



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Purdue
Governor

Sheila C. Holman
Director

Dee Freeman
Secretary

October X, 2011

Mr. Ralph Owens
Site Director
AkzoNobel Surface Chemistry LLC
485 Cedar Springs Road
Salisbury, North Carolina 28147

SUBJECT: Air Quality Permit No. 09900T10
Facility ID: 8000182
AkzoNobel Surface Chemistry LLC
Salisbury, Rowan County
Fee Class: Title V

Dear Mr. Owen:

In accordance with your completed Air Quality Permit Application for a significant modification to the Title V permit received February 24, 2011, we are forwarding herewith Air Quality Permit No. 09900T09 to AkzoNobel Surface Chemistry LLC, Unit A, Salisbury, Rowan County, North Carolina authorizing the construction and operation, of the emission sources and associated air pollution control devices specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. 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 request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641.

Permitting Section

1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, North Carolina 27604
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: www.ncair.org

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The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 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 GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from October X, 2011 until October 31, 2014 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 Ms. Jenny Kelvington, P.E. at (919) 715-6254.

Sincerely yours,

Donald R. van der Vaart, Ph.D., P.E. J.D.,
Chief

cc: Mooresville Regional Office
Gregg Worley, EPA Region 4
Central Files

Enclosure

ATTACHMENT 1:

INSIGNIFICANT ACTIVITIES

Source ID No.	Source Description
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 Injection rate or sulfuric acid) (ID No. EP-ST52-SO3-SC)
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
ITUM-1	water-based materials tumble dryer
I-S/A 4-3	500-gallon mixing tank in Area II
ICERCLA-2	CERCLA soil vapor extraction unit and associated air quality control devices ³

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source 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 2D .1100 "Control of Toxic Air Pollutants" or 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit".
3. As a remediation project selected and carried out entirely onsite and in accordance with section 121 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 [US Code, Title 42, Chapter 103, Subchapter I; § 9621 (e)(1)], the soil vapor extraction unit and associated air quality control devices are not subject to Federal, State or local permitting requirements.

ATTACHMENT 2:**Summary of Changes Made to the Previous Permit (ID No. 09900T09):**

Page No(s).	Condition No(s).	Changes
--	Cover Letter	Updated permit revision numbers, issue and effective dates.
3 - 8	Equipment list	Added GACT JJJJJ designations to the seven fuel oil-fired boilers; Removed footnote requiring the Permittee to file a Title V Air Quality Permit Application on or before 12 months after commencing operation of boiler B8; and Removed the footnote listing emission source (ID No. CP-0 including CP-0C-1) and associated control device (ID No. CP-0C-2) as a minor modification per 15A NCAC 2Q .0515.
21 - 22	2.1.E.5	Added 15A NCAC 2D .1111, 40 CFR Part 63, Subpart JJJJJ “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources” requirements for seven existing natural gas/fuel oil-fired boilers.
31-39	3	Updated General Conditions to Version 3.5



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
09900T10	09900T09	October X, 2011	October 31, 2014

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 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, 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: AkzoNobel Surface Chemistry LLC, Unit A
Facility ID: 8000182

Facility Site Location: 485 Cedar Springs Road
City, County, State, Zip: Salisbury, Rowan County, North Carolina 28147

Mailing Address: 485 Cedar Springs Road
City, State, Zip: Salisbury, North Carolina 28147

Application Number: 8000182.11A
Complete Application Date: February 24, 2011
Primary SIC Code: 2869

Division of Air Quality,
Regional Office Address: Mooresville Regional Office
610 East Center Street, Suite 301
Mooresville, North Carolina 28115

Permit issued this the Xth of October, 2011

Donald R. van der Vaart, Ph.D., P.E., J.D., Chief, Air Permits Section
By Authority of the Environmental Management Commission

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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 I			
ES-A1-1	Littleford Drying System No.1	CD-A1-LDF-BF1, CD-A1-LDF-C1a, and CD-A1-LDF-C1b	internal fabric filter (43 square feet of filter area) venting to two parallel condensers (75 and 25 square feet of surface area, respectively)
ES-A1-2	Littleford Drying System No.2	CD-A1-LDF-BF2 and CD-A1-LDF-C2	internal fabric filter (24 square feet of filter area) venting to a 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
CP-12	process vessel	N/A	N/A
R1	chemical reactor vessel (5,500 gallons capacity)	R1C	condenser (125 square feet of surface area)
R2	chemical reactor vessel (5,500 gallons capacity)	R2C	condenser (125 square feet of surface area)
R5	chemical reactor vessel (2,000 gallons capacity) with process condenser R5C-1	R5C-2	condenser (104 square feet of surface area)
R6	chemical reactor vessel (1,500 gallons capacity) with process condenser R6C-1	R6C-2	condenser (80 square feet of surface area)
7R	mixing vessel (6,000 gallons)	N/A	N/A
8R	reactor (4,000 gallons) with process condenser 8RC-1	8RC-2	condenser (125 square feet of surface area)
B2, GACT JJJJJ	natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu heat input) built in 1970	N/A	N/A
B3, GACT JJJJJ	natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu heat input) built in 1978	N/A	N/A
B6, GACT JJJJJ	natural gas/No. 2 fuel oil-fired boiler (12.5 million Btu heat input) built in 1978	N/A	N/A
B8, GACT JJJJJ 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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Area I: Firebird Process			
R-90 RACT	reactor (4,000 gallon capacity)	C900-X1	condenser
C-900 RACT	centrifuge		
V-91 through V-93 RACT	three wash tanks		
V-94 through V-97	four filtrate tanks (10,000 gallon capacity each) located at the Tank Farm	N/A	N/A
V-98 and 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)
S14	One glycerin storage tank for SRSF1 (1500 gallon capacity)	N/A	N/A
TK63	78% IPA surge control vessel for SRSF1 (2000 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 venting to two condensers in series
ES-FBPO	Packout station	CD-FBPO ³	cartridge filter (190 square feet of filter area)
Area II			
MV1	reactor vessel (4,000 gallons) with process condenser MV1C-1	MV1C-2 <u>OR</u> V-VRU1	condenser (150 square feet of surface area) <u>OR</u> refrigerated vapor recovery unit

