 68.10.

c. The Permittee shall revise and update the RMP submitted under 40 CFR 68.150 on or before **May 11, 2025** and at least once every five years after that date or most recent update as required by 40 CFR 68.190(b)(2) through (b)(7), whichever is later.

d. When the Permittee submits the Annual Compliance Certification required by General Condition P, the Permittee shall include a statement that the facility is in compliance with all requirements of 15A NCAC 02D .2100, including the registration and submission of the risk management plan.

State-enforceable only

8. Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0308(a)(1) and 15A NCAC 02Q .0309(b)]

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

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

Emission Source ID No.	Emission Source Description[1,2]
ISTG-60	Storage tank with packed tower wet scrubber (30 gallons per minute caustic solution injection) **(ID No. EP-ST60-SC)**
IST-52	Sulfur trioxide storage tank with counter-current packed-tower acid scrubber (15 gallons per minute sulfuric acid injection rate) **(ID No. EP-ST52-SO3-SC)**
IST-53	Monoethanolamine (MEA) storage tank (5,500 gallon capacity)
IB7	Natural gas-fired hot oil heater (4.2 million Btu heat input) built in 1978
IB8	Natural gas-fired hot oil heater (5.76 million Btu heat input) built in 1975
IST8A	NMA storage tank (9,000 gallon capacity)
IST38	Dowanol storage tank (10,000 gallon capacity)
ITUM-1	Water-based materials tumble dryer
I-S/A 4-3	500-gallon mixing tank in located in Area 2
ICERCLA-2	CERCLA soil vapor extraction unit and associated air quality control devices
ICP-122	Ethanol storage tank (12,700 gallon capacity)
IHOOD	Process development laboratory exhaust hood
ES-EH2	Quality control laboratory exhaust hood
I1, I2, and I3	Three aerated effluent lagoons located in the facility wastewater treatment plant
ICERCLA-3	CERCLA Groundwater Pretreatment System

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

J. **RESERVED**

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

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

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

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

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

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

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all terms and conditions in the permit (including emissions limitations, standards, or work practices), except for conditions identified as being State-enforceable Only. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent;
4. the method(s) used for determining the compliance status of the source during the certification period;
5. each deviation and take it into account in the compliance certification; and
6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

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

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or

d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.

3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(3)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(d)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **National Emission Standards Asbestos – 40 CFR Part 61, Subpart M** [15A NCAC 02D .1110]
The Permittee shall comply with all applicable standards for demolition and renovation activities pursuant to the requirements of 40 CFR Part 61, Subpart M. The permittee shall not be required to obtain a modification of this permit in order to perform the referenced activities.

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

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

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

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

the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

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

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in 15A NCAC 02D .2600 if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the DAQ to conduct independent tests of any source subject to a rule in 15A NCAC 02D to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in 15A NCAC 02D .2600 has precedence over all other tests.

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

1. A permit shall be reopened and revised under the following circumstances:
    a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
    b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
    c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
    d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.

4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]
The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540]
As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]
1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
    a. The written notification shall include:
        i. a description of the change at the facility;
        ii. the date on which the change will occur;
        iii. any change in emissions; and
        iv. any permit term or condition that is no longer applicable as a result of the change.
    b. In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

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