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
MV2	reactor vessel (4,000 gallons) with process condenser MV2C-1	MV2C-2 <u>OR</u> V-VRU1 <u>OR</u> MV2F <u>OR</u> CD-A2-2-T20PS	condenser (250 square feet of surface area) <u>OR</u> refrigerated vapor recovery unit <u>OR</u> ammonia flare used during Hydrovance® production ⁷ <u>OR</u> 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 <u>OR</u> CD-A2-2-T20PS (optional)	condenser (80 square feet of surface area) <u>OR</u> packed-tower scrubber (7 gallons per minute liquid injection of caustic solution)
S4V, S7V, and S10V	Three lacquer tanks	V-VRU1	refrigerated vapor recovery unit
S12V	DCE stripper		
S9V	neutralizing stripper vent		
S11V	neutralizing stripper vent		
S25V	neutralizer vessel		
T16V, ST46, ST47, ST49, and T30V	five storage tanks		
DCE-1	DCE distillation column S23 bottoms receiver (wet receiver tank)		
S23	DCE distillation column with condenser/ overheads receiver (dry receiver tank)		
S20V	batch distillation vessel		
S12	distillate tank for S20V		
SAT-1-1, SAT-1-2, SAT-1-3, SAT-2-1, SAT-2-2, SAT-2-3, and D14	Seven slow add tanks		
T18 and T27	Two storage tanks		
S22V	water/DCE storage vessel		
T13	water/DCE flashing unit		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
RCV-1	distillate receiver for reactors (ID Nos. MV1 and MV2 when used as stripping vessels)		
T20V	sulfonated polystyrene (SPS) stripper vessel (4,000 gallons capacity) with process condenser T20VC-1	T20VC-2 <u>OR</u> CD-A2-2-T20PS <u>OR</u> V-VRU1	condenser (360 square feet of surface area venting to atmosphere) <u>OR</u> packed-tower scrubber (7 gallons per minute liquid injection of caustic solution) <u>OR</u> refrigerated vapor recovery unit
S-13-V	chemical reactor with process condenser S-13-VC1	S-13-VC2	condenser (100 square feet of surface area)
S5V	sulfonation vessel venting to atmosphere <u>OR</u> reactor; 4,000 gallons with process condenser A2-1-1S5V-C	N/A <u>OR</u> S5VC-2	N/A <u>OR</u> condenser (30 square feet of surface area)
S1R and S6V	Two sulfonation vessels	N/A	N/A
Area III			
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
HOOD ¹	process development laboratory exhaust hood	N/A	N/A
ES-EH2 ¹	quality control laboratory exhaust hood	N/A	N/A
B4, B5, GACT JJJJJ	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, GACT JJJJJ, NSPS Dc	natural gas/No. 2 fuel oil-fired boiler (16.3 million Btu per hour maximum heat input)	N/A	N/A
Area 4 - Cosmetics and Resyn			
A3FD	fluid bed dryer with product receiver cyclone	A3FD1 <u>OR</u> A3FD2	rotoclone scrubber; 3.5 gallon per minute minimum water injection (6,500 cfm) <u>OR</u> fabric filter ² , 1,320 square feet of filter area
A4SD	spray dryer with two parallel product receiver cyclones	A4SD1	vortex scrubber; 110 gallon per minute minimum water injection (20,000 cfm)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
A4CAHS	crotonic acid pneumatic transfer system; weigh bin to receiving hopper (work bin)	CDA4CAHS	fabric filter; 60 feet of filter area
CP-0	12,000 gallon reactor including process condenser (ID No. CP-0C-1; 2000 square feet of surface area)	CP-0C-2 ³	condenser; 100 square feet of surface area
CP-1	12,000 gallon reactor with process condenser	CD-A3-2-X2-CP-1	condenser
CP-4	pearlization process	CD-A3-2-X2-CP-4	condenser
CP-6	pearlization process	CD-A3-2-X2-CP-6	condenser
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	three 10,000 gallon storage tanks (VOC)	N/A	N/A
CP104, CP105	two 6,000 gallon storage tanks (VOC)	N/A	N/A
CP115, CP116	two 1,377 gallon storage tanks (VOC)	N/A	N/A
CP101	15,000 gallon storage tank (HAPs)	N/A	N/A
CP108, CP109	two 20,000 gallon storage tanks (VOC)	N/A	N/A
CP124	20,000 gallon storage tank (HAPs)	N/A	N/A
CP102	10,000 gallon storage tank (acrylic acid)	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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
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	vent condenser
CP-300DC2	ethanol/water distillation column/reflux condenser and tank	CD-A3-2-X3-DC5003	vent condenser
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
ST31	10,000 gallon vinyl acetate storage tank	N/A	N/A
ST38	10,000 gallon heptane 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
Wastewater Treatment Plant			
1 ¹ , 2 ¹ , and 3 ¹	Three aerated effluent lagoons located in the facility wastewater treatment plant	N/A	N/A
CERCLA-1 ¹	CERCLA cleanup project air stripper	CD-CERCLA-1a and CD-CERCLA-1b	catalytic oxidizer (900 cubic feet per minute gas flow rate) and one packed-column scrubber (22 gallons per minute of 50% NaOH scrubbing medium)

¹ These emission sources are insignificant for Title V purposes; however, they are permitted pursuant to state-enforceable only requirements.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1-Emission Source(s) and Control Device(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 I

Littleford drying system No.1 (ID No. ES-A1-1) venting to fabric filter (ID No. CD-A1-LDF-BF1) then to parallel condensers (ID Nos. CD-A1-LDF-C1a, and CD-A1-LDF-C1b);

Littleford drying system No.2 (ID No. ES-A1-2) venting to fabric (ID No. CD-A1-LDF-BF2) then to condenser (ID No. CD-A1-LDF-C2);

Littleford packout system (ID No. ES-A1-3) with fabric filter (ID No. CD-A1-LDF-BF3); centrifuge (ID No. C-1) with condenser (ID No. CD-A3-2-X2-C-1); process vessel (ID No. CP-12);

reactor (ID No. R1) with condenser (ID No. R1C);

reactor (ID No. R2) with condenser (ID No. R2C);

reactor/process condenser R5C-1 (ID No. R5) with condenser (ID No. R5C-2);

reactor/process condenser R6C-1 (ID No. R6) with condenser (ID No. R6C-2);

mixing vessel (ID No. 7R); and

reactor/process condenser 8RC-1 (ID No. 8R) with condenser (ID No. 8RC-2).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Sources: ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3, only $E=4.10P^{0.67}$ Where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	Affected Sources: ID Nos. ES-A1-1, ES-A1-2, and ES-A1-3, only 20 percent opacity	15A NCAC 2D .0521
Volatile organic compounds	Affected Sources: ID No. ES-A1-2, only PSD Avoidance Condition - VOC emissions shall be less than 40 tons per consecutive 12-month period	15A NCAC 2Q .0317
Hazardous Air Pollutants	MACT Avoidance Conditions – See Multiple Emission Sources Section 2.2 A.1.	15A NCAC 2Q .0317 (Avoidance of 15A NCAC 2D .1111)
Volatile organic compounds	Refer to Section 2.2 A.6. RACT is no additional control	15A NCAC 2D .0951 (VOC RACT)
Volatile organic compounds	Work Practice Standards – See Multiple Emission Sources Section 2.2 A.2.	15A NCAC 2D .0958
Odors	State-enforceable only Requirements for Odor Control – See Multiple Emissions Sources Section 2.2 A.3.	15A NCAC 2D .1806
Toxic air pollutants	State-enforceable only Control of Toxic Air pollutants – See Multiple Emissions Sources Section 2.2 A.4.	15A NCAC 2D .1100

Regulated Pollutant	Limits/Standards	Applicable Regulation
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 – See Multiple Emissions Sources Section 2.2 A.5.	15A NCAC 2Q .0711

1. 15A NCAC 2D .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:

$$E = 4.10 \times P^{0.67} \quad \text{Where:} \quad \begin{array}{l} E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour} \end{array}$$

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

Testing [15A NCAC 2Q .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 2D .0515.

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

- c. Particulate matter emissions from the emissions sources listed above shall be controlled with fabric filters as delineated in the permit equipment list. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- i. a monthly visual inspection of the system ductwork and material collection unit for leaks;
 - ii. an annual (for each 12 month period following the initial inspection) internal (if possible) inspection of the structural integrity of each baghouse including bag condition;
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the 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 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .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 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 2D .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 2Q .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 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

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

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2Q. 0317: AVOIDANCE CONDITION

for 15A NCAC 2D. 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 2Q .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 2D .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 2D .0530 if the VOC emissions exceed this limit.

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

- d. 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 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**), and
 - iii. The control efficiency for VOC emissions of the Littleford drying system No. 2 (**ID No.ES-A1-2**).

B. Area II

- Reactor/process condenser MV1C-1 (ID No. MV1) with vent condenser (ID No. MV1C-2) or refrigerated recovery unit (ID No. V-VRU1);
- Reactor/process condenser MV2C-1 (ID No. MV2) with vent condenser (ID No. MV2C-2) or refrigerated recovery unit (ID No. V-VRU1) or ammonia flare (ID No. MV2F*);
- Reactor/reflux column and condenser MV3C-1 and/or process condenser MV3C-2 (ID No. MV-3) with vent condenser (ID No. CD-A2-2-MV3C-3);
- Reactor/process condenser MV4C-1 (ID No. MV4) with vent condenser (ID No. CD-A2-2-MV4C-3) or scrubber (ID No. CD-A2-2-T20PS);
- Refrigerated Recovery Unit (ID No. V-VRU1) on:
 - three lacquer tanks (ID Nos. S4V, S7V, and S10V);
 - dichloroethylene (DCE) stripper (ID No. S12V);
 - three process tanks (ID Nos. S9V, S11V, and S25V);
 - five storage tanks (ID Nos. T16V, ST46, ST47, ST49, and T30V);
 - DCE distillation column bottoms (dry) receiver (ID No. DCE-1);
 - DCE distillation column/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 and T27);
 - water/DCE storage vessel (ID No. S22V);
 - water/DCE flashing unit (ID No. T13); and
 - distillate receivers for reactors MV1 and MV2 used as strippers (ID No. RCV-1);
- Reactor/process condenser T20VC-1 with vent condenser (ID No. T20VC-2) or scrubber (ID No. CD-A2-2-T20PS), or refrigerated recovery unit (ID No. V-VRU1);
- Reactor/process condenser S-13-VC1 (ID No. S-13-V) with vent condenser (ID No. S-13-VC2);
- Sulfonation vessel or reactor/process condenser (ID No. S5V) with vent condenser (ID No. S5VC-2);
- Two sulfonation vessels (ID Nos. S1R and S6V);

Area III

- 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);
- Process development laboratory exhaust hood (ID No. HOOD); and
- Quality control laboratory exhaust hood (ID No. ES-EH2).

Wastewater Treatment Plant

- Three aerated effluent lagoons (ID Nos. 1, 2, and 3).
- CERCLA air stripper (ID No. CERCLA-1) with catalytic oxidizer and packed-column scrubber (ID Nos. CD-CERCLA-1a and CD-CERCLA-1b).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Affected Source: Area II Reactor (ID No. R12) only PSD Avoidance Condition - VOC emissions shall be less than 40 tons per consecutive 12-month period	15A NCAC 2Q .0317 (Avoidance of 15A NCAC 2D .0530)
Hazardous Air Pollutants	MACT Avoidance Conditions – See Multiple Emission Sources Section 2.2 A.1.	15A NCAC 2Q .0317 (Avoidance of 15A NCAC 2D .1111)
Volatile organic compounds	Refer to Section 2.2 A.6. RACT is no additional control	15A NCAC 2D .0951 (VOC RACT)

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	Work Practice Standards – See Multiple Emission Sources Section 2.2 A.2.	15A NCAC 2D .0958
Odors	State-enforceable only Requirements for Odor Control – See Multiple Emissions Sources Section 2.2 A.3.	15A NCAC 2D .1806
Toxic air pollutants	State-enforceable only Control of Toxic Air Pollutants; <i>includes inspection and maintenance requirements for the ammonia flare (ID No. MV2F)</i> – See Multiple Emissions Sources Section 2.2 A.4.	15A NCAC 2D .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 – See Multiple Emissions Sources Section 2.2 A.5.	15A NCAC 2Q .0711
Sulfur dioxide	Affected Source: Ammonia Flare (ID No. MV2F) only 2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	Affected Source: Ammonia Flare (ID No. MV2F) only 20 percent opacity	15A NCAC 2D .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 2Q .0317 <i>(Avoidance of 15A NCAC 2D .0530 and 15A NCAC 2D .0531)</i>

1. 15A NCAC 2D .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 2Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. 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 2D .0516.

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

- c. No monitoring, recordkeeping, or reporting is required to demonstrate compliance with this standard.

2. 15A NCAC 2D .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 2Q .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 2Q .0508(f)]

- c. To assure compliance, once per month the Permittee shall observe the emission point of this flare, 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 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1.B.2.a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2Q. 0317: AVOIDANCE CONDITION

**for 15A NCAC 2D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION (NO_x) and
for 15A NCAC 2D. 0531: SOURCES IN NONATTAINMENT AREAS (Ozone)**

- a. To avoid applicability of 15A NCAC 2D .0530 (for nitrogen dioxide) and 15A NCAC 2D .0531 (for ozone), nitrogen oxide emissions from flare (**ID No. MV2F**) shall not exceed 40 tons during any consecutive 12-month period.
- b. To assure nitrogen oxide emissions from the flare do not exceed the limit given in Section 2.1.B.4.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 2Q .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.

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

- d. Each month the Permittee shall create and retain a record of the number of hours (in hours/month) during the previous calendar month 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 2D .0530 and 15A NCAC 2D .0531 if these records are not created and retained.
- e. Each month the Permittee shall calculate the NO_x emissions from the flare (**ID No. MV2F**) during the previous calendar month according to the following equation:

$$E = \frac{12.5lb/hr * H}{2,000lb/ton}$$

Where:

- E = NO_x emissions (in tons/month);
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.d. above.

The Permittee shall maintain a logbook (written or in electronic format) that contains the monthly records of the emissions calculations. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 and 15A NCAC 2D .0531 if the required calculations are not created and retained as required above.

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

- f. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for months between January and June. The report shall contain the following information:
 - i. Monthly NOx emission totals for the previous 17 months;
 - ii. 12-month rolling NOx emissions 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.

C. 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 (ID No. CP-0), including process condenser (ID No. CP-0C-1), and control condenser (ID No. CP-0C-2);
 reactor (ID No. CP-1) with vent condenser (ID No. CD-A3-2-X2-CP-1);
 Pearlization reactor (ID No. CP-4) with vent condenser (ID No. CD-A3-2-X2-CP-4);
 Pearlization reactor (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 test 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:

Regulated Pollutant	Limits/Standards	Applicable Regulation
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- ii. An annual (for each 12 month period following the initial inspection) internal (if possible) 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 2D .0515 if the ductwork, bagfilters 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 and recorded in a logbook. 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 2D .0515 if these records are not created and retained, or if the scrubber is not operated within the given acceptable ranges.
- e. The results of inspection, maintenance, and parametric monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each 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 2D .0515 if these records are not maintained.

Reporting [15A NCAC 2Q .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 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 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the affected sources (**ID Nos. A3FD, A4SD, A4CA**) 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 2Q .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 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2.a. above.
 If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

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

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. Miscellaneous Storage Tanks

- 2-ethylhexyl acrylate storage tank (ID No. CP123)
- vinyl acetate storage tank (ID No. ST31)
- heptane storage tank (ID No. ST38)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	MACT Avoidance Conditions – See Multiple Emission Sources Section 2.2 A.1.	15A NCAC 2Q .0317 <i>(Avoidance of 15A NCAC 2D .1111)</i>
Volatile organic compounds	Refer to Section 2.2 A.6. RACT is no additional control	15A NCAC 2D .0951 (VOC RACT)
Volatile organic compounds	Work Practice Standards – See Multiple Emission Sources Section 2.2 A.2.	15A NCAC 2D .0958
Odors	State-enforceable only Requirements for Odor Control – See Multiple Emissions Sources Section 2.2 A.3.	15A NCAC 2D .1806
Toxic air pollutants	State-enforceable only Control of Toxic Air pollutants – See Multiple Emissions Sources Section 2.2 A.4.	15A NCAC 2D .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 – See Multiple Emissions Sources Section 2.2 A.5.	15A NCAC 2Q .0711

E. Area I

- 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 III

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:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Sources: ID Nos. B2, B3, B4, B5, B6 and ES-A3-2-B7 0.528 pounds per million Btu heat input	15A NCAC 2D .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 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .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 2D .0524 (40 CFR 60, Subpart Dc)
Hazardous Air Pollutants	Work Practices	15A NCAC 2D .1111 40 CFR Part 63, Subpart JJJJJ
Hazardous Air Pollutants	MACT Avoidance Conditions – See Multiple Emission Sources Section 2.2 A.1.	15A NCAC 2Q .0317 (Avoidance of 15A NCAC 2D .1111)

1. 15A NCAC 2D .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 0.528 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 2Q .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 Section 2.1 E.1.a. or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .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.

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

- a. Emissions of sulfur dioxide from these boilers (**ID Nos. B2, B3, B4, B5, B6, ES-A3-B7, and B8**) 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 2Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. 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 2D .0516.

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

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from natural gas and No. 2 fuel oil for these sources.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the boilers (**ID Nos. B2, B3, B4, B5, B6, ES-A3-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 2Q .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 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of natural gas/No. 2 fuel oil.

4. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Dc

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions."

Emission Limitations [15A NCAC 2D .0524]

- b. The maximum sulfur content of any fuel oil received and burned in the affected boilers (**ID Nos. ES-A3-2-B7 and B8**) shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]

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

- c. The Permittee shall retain a copy of the fuel supplier certification for any No. 2 fuel oil fired at the affected boilers (**ID Nos. ES-A3-2-B7 and B8**). The fuel supplier certification shall include the following information:
 - i. The name of the oil supplier;
 - ii. The sulfur content of the oil (in % by weight); and,
 - iii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the sulfur content of the oil exceeds the limit provided in Section 2.1 E.4.b of this permit or if fuel supplier certifications are not retained as described above. [40 CFR 60.46c(d), 40 CFR 60.48c(f)]

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

- d. Each calendar month, the Permittee shall record the total quantity of each fuel fired in the affected boilers (**ID Nos. ES-A3-2-B7 and B8**) during the previous calendar month. The Permittee shall be deemed in non-compliance with 15A NCAC 2D .0524 if it fails to create and retain the required record. [40 CFR 60.48c(g)(2)]

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

- e. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to provide a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate fuel oil fired, by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The summary report shall include the following information:
 - i. Fuel supplier certification(s) for distillate fuel oil, as provided in Section 2.1 E.4.c. of this permit;
 - ii. A certified statement signed by the owner or operator that the records of fuel supplier certification(s) submitted represents all of the fuel fired at the affected boiler during the semiannual period; and,

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

5. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart JJJJJJ “National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources”

Compliance Date [40 CFR §63.1196]

- a. The Permittee shall comply with the work practices in 40 CFR Part 63, Subpart JJJJJJ for existing boilers (**ID Nos. B2, B3, B4, B5, B6, ES-A3-B7, and B8**) located at an area source of hazardous air pollutant emissions beginning by the day, on or after March 21, 2012, fuel oil is first fired in the boiler; except, compliance with the work practices is not required for boilers firing natural gas and combusting fuel oil only during periods of gas curtailment, gas supply emergencies, or liquid fuel testing, as defined by 40 CFR Part 63, Subpart JJJJJJ.

Work Practices [40 CFR §63.11223]

- b. The Permittee shall tune-up the boilers (**ID Nos. B2, B3, B4, B5, B6, ES-A3-B7, and B8**) by the compliance date in Condition 2.1.E.5.a above. Thereafter, the Permittee shall perform a biennial tune-up of each boiler no later than 25 months after the previous tune-up. If the boiler is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.
- c. As a minimum, the Permittee shall conduct the following inspections, optimization, and measurements for each boiler during the tune-up:
 - i. Inspect the burner and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled boiler shutdown but no later than 36 months after the previous inspection.
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.
 - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available.
 - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).

Energy Assessment [40 CFR §63.11196, 63.11214]

- d. The Permittee shall complete a one-time energy assessment performed by a qualified assessor on or after January 1, 2008 and no later than March 21, 2014; except, the energy assessment is not required for boilers firing natural gas and combusting fuel oil only during periods of gas curtailment, gas supply emergencies, or liquid fuel testing, as defined by 40 CFR Part 63, Subpart JJJJJJ.
- e. After March 21, 2014, the Permittee shall perform the one-time energy assessment in accordance with the subpart prior to burning fuel oil for the first time during periods other than those times specified in 2.1.E.5.d. above.
- f. As a minimum, the energy assessment shall include:
 - i. A visual inspection of the boiler system,
 - ii. An evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints,
 - iii. Inventory of major systems consuming energy from affected boilers,
 - iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,
 - v. A list of major energy conservation measures,
 - vi. A list of energy savings potential of the energy conservation measures identified, and
 - vii. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

Recordkeeping and Reporting [40 CFR §63.9, 63.11214, 63.11223, and 63.11225]

- g. The Permittee shall prepare a Notification of Compliance Status report, signed by the responsible official, and submitted no later than 90 days after becoming subject to the work practices specified in 2.1.E.5.b and c above.

- h. The Permittee shall prepare a Notification of Compliance Status report, signed by the responsible official, and submitted after March 21, 2014 and no later than 30 days after completion of the energy assessment of each boiler and energy use system.
- i. The Permittee shall prepare biennially and submit upon request of the NC DAQ, a report containing the following information for each boiler subject to work practices:
 - i. The date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
 - ii. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler,
 - iii. A description of all corrective actions taken as a part of the tune-up of the boiler, and
 - iv. The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler.
- j. For boilers subject to work practices, the Permittee shall prepare by March 1 an annual compliance certification report for the previous calendar year containing the following information:
 - i. A description of all deviations, the time periods during which the deviations occurred, and the corrective actions taken,
 - ii. The company name and address, and
 - iii. A statement signed by the responsible official certifying the truth, accuracy and completeness of the notification and stating whether the source has complied with all the relevant standards and other requirements of this subpart.
- k. The annual compliance certification report shall be submitted to the NC DAQ by March 15 if the facility deviated from any applicable requirement during the previous calendar year or upon request by the NC DAQ.
- k. 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.

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 associated condenser (ID No. C900-X1);
 four filtrate tanks (ID Nos. V-94 through V-97);
 two reclaim tanks, one surge control vessel, and one receiver vessel (ID Nos. V-98, V-99, TK63, and DC9001) with associated condenser (ID No. V98-X1);
 five storage tanks (ID Nos. CP-900, T51, T64, T48, and S14);
 solvent recovery system (ID No. SRSF1) with associated condenser (ID No. DC9001-X2);
 one receiver vessel (ID No. DC9003) with associated condenser (ID No. DC-9003REC-X4);
 Littleford drying system (ID No. LDF-3) with associated internal fabric filter (ID No. CD-LDF3) and two condensers (ID Nos. LDF3-X1 and LDF3-X2); and
 packout station (ID No. ES-FBPO) with associated cartridge filter (ID No. CD-FBPO)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Affected Source: ID No. LDS-3 $E=4.10P^{0.67}$ Where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 2D .0515
Visible emissions	Affected Source: ID No. LDS-3 20 percent opacity	15A NCAC 2D .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 2D .0951
Volatile organic compounds	Work Practice Standards – See Multiple Emission Sources Section 2.2 A.2.	15A NCAC 2D .0958

Regulated Pollutant	Limits/Standards	Applicable Regulation
Odors	State-enforceable only Requirements for Odor Control – See Multiple Emissions Sources Section 2.2 A.3.	15A NCAC 2D .1806

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from affected source (**ID No. LDF-3 and ES-FBPO**) shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad \text{Where:} \quad \begin{array}{l} E = \text{allowable emission rate in pounds per hour} \\ P = \text{process weight in tons per hour} \end{array}$$

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

Testing [15A NCAC 2Q .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 2D .0515.

Monitoring/Recordkeeping [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 formulas contained above (or the formulas contained in 15A NCAC 02D .0515) 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.

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

- a. Visible emissions from the affected source (**ID No. LDS-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 2Q .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 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. The Permittee shall establish normal visible emissions for the emission source within 30 days of commencing operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 F.2. a. above.
 If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- i. the date and time of each recorded action;
- ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
- iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0951 MISCELLANEOUS VOLATILE ORGANIC COMPOUND EMISSIONS

- 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 the permit equipment list. 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 2Q .0508(f)]

- b. Each condenser 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. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0951 if the exit gas temperature exceeds the limit established in Section 2.1.F.3.a. above.
- 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 non compliance with 15A NCAC 2D .0951 if the above inspections and maintenance are not performed.

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

- d. Records of all monitoring, inspection, and maintenance activities 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.

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

- e. The Permittee shall submit a summary report of the temperature observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2.2- 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) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	MACT Avoidance – Section 2.2.A.1. Less than 10 tons per year of any individual HAP Less than 25 tons per year of total, combing HAP	15A NCAC 2Q .0317 (Avoidance of 15A NCAC 2D .1111)
Volatile organic compounds	RACT is no additional control – Section 2.2 A.6.	15A NCAC 2D .0951 (VOC RACT)
Volatile organic compounds	VOC work practice standards – Section 2.2 A.2.	15A NCAC 2D .0958
Odors	State-enforceable only Odorous emissions must be controlled – Section 2.2 A.3.	15A NCAC 2D .1806
Toxic air pollutants	State-enforceable only Control of Toxic Air pollutants – Section 2.2 A.4.	15A NCAC 2D .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 – See Multiple Emissions Sources Section 2.2 A.5.	15A NCAC 2Q .0711

1. 15A NCAC 2Q. 0317: AVOIDANCE CONDITION

for 15A NCAC 2D .1111: LIMITATION TO AVOID BEING MAJOR FOR HAP

- 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 year of each individual hazardous air pollutant, and
 - ii. 25 tons per year of all hazardous air pollutants combined.

Monitoring/Recordkeeping [15A NCAC 2Q .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. 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.

The results of the monthly and 12-month rolling emissions calculations shall be recorded in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the emissions calculations are not recorded as provided above, or if the 12-month rolling emissions of any HAP exceeds the limitation provided in a.i. above.
- 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). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the emissions calculations are not recorded as provided above, or if the 12-month rolling emissions of total, combined HAP exceeds the limitation provided in a.ii. above.

- 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). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the records are not maintained.

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

- e. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for 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 2D .0958: WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS

- a. Pursuant to 15A NCAC 2D .0958, 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, and whose emissions of VOC are greater than 15 pounds per day; 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 2D .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 2D .0958(d)]

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

- c. To assure compliance with paragraphs (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 2D .0958.

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

- d. The results of the inspections 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 2D .0958.

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

- e. The Permittee shall submit a summary report of the observations by 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-Only Requirement

3. 15A NCAC 2D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

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

State-Only Requirement

4. 15A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANT EMISSIONS

- a. The Permittee shall comply with 15A NCAC 2D .1100 as an "Industrial Park" comprised of Akzo Nobel SPG, LLC Unit A, Facility ID No. 8000182 (Akzo Nobel), and Indopco, Inc. dba Henkel Unit H, Facility ID No. 8000055 (Henkel).
- b. Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration at the Industrial Park perimeter, the following listed toxic air pollutants (TAPs) shall be limited to the following emission rates:

Pollutant	Emission Source	Allowable Emission Rate
Ethylene dichloride	Industrial Park-Wide	40,141.5 lbs/yr
	Akzo Nobel Area II: S5V	3,034 lbs/yr
	Akzo Nobel Area II: S1R	1,933 lbs/yr
	Akzo Nobel Area II: S6V	1,932 lbs/yr
Formaldehyde	Industrial Park-Wide	6.976 lbs/hr
	Akzo Nobel AREA I	1.276 lb/hr for each manifold
Ammonia	Akzo Nobel Area II: V-VRU1 (associated with MV1, MV2, S4V, S7V, S10V, S12V, S9V, S11V, S25V, T16V, ST46V, ST47V, ST49V, 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 lbs/hr
	Akzo Nobel Area II: MV2F (associated with MV2)	21.5 lbs/hr
	Akzo Nobel Area II: MV4, T20V	0.1 lbs/hr
	Akzo Nobel Area III: V09	15.0 lbs/hr
Ammonia	Akzo Nobel Area III: ES-EH2	0.002 lbs/hr
	Industrial Park Area III: Fugitive Sources	3.0 lbs/hr
Benzene	Industrial Park-Wide	796.26 lbs/yr
Methylene chloride	Industrial Park-Wide	10.5 lbs/hr -and- 16,000 lbs/yr

- c. To assure compliance with the ethylene dichloride emissions limitations, the following conditions apply:
- The total monthly and annual ethylene dichloride emissions from each source shall be recorded in a toxic air pollutant emissions logbook.
 - Hours of operation per calendar year quarter of the CERCLA project air stripper (**ID No. CERCLA-1**) shall be recorded in the toxic air pollutant emissions logbook.
 - 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 assure compliance with the formaldehyde emissions limitations, the Permittee shall record hourly formaldehyde emission rates from the AREA I. 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 assure 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.3.d. and e. of this permit;
 - 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.h. of this permit; and,
 - vi. No monitoring or recordkeeping is required to demonstrate compliance with the ammonia limits for Area III point sources (**ID Nos. ES-ES2 and V09**) or fugitive emissions.
- f. To assure 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.
 - i. Condenser/Coldtrap/Refrigerated Vapor Recovery Unit Requirements - TAP emissions shall be controlled as described in the permitted equipment list.
- g. 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:
 - 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. In order to indicate leakage of the coolant, the condensate shall be inspected for the presence of coolant;
 - ii. The Permittee shall conduct a bi-annual clean out of the condenser shell sides and tube sides; and
 - iii. The Permittee shall inspect and maintain the structural integrity of ductwork and piping leading to and coming from the condenser.
- h. 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.
- i. Monitoring Requirements - Each condenser 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 log once per week. The log 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	Maximum Outlet Temperature °C
CD-A1-LDF-C1a	122	50
CD-A1-LDF-C1b	122	50

Condenser ID	Maximum Outlet Temperature °F	Maximum Outlet Temperature °C
CD-A1-LDF-C2	122	50
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	122	50
CD-A3-2-X2-CP-4	122	50
CD-A3-2-X2-CP-6	122	50
CD-A3-2-X2-C-1	122	50
CD-A3-2-X3-DC5001	122	50
CD-A3-2-X3-DC5003	122	50

Reporting Requirements

- j. The Permittee shall submit a quarterly summary report of monitoring and recordkeeping activities 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 2D .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.
 If there were no deviations during the 3-month reporting period, include a statement as such.

State-Only Requirement

5. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENTS

- a. Pursuant to 15A NCAC 2Q .0711 “Emission Rates Requiring a Permit,” for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that actual emissions do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711.
 - i. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.
 - ii. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D.1100 "Control of Toxic Air Pollutants.”

In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

TPERs Limitations				
Pollutant (CAS Number)	Carcinogens (lb/yr)	Chronic Toxicants (lb/day)	Acute Systemic Toxicants (lb/hr)	Acute Irritants (lb/hr)

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		
Sulfuric Acid (7664-93-9)		0.25	0.025	
Toluene (108-88-3)		98		14.4
Xylene (1330-20-7)		57		16.4

6. 15A NCAC 2D .0951 MISCELLANEOUS VOLATILE ORGANIC COMPOUND EMISSIONS

- a. This Rule applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds for which there is no other applicable emissions control rule in 15A NCAC 2D .0900 except 15A NCAC 2D .0958 [15A NCAC 2D .0951(a)].
 - i. The owner or operator of any facility to which 15A NCAC 2D .0951 applies shall install and operate reasonably available control technology. The Division has determined that RACT is no additional control.

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

- b. No monitoring recordkeeping or reporting is required.

SECTION 3 - GENERAL CONDITIONS (version 3.5 08/15/11)

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

A. General Provisions [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
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 2Q .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 and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.

C. Severability Clause [15A NCAC 2Q .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 2Q .0507(e) and 2Q .0508(i)(16)]

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

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

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

E. Duty to Comply [15A NCAC 2Q .0508(i)(2)]

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. Permit Modifications

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

H. Changes Not Requiring Permit Modifications

1. Reporting Requirements
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 2Q .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 2Q .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 2Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

“**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 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.*)

“**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.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
 - a. Pursuant to 15A NCAC 2D .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 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 quarterly. 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.B. Other Requirements under 15A NCAC 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .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 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

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

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

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

error.

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

K. **Permit Renewal** [15A NCAC 2Q .0508(e) and 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 2Q .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 2Q .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 2Q .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 2Q .0508(f) and 2Q .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 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. 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; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .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 2Q .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 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .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 2Q .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 2Q .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 2Q .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 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. 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 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 2Q .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 2Q .0107 and 2Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .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 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .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 2Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .0507(d)(4)]

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 2Q .0501(e)]

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 2Q .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. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) -**
FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount

of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 2Q .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 2D .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 2D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 2D .0200]

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 2D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 2D .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 2D .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 2Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 2D.

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 2D .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:
 - (1) 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.
 - (2) Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - (3) Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a

rule in this Subchapter 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 Section 2D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 2Q .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 2Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .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 2Q .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 2Q .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. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .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 2D .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 2Q.0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(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 2Q .0501(d)(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 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

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 2Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environment Protection Agency (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 2Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound