ROY COOPER
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MARY PENNY KELLEY
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

March 13, 2025

Mr. Scott McIntyre
Site Director
Avient Protective Materials LLC
5750 Martin Luther King Jr. Highway
Greenville, North Carolina 27834-8928

SUBJECT: Air Quality Permit No. 05754T103
Facility ID: 7400021
Avient Protective Materials LLC
Greenville
Pitt County
Fee Class: Title V
PSD Class: Major

Dear Mr. McIntyre:

In accordance with your completed Air Quality Permit Application for a minor modification of your Title V permit, we are forwarding herewith Air Quality Permit No. 05754T103 authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

These emission sources (ID Nos. RMS-1 and PrePreg-1) are listed as a minor modification per 15A NCAC 02Q .0515. The annual compliance certification as described in General Condition P is required. Unless otherwise notified by DAQ, the affected terms of this permit (excluding the permit shield as described General Condition R) for these emission sources shall become final on May 12, 2025. Until this date, the affected permit terms herein reflect the proposed operating language that the Permittee shall operate these emission source under pursuant to 15A NCAC 02Q .0515(f).

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to file a petition for contested case hearing in the North Carolina Office of Administrative Hearings. Information regarding the right, procedure, and time limit for permittees and other

persons aggrieved to file such a petition is contained in the attached "Notice Regarding the Right to Contest A Division of Air Quality Permit Decision."

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

Pitt County has triggered increment tracking under PSD for NO_x. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from March 13, 2025 until June 30, 2029 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 Jacob Larson at (919) 707-8407 or Jacob.larson@deq.nc.gov.

Sincerely yours,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Laserfiche [7400021]
Connie Horne (cover letter only)

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

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

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

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

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

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

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

* * *

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

Summary of Changes to Permit

The following changes were made to Air Permit No. 05754T103:*

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

Page No.	Section	Description of Changes
--	Cover page and throughout permit	• Updated all dates and permit revision numbers.
4-6	Permitted Emissions Table	• Added RMS-1 and PrePreg-1 to emission source table.
29	2.1 D	• Added NCAC 02D .0515 condition for sources RMS-1 and PrePreg-1 • Added NCAC 02D .0521 condition for sources RMS-1 and PrePreg-1 • Added 40 CFR Part 60 subpart VVV condition for sources RMS-1 and PrePreg-1

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
05754T103	05754T102	May 12, 2025	June 30, 2029

NOTE: Per General Condition K, a permit application for the renewal of this Title V permit shall be submitted no later than December 31, 2028..

*The effective date listed above applies only to changes made as a result of this modification. All other terms and conditions of this permit are applicable as of the issuance date.

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

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

Permittee:	**Avient Protective Materials LLC**
Facility ID:	**7400021**
SIC Code:	**2824/Organic Fibers, Non-cellulosic**
NAICS Code:	**325222/Non-cellulosic Organic Fiber Manufacturing**
Facility Site Location:	**5750 Martin Luther King Jr. Highway**
City, County, State, Zip:	**Greenville, Pitt, NC 27834-8928**
Mailing Address:	**5750 Martin Luther King Jr. Highway**
City, State, Zip:	**Greenville, NC 27834-8928**
Application Number(s):	**7400021.23B**
Complete Application Date(s):	**02/24/2023**
Division of Air Quality, Regional Office Address:	**Washington Regional Office 943 Washington Square Mall Washington, NC 27889**

Permit issued this the 13th day of March, 2025.

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

Table of Contents

List of Acronyms

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

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Avient Protective Materials LLC - Line No. 1 (ID No. DAP1) - Polyethylene Fiber Production			
F0951 **PSD**	natural gas/No. 2 fuel oil-fired process heater with heat exchangers (6.1 million Btu per hour heat input)	NA	NA
HWH1 **PSD**	natural gas/No. 2 fuel oil-fired hot water heater (8.1 million Btu per hour heat input)	NA	NA
V1114 **NSPS HHH** **PSD**	suspension make-up tank (Solvent introduction)	S1114	dust collector (66 square feet of filter area)
V1115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V1116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
1211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system (EFK1961)	S0936	two parallel VOC concentrators - adsorption cycle
V1301 and V1302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system (EFK1961)		
B1401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system (EFK1961)		
F1401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK1961) and two solvent reclaim condensers with vent to atmosphere (S1412)		
RSS1 **NSPS HHH** **PSD**	recycle solvent separator and super separator with localized exhaust hood capture system (EFK1961)		
F1501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP5, final drying oven ‘slip stream’ exhaust (VB03 1845)	NA	NA
F1701 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP6, final drying oven ‘slip stream’ exhaust (VB03 1845)	NA	NA
GBL1-1 **NSPS HHH** **PSD**	Line No. 1 General Building Exhaust (AHU3) for general fugitive VOC emissions from miscellaneous sources	NA	NA
GBL1-2 **NSPS HHH** **PSD**	Line No. 1 General Building Exhausts (EFP1, EFP2, EFP3, EFP4, EFP9, EFK0911, EFP5A, and F1) for general fugitive VOC emissions from miscellaneous sources	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
SWS1 **NSPS HHH** **PSD**	solvent water separator	NA	NA
V1415 **PSD**	PDY waste box	NA	NA
Avient Protective Materials LLC - Line No. 2 (ID No. DAP2) - Polyethylene Fiber Production			
F0952 **PSD**	natural gas/No. 2 fuel oil-fired process heater with heat exchangers (5.8 million Btu per hour heat input)	NA	NA
HWH2 **PSD**	natural gas/No. 2 fuel oil-fired hot water heater (6.1 million Btu per hour heat input)	NA	NA
V2114 **NSPS HHH** **PSD**	suspension make-up tank (Solvent introduction)	S2114	dust collector (66 square feet of filter area)
V2115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V2116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
2211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system EFK2961	S0936	two parallel VOC concentrators - adsorption cycle
V2301 and V2302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system EFK2961		
B2401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system EFK2961		
F2401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK2961) and two solvent reclaim condensers with vent to atmosphere (S2412)		
RSS2 **NSPS HHH** **PSD**	recycle solvent separator and super separator with localized exhaust hood capture system EFK2961		
F2501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP14, Final drying oven ‘slip stream’ exhaust (S2503)	NA	NA
F2701 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP16, Final drying oven ‘slip stream’ exhaust (S2703)	NA	NA
F2601 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP15, Final drying oven ‘slip stream’ exhaust (S2603)	NA	NA
F2801 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP17, Final drying oven ‘slip stream’ exhaust (S2803)	NA	NA
GBL2-1	Line No. 2 General Building Exhaust	S0937	VOC concentrator with 2.9 million

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
NSPS HHH **PSD**	(AHU7) for general fugitive VOC emissions from miscellaneous sources		Btu per hour heat input air heater for adsorption cycle
GBL2-2 **NSPS HHH** **PSD**	Line No. 2 General Building Exhausts (EFP10, EFP11, EFP12, EFP13, EFP18, K2503, K2603, K2703, K2803, F3, F4, F5, and F6) for general fugitive VOC emissions from miscellaneous sources	NA	NA
SWS2 **NSPS HHH** **PSD**	solvent water separator	NA	NA
V2415 **PSD**	PDY waste box	NA	NA
Avient Protective Materials LLC - Line No. 3 (ID No. DAP3) - Polyethylene Fiber Production			
F0953 **PSD**	natural gas/No. 2 fuel oil-fired hot oil process heater with heat exchangers (5.6 million Btu per hour heat input)	NA	NA
HWH3 **PSD**	natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input)	NA	NA
V3114 **NSPS HHH** **PSD**	suspension make-up tank (Solvent introduction)	S3114	dust collector (66 square feet of filter area)
V3115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V3116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
3211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system EFK3961	S0936	two parallel VOC concentrators - adsorption cycle
V3301 and V3302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system EFK3961		
B3401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system EFK3961		
F3401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK3961) and two solvent reclaim condensers with vent to atmosphere (S3412)		
RSS3 **NSPS HHH** **PSD**	recycle solvent separator and super separator with localized exhaust hood capture system EFK3961		
F3501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP25, Final drying oven ‘slip stream’ exhaust (S3503)	NA	NA
F3701 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system EFP26, Final drying oven ‘slip stream’ exhaust (S3703)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
GBL3-1 **NSPS HHH** **PSD**	Line No. 3 General Building Exhaust (AHU10) for general fugitive VOC emissions from miscellaneous sources	S0937	VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle
GBL3-2 **NSPS HHH** **PSD**	Line No. 3 General Building Exhausts (EFP21, EFP22, EFP23, EFP24, EFP25, EFP26, EFP27, F7, and F8) for general fugitive VOC emissions from miscellaneous sources	NA	NA
SWS3 **NSPS HHH** **PSD**	solvent water separator	NA	NA
V3415 **PSD**	PDY waste box	NA	NA
Avient Protective Materials LLC - Line No. 4 (ID No. DAP4) - Polyethylene Fiber Production			
F0954 **PSD**	natural gas/No. 2 fuel oil-fired hot oil process heater with heat exchangers (5.7 million Btu per hour heat input)	NA	NA
HWH4 **PSD**	natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input)	NA	NA
V4114 **NSPS HHH** **PSD**	suspension make-up tank (Solvent introduction)	S4114	dust collector (66 square feet of filter area)
V4115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V4116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
4211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system EFK4961	S0961	two parallel VOC concentrators - adsorption cycle
V4301 and V4302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system EFK4961		
B4401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system EFK4961		
F4401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK4961) and two solvent reclaim condensers with vent to atmosphere (S4412)		
RSS4 **NSPS HHH** **PSD**	recycle solvent separator and super separator with localized exhaust hood capture system EFK4961		
F4501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system K-4503, Final drying oven ‘slip stream’ exhaust	NA	NA
F4601 **NSPS HHH**	final drying oven with localized exhaust hood capture system K-4603, Final drying	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
PSD	oven 'slip stream' exhaust		
F4701 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system K-4703, Final drying oven 'slip stream' exhaust	NA	NA
GBL4-1 **NSPS HHH** **PSD**	Line No. 4 General Building Exhaust (EFP37) for general fugitive VOC emissions from miscellaneous sources	S0961	two parallel VOC concentrators - adsorption cycle
GBL4-2 **NSPS HHH** **PSD**	Line No. 4 General Building Exhausts (EFP30, EFP31, EFP32, EFP33, EFP34, EFP4503, EFP4603, EFP4703, EFK012, F9, F10, and F11) for general fugitive VOC emissions from miscellaneous sources	NA	NA
SWS4 **NSPS HHH** **PSD**	solvent water separator	NA	NA
V4415 **PSD**	PDY waste box	NA	NA
Avient Protective Materials LLC - Line No. 5 (ID No. DAP5) - Polyethylene Fiber Production			
F0955 **PSD**	natural gas/No. 2 fuel oil-fired hot oil process heater with heat exchangers (4.7 million Btu per hour heat input)	NA	NA
HWH5 **PSD**	natural gas/No. 2 fuel oil-fired hot water heater (6.0 million Btu per hour heat input)	NA	NA
V5114 **NSPS HHH** **PSD**	suspension make-up tank	S5114	dust collector (66 square feet of filter area)
V5115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V5116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
5211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system EFK5961	S0961	two parallel VOC concentrators - adsorption cycle
V5301 and V5302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system EFK5961		
B5401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system EFK5961		
F5401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation with localized exhaust hood capture system (EFK5961) and two solvent reclaim condensers with vent to atmosphere (S5412)		
RSS5 **NSPS HHH** **PSD**	recycle solvent separator and super separator with localized exhaust hood capture system EFK5961		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
F5501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system K-5501, Final drying oven 'slip stream' exhaust	NA	NA
F5701 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system K-5703, Final drying oven 'slip stream' exhaust	NA	NA
GBL5-1 **NSPS HHH** **PSD**	Line No. 5 General Building Exhaust (EFP45) for general fugitive VOC emissions from miscellaneous sources	S0961	two parallel VOC concentrators - adsorption cycle
GBL5-2 **NSPS HHH** **PSD**	Line No. 5 General Building Exhausts (EFP38, EFP39, EFP40, EFP41, EFP42, EFP5503, EFP5703, F12, and F13) for general fugitive VOC emissions from miscellaneous sources	NA	NA
SWS5 **NSPS HHH** **PSD**	one (1) solvent water separator	NA	NA
V5415 **PSD**	one (1) PDY waste box	NA	NA
Avient Protective Materials LLC - Line No. 6 (ID No. DAP6) - Polyethylene Fiber Production			
F0956 **PSD**	natural gas/No. 2 fuel oil-fired hot oil process boiler/furnace (4.7 million Btu per hour heat input) equipped with a low NOx burner	NA	NA
HWH6-A, HWH6-B, and HWH6-C **PSD**	three (3) natural gas/No. 2 fuel oil-fired hot water heaters (1.75 million Btu per hour heat input each) equipped with low NOx burners	NA	NA
V6114 **NSPS HHH** **PSD**	suspension make-up tank (Solvent introduction)	S6114	dust collector (66 square feet of filter area)
V6115 **NSPS HHH** **PSD**	suspension mixing vessel	NA	NA
V6116 **NSPS HHH** **PSD**	suspension supply vessel	NA	NA
6211 **NSPS HHH** **PSD**	extruder with localized exhaust hood capture system EFK6961	S0970	VOC concentrator - adsorption cycle
V6301 and V6302 **NSPS HHH** **PSD**	two (2) quench baths with localized exhaust hood capture system EFK6961		
B6401 **NSPS HHH** **PSD**	UDY box with localized exhaust hood capture system EFK6961		
F6401 **NSPS HHH** **PSD**	primary drying oven with internal inert atmosphere (nitrogen) recirculation and two solvent reclaim condensers with a localized exhaust hood capture system (EFK6961)		
RSS6	recycle solvent separator and super		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
NSPS HHH **PSD**	separator with localized exhaust hood capture system EFK6961		
F6501 **NSPS HHH** **PSD**	final drying oven with localized exhaust hood capture system K-6501, Final drying oven 'slip stream' exhaust	NA	NA
GBL6-1 **NSPS HHH** **PSD**	Line No. 6 General Building Exhausts (EFK6961) for fugitive VOC emissions from miscellaneous sources	NA	NA
GBL6-2 **NSPS HHH** **PSD**	Line No. 6 General Building Exhausts (EFP46, EFP47, EFP50, EFP6503, S6503 and F14) for fugitive VOC emissions from miscellaneous sources	NA	NA
SWS6 **NSPS HHH** **PSD**	solvent water separator	NA	NA
V6415 **PSD**	PDY waste box	NA	NA
Avient Protective Materials LLC (ID No. DAP) - Polyethylene Fiber Production Area (Common Area to DAP Lines)			
S0936 **NSPS HHH** **PSD**	two parallel VOC concentrators - adsorption cycle (DAP 1-3)	F0935	natural gas fired regenerative thermal oxidizer; 4.5 million Btu heat input
S0937 **NSPS HHH** **PSD**	VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (DAP 2-3)		
S0961 **NSPS HHH** **PSD**	two parallel VOC concentrators - adsorption cycle (DAP 4-5)	F0962	natural gas fired regenerative thermal oxidizer; 4.5 million Btu heat input
S0970 **NSPS HHH** **PSD**	VOC concentrator - adsorption cycle (DAP 6)	F0970	natural gas fired regenerative thermal oxidizer; 2.1 million Btu heat input
T0901 **NSPS HHH** **PSD**	solvent tank; 52,834 gallons (DAP 1-3)	NA	NA
T0902 **NSPS HHH** **PSD**	solvent tank; 37,509 gallons (DAP 1-3)	NA	NA
T0905 **NSPS HHH** **PSD**	solvent tank; 133,646 gallons (DAP 4-6)	NA	NA
T0906 **NSPS HHH** **PSD**	solvent tank; 101,148 gallons (DAP 4-6)	NA	NA
UDYTL 1-3 **NSPS HHH** **PSD**	Un-Drawn Yarn tote loading (DAP 1-3)	NA	NA
UDYTL 4-6 **NSPS HHH** **PSD**	Un-Drawn Yarn tote loading (DAP 4-6)	NA	NA
C-0901 **NSPS HHH**	Solvent Recovery System including a reboiler (H-0977), sidestream second condenser (H-0976), and top condenser (H-0978)	NA	NA

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Building Number 12, Fiber Processing & Sheet Assembly (ID No. B12)			
FL-2, FL-3, FL-5, FL-6, and FL-7 **PSD**	Five (5) fiber lines (4,480 pounds per day each), including exhaust fans for fiber creels, fiber impregnator, crossply machine, laminator, printer, and drum storage	NA	NA
SAU-01	One sheet assembly unit, including unwinders, assembly unit, laminating belt winders, press, and printer	NA	NA
Small-Scale Manufacturing Line			
MAP-1	One Small Scale Fiber Manufacturing Line, including four PE vessels (V-1101, V-1112, V-1113, and V-1114) and two solvent storage tanks (T-1 & T-2)	S-1101 S-P1010	Bagfilter (194 square feet of filter area) Bagfilter (0.61 square feet of filter area)
Polyethylene Sheet (PES) Manufacturing Line			
PES-1	PES Manufacturing Line No. 1, including Storage Silo, Feed Silo, Separator, and Aspirator Vent	S-01102 S-01121 S-01125 V-01129	Bagfilter (194 square feet of filter area) Bagfilter (29.1 square feet of filter area) Bagfilter (29.1 square feet of filter area) Bagfilter (248 square feet of filter area)
Fiber Impregnation Line 1			
RMS-1** **NSPS VVV**	Resin Mixing Station Line 1	NA	NA
PrePreg-1** **NSPS VVV**	Pre-Impregnation Line 1, including Yarn Feeder, Resin Hopper, Electric Oven, and Fume Hood	NA	NA

** Pursuant to application 7400021.24A these emission sources **(ID Nos. RMS-1 and PrePreg-1)** are listed as a minor modification per 15A NCAC 02Q .0515. The annual compliance certification as described in General Condition P is required. Unless otherwise notified by DAQ, the affected terms of this permit (excluding the permit shield as described General Condition R) for these emission sources shall become final on May 12, 2025. Until this date, the affected permit terms herein reflect the proposed operating language that the Permittee shall operate these emission sources pursuant to 15A NCAC 02Q .0515(f).

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

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

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

A. Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 1 (ID No. DAP1)

natural gas/No. 2 fuel oil-fired process heater with heat exchanger (6.1 million Btu per hour heat input) (ID No. F0951).
natural gas/No. 2 fuel oil-fired hot water heater (8.1 million Btu per hour heat input) (ID No. HWH1)
suspension make-up vessel (ID No. V1114) with fabric filter with 66 square feet of fabric filter (ID No. S1114).
suspension mixing vessel (ID No. V1115)
suspension supply vessel (ID No. V1116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V1301 and V1302),
UDY box (ID No. B1401),
primary drying oven (ID No. F1401), and
recycle solvent separator and super-separator (ID No. RSS1).
final drying oven (ID No. F1501).
final drying oven (ID No. F1701).
general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID Nos. GBL1-1 (AHU3) and GBL1-2).
solvent water separator (ID No. SWS1)
PDY waste box (ID No. V1415).

Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 2 (ID No. DAP2)

natural gas/No. 2 fuel oil-fired process heater with heat exchanger (5.8 million Btu per hour heat input) (ID No. F0952)
natural gas/No. 2 fuel oil-fired hot water heater (6.1 million Btu per hour heat input) (ID No. HWH)
suspension make-up vessel (ID No. V2114) with fabric filter with 66 square feet of fabric filter (ID No. S2114)
suspension mixing vessel (ID No. V2115)
suspension supply vessel (ID No. V2116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V2301 and V2302),
UDY box (ID No. B2401),
primary drying oven (ID No. F2401), and
recycle solvent separator and super-separator (ID No. RSS2).
final drying oven (ID No. F2501).
final drying oven (ID No. F2701).
final drying oven (ID No. F2601).
final drying oven (ID No. F2801).
vapor collection system, which vents to a VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (ID No. S0937)[1], which vents to a regenerative thermal oxidizer (ID No. F0935), for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL2-1).
[1] *During the absorption cycle this concentrator vents to the atmosphere. The concentrator vent is equipped with a CERMS to track emissions during these periods.*
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL2-2).
solvent water separator (ID No. SWS2)
PDY waste box (ID No. V2415).

Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 3 (ID No. DAP3)

natural gas/No. 2 fuel oil-fired process heater with heat exchanger (5.6 million Btu per hour heat input) (ID No. F0953)
natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input) (ID No. HWH3)
suspension make-up vessel (ID No. V3114) with fabric filter with 66 square feet of fabric filter (ID No. S3114)
suspension mixing vessel (ID No. V3115)
suspension supply vessel (ID No. V3116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0936), which vent to a regenerative thermal oxidizer (ID No. F0935) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V3301 and V3302),
UDY box (ID No. B3401),
primary drying oven (ID No. F3401), and
recycle solvent separator and super-separator (ID No. RSS3).
final drying oven (ID No. F3501).
final drying oven (ID No. F3701).
vapor collection system, which vents to a VOC concentrator with 2.9 million Btu per hour heat input air heater for adsorption cycle (ID No. S0937), which vents to a regenerative thermal oxidizer (ID No. F0935), for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL3-1).
[!] *During the absorption cycle this concentrator vents to the atmosphere. The concentrator vent is equipped with a CERMS to track emissions during these periods.*
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL3-2).
solvent water separator (ID No. SWS3)
PDY waste box (ID No. V3415).

Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 4 (ID No. DAP4)

natural gas/No. 2 fuel oil-fired process heater with heat exchanger (5.7 million Btu per hour heat input) (ID No. F0954)
natural gas/No. 2 fuel oil-fired hot water heater (7.9 million Btu per hour heat input) (ID No. HWH4)
suspension make-up vessel (ID No. V4114) with fabric filter with 66 square feet of fabric filter (ID No. S4114)
suspension mixing vessel (ID No. V4115)
suspension supply vessel (ID No. V4116)
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer (ID No. F0962) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V4301 and V4302),
UDY box (ID No. B4401),
primary drying oven (ID No. F4401), and
recycle solvent separator and super-separator (ID No. RSS4).
final drying oven (ID No. F4501).
final drying oven (ID No. F4601).
final drying oven (ID No. F4701).
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer rated at 4.5 million Btu per hour heat input (ID No. F0962) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL4-1).
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL4-2).
solvent water separator (ID No. SWS4)
PDY waste box (ID No. V4415).

Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 5 (ID No. DAP5)

natural gas/No. 2 fuel oil-fired process heater with heat exchanger (4.7 million Btu per hour heat input) (ID No. F0955)
natural gas/No. 2 fuel oil-fired hot water heater (6.0 million Btu per hour heat input) (ID No. HWH5)
suspension make-up vessel (ID No. V5114) with fabric filter with 66 square feet of fabric filter (ID No. S5114)
suspension mixing vessel (ID Nos. V5115)

suspension supply vessel (ID No. V5116)
two quench baths (ID Nos. V5301 and V5302),
UDY box (ID No. B5401),
primary drying oven (ID No. F5401), and
recycle solvent separator and super-separator (ID No. RSS5).
final drying oven (ID No. F5501).
final drying oven (ID No. F5701).
vapor collection system, which vents to two parallel VOC adsorption concentrators (ID No. S0961), which vent to a regenerative thermal oxidizer rated at 4.5 million Btu per hour heat input (ID No. F0962) or to the oxidizer stack during the absorption cycle, for general building exhaust for general fugitive VOC emissions from miscellaneous sources (ID No. GBL5-1).
general building exhausts for general fugitive VOC emissions from miscellaneous sources (ID No. GBL5-2).
solvent water separator (ID No. SWS5)
PDY waste box (ID No. V5415).

Avient Protective Materials LLC - Polyethylene Fiber Production Line No. 6 (ID No. DAP6)

natural gas/No. 2 fuel oil-fired process boiler/furnace (4.7 million Btu per hour heat input) (ID No. F0956)
three (3) natural gas/No. 2 fuel oil-fired hot water heater (1.75 million Btu per hour heat input each) (ID No. HWH6-A, HWH6-B, and HWH6-C)
suspension make-up vessel (ID No. V6114) with fabric filter with 66 square feet of fabric filter (ID No. S6114)
suspension mixing vessel (ID No. V6115)
suspension supply vessel (ID No. V6116)
vapor collection system, which vents to VOC adsorption concentrator (ID No. S0970), which vents to a regenerative thermal oxidizer rated at 2.1 million Btu per hour heat input (ID No. F0970) or to the oxidizer stack during the absorption cycle, on:
two quench baths (ID Nos. V6301A and V6302A),
UDY box (ID No. B6401),
primary drying oven (ID Nos. F6401), and,
recycle solvent separator and super-separator (ID Nos. RSS6).
final drying oven (ID No. F6501)
general building exhausts for general fugitive VOC emissions from misc. DAP 6 sources (ID No. GBL6-1).
general building exhausts for general fugitive VOC emissions from misc. DAP 6 sources (ID No. GBL6-2).
solvent water separators (ID Nos. SWS6)
PDY waste box (ID No. V6415).

Avient Protective Materials LLC - Polyethylene Fiber Production Area

Two (2) virgin solvent tanks (ID Nos. T0901 and T0905).
Two (2) contaminated solvent tank (ID Nos. T0902 and T0906).
Two (2) UDY tote loading operations (ID Nos. UDYTL 1-3 and UDYTL 4-6).
Solvent Recovery System (ID No. C-0901)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	**Affected Sources: Process and Hot Water Heaters** Particulate emissions shall not exceed 0.31 pounds per million Btu heat input or 0.22 pounds per million Btu heat input, as specified below	15A NCAC 02D .0503
Sulfur Dioxide	**Affected Sources: Process and Hot Water Heaters** Sulfur dioxide emissions shall not exceed 2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
Volatile Organic Compounds	Volatile organic compounds emissions shall not exceed 34 pounds per ton of solvent used.	15A NCAC 02D .0524 40 CFR 60, Subpart HHH
Volatile Organic Compounds	BACT: Volatile organic compounds emissions shall not exceed 12 pounds per ton of solvent used.	15A NCAC 02D .0530

Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Use of Projected Actual Emissions to Avoid Applicability of PSD Requirements.	15A NCAC 02D .0530(u)
Nitrogen Oxides	**Affected Sources: Combustion Sources** See Section 2.2 A.1 PSD **Avoidance**	15A NCAC 02Q .0317 (for 15A NCAC 02D .0530)
Sulfur Dioxide	**Affected Sources: Combustion Sources** See Section 2.2 A.2 PSD **Avoidance**	15A NCAC 02Q .0317 (for 15A NCAC 02D .0530)
Hazardous Air Pollutants	MACT Avoidance Limitations See Section 2.2 B.1	15A NCAC 02Q .0317 (for 15A NCAC 02D .1111)

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

a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from these sources into the atmosphere shall not exceed the following limitations:
   i. Process heaters **(ID Nos. F0951, F0952, F0953, F0954, and F0955)** shall not exceed 0.31 pounds per million Btu heat input; and
   ii. Process and hot water heaters **(ID Nos. F0956, HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B and HWH6-C)** shall not exceed 0.22 pounds per million Btu heat input.

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

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

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

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas and No. 2 fuel oil in these sources.

2. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from the bagfilters **(ID Nos. S1114, S2114, S3114, S4114, S5114, and S6114)** shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67}$$ Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from the listed emission sources shall be controlled by the fabric filters. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
   ii. An annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters/HEPA filters 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 bagfilters; and
iv. Any variance from manufacturer's recommendations, if any, and corrections made.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 A.2.c and d above postmarked on or delivered on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from any source of combustion, including process heaters and hot water heaters, shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.a. above the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from natural gas and No. 2 fuel oil combusted in these sources.

4. 15A NCAC 02D .0521: Control of Visible Emissions

a. Visible emissions from each emission source/point venting to the atmosphere, as listed below, 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.
   i. Process heaters **(ID Nos. F0951 through F0956)**,
   ii. Hot water heaters **(ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B and HWH6-C)**,
   iii. Concentrators **(ID Nos. S0936, S0937, S0961, S0970)**,
   iv. Regenerative Thermal Oxidizers **(ID Nos. F0935, F0962 and F0970)**,
   v. Uncontrolled general building exhaust points **(ID Nos. GBL1-1, GBL1-2, GBL2-2, GBL3-2, GBL4-2, GBL5-2, and GBL6-2)**, and
   vi. Bagfilters **(ID Nos. S1114, S2114, S3114, S4114, S5114, and S6114)**.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring/recordkeeping/reporting is required for the combustion of natural gas, No. 2 fuel oil, or VOC emission at the process heaters, hot water heaters, concentrators or regenerative thermal oxidizers listed in Sections 2.1 A.4.a.i through 2.1 A.4.a.iv above.
d. No monitoring/recordkeeping/reporting is required for the evaporative losses from the uncontrolled general building exhaust points listed in Section 2.1 A.4.a.v above.
e. No monitoring/recordkeeping/reporting is required for the bagfilters listed in 2.1 A.4.a.vi above.

5. 15A NCAC 02D .0524, NEW SOURCE PERFORMANCE STANDARDS

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

a. The Permittee shall comply with all applicable provisions, including the notification requirements contained in 15A

NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart HHH, including Subpart A "General Provisions." In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:

i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than 30 days after such date; and
ii. The actual date of initial start-up of an affected facility, postmarked within 15 days after such date.

b. The Permittee shall not discharge into the atmosphere VOC emissions that exceed 17 kg/Mg (34 lb/ton) solvent feed from any affected fiber manufacturing line **(ID Nos. DAP1 through DAP6)**. Compliance with the emission limitations is determined on a 6-month rolling average basis. [40 CFR 60.602]

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

c. The Permittee shall test, monitor, and record the VOC emissions from the fiber manufacturing lines as provided in Section 2.1 A.6.b through 2.1 A.6.p below, except as follows:
   i. Estimate the monthly emissions from the solvent recovery system **(ID No. C-0901)**.
   ii. Monthly emissions from the solvent recovery system shall be distributed among the DAP lines **(ID Nos. DAP1 through DAP6)** by multiplying the total emissions by the ratio of the amount of solvent used in the line over the total amount of solvent used in the fiber production area. Solvent usage rates shall be estimated in accordance with Section 2.1 D.6.d below.
   iii. Add the solvent recovery system emissions to the monthly and 6-month average emissions calculations for each DAP line, as described Section 2.1 D.6.h through 2.1 D.6.m below.

   The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0524 if it fails to comply with the required testing/monitoring/recordkeeping requirements, or if the calculated 6-month average VOC emission rate calculated pursuant to subsection 2.1 A.5.c.iii above exceeds the limit pursuant to Section 2.1 A.5.b of this permit.

6. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In accordance with the Best Available Control Technology (BACT) determination required pursuant to 15A NCAC 02D .0530, the 6-month average VOC emission rate from each of the fiber manufacturing lines **(ID Nos. DAP1 through DAP6)**, including emissions from the solvent tanks and undrawn yarn (UDY) tote loading operations, shall not exceed 12 pounds per ton of solvent feed (lbs/ton solvent) on a calendar month basis.
   i. RTO **(F-0935)** for DAPs 1-3 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator **(S-0936)** is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC .02D .0535(f)/02Q .0505(f)(2)).
   ii. RTO **(F-0962)** for DAPs 4-5 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator **(S-0961)** is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC .02D .0535(f)/02Q .0505(f)(2)).
   iii. RTO **(F-0972)** for DAP 6 can be shut down for troubleshooting and maintenance, as long as the associated VOC concentrator **(S-0970)** is online and collecting VOC emissions. The RTO can only remain down up to the point of breakthrough on the VOC concentrator, at which point the RTO will either resume normal operation, the production line be stopped, or the Permittee will follow the permit guidance for excess emissions and permit deviations (15A NCAC .02D .0535(f)/02Q .0505(f)(2)).

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

b. The Permittee shall conduct emissions stack tests on each of the previously untested fiber manufacturing lines **(ID Nos. DAP1, DAP2, DAP3, DAP4, DAP5 and DAP6)** to determine the emission rates from the concentrators, regenerative thermal oxidizer, uncontrolled general building exhaust vents, and air handling unit within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup of the affected manufacturing line.
   i. The total hydrocarbon (THC) continuous emission rate monitoring system (CERMS) (THC analyzers and continuous flow rate monitors) associated with the regenerative thermal oxidizers, and air handling units shall be certified in accordance with 40 CFR Part 60, Appendix B, Performance Specifications 6 and 8A (PS 8A for THC analyzers; PS 6 for CERMS which includes the flow meters). The test for **DAP3** shall also include an

evaluation of the CERMS on concentrator **ID No. S0937**. In addition, the Permittee shall test these sources to determine the total hydrocarbon (THC) emissions (measured as propane and converted to solvent). EPA Methods 1-4 and 25A of 40 CFR Part 60, Appendix A shall be used as the reference test methods, or as otherwise approved in the test protocol. Comparison between the measured results from the VOC analyzer and the measured results from Method 25A will be made on the basis of the solvent being measured and not on the basis of the calibration gas.

ii. Uncontrolled building exhaust vents shall be tested for total hydrocarbon (THC) emissions (measured as propane and converted to solvent). Testing will be performed at each vent simultaneously. The methods used to quantify the results will be EPA Methods 1-4 and 25A of 40 CFR Part 60, Appendix A, or as otherwise approved in the test protocol. In addition, the procedures of 40 CFR Part 51, Appendix M, Method 204E – "Volatile Organic Compounds Emissions in Uncaptured Stream from Building Enclosure" will be followed, where needed. In conjunction with this test, VOC analyzer and continuous flow meter data from the VOC concentrators, regenerative thermal oxidizer, and air handling unit will be collected. There shall be at least one fiber breakage event during each stack test. In the event there is not a fiber breakage, historical data may be used as a substitute or a break will be simulated at the request of the DAQ.

iii. From the test results and emissions data obtained in Section 2.1 A.6.b.ii above, the Permittee shall determine the "multiplier", or the ratio of total emissions from the uncontrolled exhaust points to the uncontrolled emission rate from the air handling unit. This ratio shall be calculated by summing the hourly emissions rate for all the uncontrolled exhaust points and dividing this total by the hourly emissions rate data collected for the air handling unit.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the required tests are not conducted as required above. *These requirements have been met as of July 23, 2008.*

c. Each of the fiber manufacturing lines and exhaust points listed below shall be tested in accordance with the procedures detailed in Section 2.1 A.6.b above:

i. DAP Line No. 1 **(ID No. DAP1)**
   (A) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0935)**,
   (B) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL1-2:** EFP1, EFP2, EFP3, EFP4, EFP9, EFK0911, EFP5A, and F1**)**,
   (C) Uncontrolled emission rate from the air handling unit **(ID No. GBL1-1**: AHU3**)**, measured upstream from the VOC concentrator, and
   (D) Performance test of all required continuous VOC analyzers and continuous flow meters.

ii. DAP Line No. 2 **(ID No. DAP2)**
   (A) Controlled emission rates from the concentrator when vented to the atmosphere **(ID No. S0937)**,
   (B) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0935)**,
   (C) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL2-2:** EFP10, EFP11, EFP12, EFP13, EFP18, K2503, K2603, K2703, K2803, F3, F4, F5 and F6**)**,
   (D) Pre-control emission rate from the air handling unit **(ID No. GBL2-1**: AHU7**)**, measured upstream from the VOC concentrator, and(E) Performance test of all required continuous VOC analyzers and continuous flow meters.

iii. DAP Line No. 3 **(ID No. DAP3)**
   (A) Controlled emission rates from the concentrator when vented to the atmosphere **(ID No. S0937)**,
   (B) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0935)**,
   (C) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL3-2:** EFP21, EFP22, EFP23, EFP24, EFP27, EFP25, EFP26, F7 and F8**)**,
   (D) Pre-control emission rate from the air handling unit **(ID No. GBL3-1**: AHU10**)**, measured upstream from the VOC concentrator, and
   (E) Performance test of all required continuous VOC analyzers and continuous flow meters.

iv. DAP Line No. 4 **(ID No. DAP4)**
   (A) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0962)**,
   (B) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL4-2:** EFP30, EFP31, EFP32, EFP33, and EFP34, EFP4503, EFP4603, EFP4703, EFK012, F11, F12 and F13**)**,
   (C) Pre-control emission rate from the air handling unit **(ID No. GBL4-1:** AHU12, EFP37**)**, measured upstream from the VOC concentrator, and
   (D) Performance test of all required continuous VOC analyzers and continuous flow meters.

v. DAP Line No. 5 **(ID No. DAP5)**
   (A) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0962)**,
   (B) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL5-2:** EFP38, EFP39, EFP40,

EFP41, EFP42, EFP5503, EFP5703, F13 and F14**)**,
(C) Pre-control emission rate from the air handling unit **(ID No. GBL5-1:** EFP45**)**, measured upstream from the VOC concentrator, and
(D) Performance test of all required continuous VOC analyzers and continuous flow meters.

vi. DAP Line No. 6 **(ID No. DAP6)**
(A) Controlled emission rate from the regenerative thermal oxidizer stack **(ID No. F0970)**,
(B) Uncontrolled emission rates from the General Building Exhaust **(ID No. GBL6-2:** EFP46, EFP47, EFP50, EFP6503 and S6503**)**,(C) Pre-control emission rate from the in-line fan (**ID No. EFK 6961**), measured upstream from the VOC concentrator, and
(D) Performance test of all required continuous VOC analyzers and continuous flow meters.

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

d. Each calendar month, the Permittee shall measure and record the solvent usage (in tons/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the batch count and/or solvent usage rates are not monitored and recorded.

e. The Permittee shall monitor and record the number of shipments made from the totes of undrawn yarn tote loading operations **(ID Nos. UDYTL 1-3 and UDYTL 4-6)** during each calendar month (in shipments/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the number of shipments is not monitored and recorded.

f. The Permittee shall install, calibrate, maintain, and operate monitoring devices that continuously measure and permanently record the flow rate (F) and VOC concentration (C) of the pre-concentrator exhaust stream from the air handling units and the emission streams from each affected concentrator and regenerative thermal oxidizer, as listed below:
i. DAP1 Air Handling Unit: **ID No. GBL1-1** (AHU3)
ii. DAP2 Air Handling Unit: **ID No. GBL2-1** (AHU7, upstream from the concentrator)
iii. DAP3 Air Handling Unit: **ID No. GBL3-1** (AHU10, upstream from the concentrator)
iv. DAP2 / DAP3 Concentrator: **ID No. S0937**
v. DAP1 through DAP3 Regenerative Thermal Oxidizer: **ID No. F0935**vi.DAP4 Air Handling Unit: **ID No. GBL4-1** (EFP37, upstream from the concentrator)
vii. DAP5 Air Handling Unit: **ID No. GBL5-1** (EFP45, upstream from the concentrator)
viii. DAP4 and DAP5 Regenerative Thermal Oxidizer: **ID No. F0962**
ix. DAP6 Air In-Line Fan: **ID No. EFK 6961** (upstream from the concentrator)
x. DAP6 Regenerative Thermal Oxidizer: **ID No. F0970**

g. The Permittee shall develop and implement a Quality Assurance/ Quality Control (QA/QC) measure for all the CERMS (THC and flow monitors). The QA/QC shall at the minimum include a provision for Calibration Drift (CD) determination and adjustments, data accuracy assessment, preventive maintenance, and program for corrective action for malfunctioning CERMS.
i. Excess Emissions: The excess emissions shall be defined as any consecutive period that exceeds the limit specified in Section 2.1 6.a. The VOC CEMs data reported to meet the requirements of this section shall include data substituted using the following procedure. The Permittee shall substitute for each hour of data missing with the greater of either (A) or (B):
(A) the average of the hourly pollutant emission rates recorded by the appropriate CEMS of the hour before and the hour after the missing data period; or
(B) the maximum hourly pollutant emission rate of the past 720 operating hours.
The missing data procedure shall be used whenever the emission unit and/or missing the emissions data for any operating hour.

ii. Monitor downtime: For CEMS required by Section 2.1 A.6.f above, monitor downtime:
(A) shall not exceed 5.0 percent of the operating time in a calendar quarter;
(B) shall be calculated using the following equation:

$$\%MD = \left(\frac{Total\ Monitor\ Downtime}{Total\ Source\ Operating\ Time}\right) \times 100$$

Where:

"Total Monitor Downtime" = number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid, not available, and/or filled with missing data procedure.
"Total Source Operating Time" = number of hours in a calendar quarter where the emission source associated with the CEMS was operating.

iii. The Permittee shall report excess emissions for all periods of operation, including start-up, shutdown, and malfunction**.**

If the associated CERMS does not comply with these requirements or the CERMS (THC and flow monitors) emissions exceed the limits in Section 2.1 A.6.a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

The continuous monitors shall conform to the requirements of 40 CFR 60.13 except that a valid hour of data for a full source operating hour shall be comprised of at least one data point in each of the four 15-minute quadrants (used to calculate the hourly average) and a valid hour of data for a partial operating hour shall be comprised of at least one valid data point in each 15-minute quadrant of the hour in which the manufacturing operates. For any operating hour in which required maintenance or quality-assurance activities are performed, a minimum of two data points separated by at least 15 minutes is required to calculate the hourly average. Continuous flow meters shall meet the requirements of 40 CFR 60.13(d) and (e) except that adjustment for zero and span drift may be made in accordance with the manufacturer's recommendation and/or written procedure. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if exhaust flow rates and VOC concentrations are not monitored and recorded as provided above.

h. The continuous monitors shall conform to the requirements of 40 CFR 60.13 except that a valid hour of data for a full source operating hour shall be comprised of at least one data point in each of the four 15-minute quadrants (used to calculate the hourly average) and a valid hour of data for a partial operating hour shall be comprised of at least one valid data point in each 15-minute quadrant of the hour in which the manufacturing operates. For any operating hour in which required maintenance or quality-assurance activities are performed, a minimum of two data points separated by at least 15 minutes is required to calculate the hourly average. Continuous flow meters shall meet the requirements of 40 CFR 60.13(d) and (e) except that adjustment for zero and span drift may be made in accordance with the manufacturer's recommendation and/or written procedure. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if exhaust flow rates and VOC concentrations are not monitored and recorded as provided above.

i. The Permittee shall determine and record the monthly VOC emissions from each solvent storage tank**-(ID Nos. T0901, T0902, T0905 and T0906**) (T) using actual throughput data and emission calculations from Section 7.1 of the AP42 or other approved methodology (in lbs/month). The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the tank VOC emissions are not monitored and recorded as provided above.

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

j. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 1 **(ID No. DAP1)** for the previous 6-month period in accordance with the following requirements:
   i. Determine the emission rate from the air handling unit **(ID No. GBL1-1)** (Q_{GBL1-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.i above.
   ii. Determine the emission rate from the miscellaneous building exhaust vents **(ID No. GBL1-2)** (Q_{GBL1-2}), in lbs/month, by multiplying Q_{GBL1-1}, determined in Section 2.1 A.6.j.i above, by the general exhaust-to-AHU multiplier determined during the stack test.
   iii. Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 1, 2, and 3 during the previous calendar month (M_1, M_2, and M_3).
   iv. Determine the emission rate from the regenerative thermal oxidizer stack **(ID No. F0935)** (Q_{F0935}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.j.v below.
   v. Determine the emission rate from the solvent recovery system (ID No.C-901) (Q_{C-0901}) in lbs/month for each DAP line using the throughput, performance test emission factor and operating time.
   vi. Determine the emission rate from the dedicated tanks **(ID Nos. T0901 and T0902)** ($Q_{T0901-T0902}$) in lbs/month, using the throughput monitored pursuant to Section 2.1 A.6.i above.
   vii. Determine the total number of shipments from UDY tote loading operations from DAP Line Nos. 1 through 3 **(ID No. UDYTL 1-3)** during the previous calendar month (UDY_{1-3}).
   viii. Determine the solvent loss from DAP Line No. 1 (L_1) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_1 = \frac{Q_{GBL1-1}+Q_{GBL1-2}+\left[\left(\frac{M_1}{M_1+M_2+M_3}\right)\times\left(Q_{F0935}+Q_{T0901}+(56\times0.29\times UDY_{1-3})\right)\right]+\left[\left(\frac{M_1}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_1}$$

ix. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all of the hourly averages in the previous 6 calendar months and divide by the total number of operating hours.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.j.ix, above, exceeds the limit in Section 2.1 A.6.a above.

k. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 2 **(ID No. DAP2)** for the previous 6-month period in accordance with the following requirements:
   i. Determine the pre-concentrator emission rate from the air handling unit **(ID No. GBL2-1)** (Q_{GBL2-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.ii above.
   ii. Determine the emission rate from the miscellaneous building exhaust vents **(ID No. GBL2-2)** (Q_{GBL2-2}), in lbs/month, by multiplying Q_{GBL2-1}, determined in 2.1 A.6.k.i above, by the general exhaust-to-AHU multiplier determined during the stack test.
   iii. Determine the emission rate from the concentrator stack **(ID No. S0937)** (Q_{S0937}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.iv above.
   iv. Determine the solvent loss from DAP Line No. 2 (L_2) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_2 = \frac{Q_{GBL2-2}+\left[\left(\frac{M_2}{M_1+M_2+M_3}\right)\times(Q_{F0935}+Q_{T0901}+(56\times0.29\times UDY_{1-3}))\right]+\left[\left(\frac{M_2}{M_2+M_3}\right)\times Q_{S0937}\right]+\left[\left(\frac{M_2}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_2}$$

   v. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all the hourly averages in the previous 6 calendar months and divide by the total number of operating hours.
   vi. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.k.v above exceeds the limit in Section 2.1 A.6.a above.

l. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 3 **(ID No. DAP3)** for the previous 6-month period in accordance with the following requirements:
   i. Determine the pre-concentrator emission rate from the air handling unit **(ID No. GBL3-1)** (Q_{GBL3-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.iii above.
   ii. Determine the emission rate from the miscellaneous building exhaust vents **(ID No. GBL3-2)** (Q_{GBL3-2}), in lbs/month, by multiplying Q_{GBL3-1}, determined in 2.1 A.6.l.i above, by the general exhaust-to-AHU multiplier determined during the stack test.
   iii. Determine the solvent loss from DAP Line No. 3 (L_3) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_3 = \frac{Q_{GBL3-2}+\left[\left(\frac{M_3}{M_1+M_2+M_3}\right)\times(Q_{F0935}+Q_{T0901}+(56\times0.29\times UDY_{1-3}))\right]+\left[\left(\frac{M_3}{M_2+M_3}\right)\times Q_{S0937}\right]+\left[\left(\frac{M_3}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_3}$$

   iv. etermine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all the hourly averages in the previous 6 calendar months and divide by the total number of operating hours.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.l.iv, above, exceeds the limit in Section 2.1 A.6.a above.

m. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 4 **(ID No. DAP4)** for the previous 6-month period in accordance with the following requirements:
   i. Determine the pre-concentrator emission rate from the air handling unit **(ID No. GBL4-1)** (Q_{GBL4-1}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.vi above.
   ii. Determine the emission rate from the miscellaneous building exhaust vents **(ID No. GBL4-2)** (Q_{GBL4-2}), in lbs/month, by multiplying Q_{GBL4-1}, determined in 2.1 A.6.m.i above, by the general exhaust-to-AHU multiplier determined during the stack test.
   iii. Determine the measured total solvent mass in lbs/month produced at DAP Line Nos. 4 through 6 during the previous calendar month (M_4, M_5, and M_6).

iv. Determine the emission rate from the regenerative thermal oxidizer stack **(ID No. F0962)** ($Q_{F096236}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.viii above.
v. Determine the emission rate from the solvent recovery system (ID No.C-901) ($Q_{C\text{-}0901}$) in lbs/month for each DAP line using the throughput, performance test emission factor, and operating time.
vi. Determine the emission rate from the dedicated tanks **(ID Nos. T0905 and T0906)** ($Q_{T0905\text{-}T0906}$) in lbs/month, using the throughput monitored pursuant to Section 2.1 A.6.i above.
vii. Determine the total number of shipments from UDY tote loading operations from DAP Line Nos. 4 through 6 **(ID No. UDYTL 4-6)** during the previous calendar month ($UDY_{4\text{-}6}$).
viii. Determine the solvent loss from DAP Line No. 4 (L_4) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_4 = \frac{Q_{GBL4-2}+\left[\left(\frac{M_4}{M_4+M_5}\right)\times Q_{F0962}\right]+\left[\left(\frac{M_4}{M_4+M_5+M_6}\right)\times\left(Q_{T0905}+(56\times 0.29\times UDY_{4-6})\right)\right]+\left[\left(\frac{M_4}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_4}$$

ix. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all the hourly averages in the previous 6 calendar months and divide by the total number of operating hours.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.m.ix, above, exceeds the limit in Section 2.1 A.6.a above.

n. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 5 **(ID No. DAP5)** for the previous 6-month period in accordance with the following requirements:
i. Determine the pre-concentrator emission rate from the air handling unit **(ID No. GBL5-1)** ($Q_{GBL5\text{-}1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.vii above.
ii. Determine the emission rate from the miscellaneous building exhaust vents **(ID No. GBL5-2)** ($Q_{GBL5\text{-}2}$), in lbs/month, by multiplying $Q_{GBL5\text{-}1}$, determined in 2.1 A.6.n.i above, by the general exhaust-to-AHU multiplier determined during the stack test.
iii. Determine the solvent loss from the previous calendar month using the following equation:

$$L_5 = \frac{Q_{GBL5-2}+\left[\left(\frac{M_5}{M_4+M_5}\right)\times Q_{F0962}\right]+\left[\left(\frac{M_5}{M_4+M_5+M_6}\right)\times(Q_{T0905}+(56\times 0.29\times UDY_{4-6}))\right]+\left[\left(\frac{M_5}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_5}$$

iv. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all the hourly averages in the previous 6 calendar months and divide by the total number of operating hours.

The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.n.iv above exceeds the limit in Section 2.1 A.6.a above.

o. Each calendar month, the Permittee shall calculate and record the average solvent loss (in lbs/ton solvent) from DAP Line No. 6 **(ID No. DAP6)** for the previous 6-month period in accordance with the following requirements:
i. Determine the pre-concentrator emission rate from the in-line fan **(ID No. EFK 6961)** ($Q_{GBL6\text{-}1}$), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.5.f.ix above.
ii. Determine the emissions from the miscellaneous building exhaust vents **(ID No. GBL6-2)** ($Q_{GBL6\text{-}2}$), in lbs/month, by multiplying $Q_{GBL6\text{-}1}$, determined in 2.1 A.6.o.i above, by the general exhaust-to-in-line fan multiplier determined during the stack test.
iii. Determine the emission rate from the regenerative thermal oxidizer stack **(ID No. F0970)** (Q_{F0970}), in lbs/month using the stream flow rate and VOC concentration monitored pursuant to Section 2.1 A.6.f.x above.
iv. Determine the emission rate from the solvent recovery system (ID No.C-901) ($Q_{C\text{-}0901}$) in lbs/month for each DAP line using the throughput, performance test emission factor and operating time.
v. Determine the emission rate from the dedicated tanks **(ID Nos. T0905 and T0906)** ($Q_{T0905\text{-}T0908}$), in lbs/month, using the throughput monitored pursuant to Section 2.1 A.6.i of this permit.
vi. Determine the solvent loss from DAP Line No. 6 (L_6) in lbs/ton solvent from the previous calendar month using the following equation:

$$L_6 = \frac{Q_{GBL6-2}+Q_{F0970}+\left[\left(\frac{M_6}{M_4+M_5+M_6}\right)\times\left(Q_{T0905}+(56\times 0.29\times UDY_{4-6})\right)\right]+\left[\left(\frac{M_6}{M_1+M_2+M_3+M_4+M_5+M_6}\right)\times(Q_{C-0901}+Q_{T0902}+Q_{T0906})\right]}{M_6}$$

vii. Determine the average solvent loss from the previous 6-month calendar period (in lbs/month) by summing all

the hourly averages in the previous 6 calendar months and divide by the total number of operating hours. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the VOC emissions are not calculated and recorded as provided above, or if the 6-month average VOC emission rate determined in 2.1 A.6.o.vii above exceeds the limit in Section 2.1 A.6.a above.

p. Monitoring data recorded during periods specified in 2.1 A.6.p.i and 2.1 A.6.p.ii, below, shall not be included in the monthly emissions calculations listed in Section 2.1 A.6.i through 2.1 A.6.p above. Monitoring data recorded during periods specified in 2.1 A.6.p.iii through 2.1 A.6.p.v below shall be included in the monthly emissions calculations. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.
   i. Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;
   ii. Periods of non-operation of a DAP manufacturing line, resulting in cessation of the emissions to which the monitoring applies;
   iii. Start-ups;
   iv. Shutdowns; and
   v. Malfunctions.

q. The Permittee must apply for and obtain a permit modification prior to revising any of the emissions calculations methodologies provided in Sections 2.1 A.6.h through 2.1 A.6.o above. Corrections and clarifications to the emissions calculations may be revised by an administrative amendment.

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

r. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.6.d through q above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
   i. The solvent loss rate (in lbs/ton solvent) of each DAP manufacturing line for each of the previous 17 calendar months;
   ii. The 6-month average solvent loss rate (in lbs/ton solvent) of each DAP manufacturing line for each of the previous 6-month periods ending during the reporting period;
   iii. A summary of any hour during the reporting period when insufficient monitoring data, as defined in Section 2.1 A.6.f above, was collected; and
   iv. Identification of any deviations from Section 2.1 A.6 above.

7. 15A NCAC 02D .0530(u): use of projected actual emissions to avoid applicability of prevention of significant deterioration requirements

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0530(u)]

a. The Permittee has used projected actual emissions to avoid applicability of prevention of significant deterioration requirements, pursuant to Application **7400021.20B**, for the increase in production on fiber manufacturing lines **(ID Nos. DAP1 through DAP6)**. The Permittee shall perform the following:
   i. The Permittee shall maintain records of annual emissions in tons per year, on a calendar year basis related to the modifications, for five years following resumption of regular operations after the change is made. *Requirement was implemented on March 09, 2021.*
   ii. The Permittee shall submit a report to the director within 60 days after the end of each calendar year during which these records must be generated. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c).
   iii. The Permittee shall make the information documented and maintained under this condition available to the Director or the general public pursuant to the requirements in 40 CFR 70.4(b)(3)(viii).
   iv. The reported actual emissions (post-construction emissions) for each of the five calendar years will be compared to the projected actual emissions (pre-construction projection) as included below:

Regulated NSR Pollutant	Projected Actual Emissions* (tons per year)
VOC	78.0

* The projected actual emissions are not enforceable limitations. If the reported actual emissions exceed the projected actual emissions, the Permittee shall include in its annual report an explanation as to why actual emissions exceeded the projected actual emissions. These projected actual emissions include the “could have accommodated” emissions as used in the application.

B. Building 12, including: Five (5) Uncontrolled Fiber Processing Lines (ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7) Sheet Assembly Unit (ID No. SAU-01)

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Combined volatile organic compounds emissions from the six affected fiber processing lines **(ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7)** shall not exceed 25 tons per consecutive 12-month period	15A NCAC 02D .0530
Hazardous Air Pollutants	MACT Avoidance Limitations See Section 2.2 B.1	15A NCAC 02Q .0317 (for 15A NCAC 02D .1111)
Toxic Air Pollutants	**State-enforceable only** See Section 2.2 B.2	15A NCAC 02D .1100

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

a. In accordance with the Best Available Control Technology (BACT) determination required pursuant to 15A NCAC 02D .0530, the combined VOC emissions from the affected fiber processing lines **(ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7)** shall not exceed 25 tons per consecutive 12-month period.

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

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

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

c. Each calendar month, the Permittee shall monitor and record the following production information for the previous calendar month:
   i. Quantity of each impregnation compound utilized at the affected fiber processing lines **(ID Nos. FL-1 through FL-6)** (in gallons/month);
   ii. VOC concentration of each impregnation compound (in lbs/gallon);
   iii. Quantity of each ink utilized at the fiber processing lines (in gallons/month); and
   iv. VOC concentration of each ink (in lbs/gallon).

   Records shall be maintained in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not created and retained.

d. Each calendar month, the Permittee calculate and record the combined VOC emission rate (in tons/month) from the affected fiber processing lines **(ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7)** for the previous calendar month in accordance with the following equation:

$$E = \frac{\sum_{i=1}^{j}(Q_{Pi} * C_{Pi}) + \sum_{i=1}^{k}(Q_{Ii} * C_{Ii})}{2{,}000\ {}^{lbs}/_{ton}}$$

Where,

E = Average monthly VOC emission rate (in lbs/month);
j = Number of impregnation compounds used during the previous calendar month;
Q_{Pi} = Quantity of each impregnation compound (i) used during the previous calendar month (in gallons/month);
C_{Pi} = VOC concentration of each impregnation compound (i) (in lbs/gallons);
k = Number of inks used during the previous calendar month;
Q_{Ii} = Quantity of each ink (i) used during the previous calendar month (in gallons/month); and,
C_{Ii} = VOC concentration of each ink compound (i) (in lbs/gallons).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monthly VOC emissions are not calculated and recorded as required above.

e. Each calendar month, the Permittee calculate and record the combined VOC emission rate from the affected fiber processing lines **(ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7)** for the previous 12-months of operation (in tons/12-months) by summing the monthly emission totals, as determined in Section 2.1 B.1.d above, for the previous 12

calendar months during which the source was operating. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the 12-month rolling VOC emissions are not calculated and recorded as required above, or if the VOC emissions exceed the limit in Section 2.1 B.1.a above.

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

f. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.1.c through e above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
   i. Monthly VOC emission totals, as calculated in Section 2.1 B.1.d above, for the previous 17 months;
   ii. 12-month rolling VOC emissions, as calculated in Section 2.1 B.1.e above, for each of the six consecutive 12-month periods ending during the reporting period; and
   iii. Identification of any deviations from Section 2.1 B.1 above.

C. Small Scale MAP Fiber Manufacturing Line (ID No. MAP-1) associated with bagfilters (ID Nos. S-1101 and S-P1010)
Polyethylene Sheet Manufacturing Line No. 1 (ID No. PES-1) associated with bagfilters (ID Nos. S-01102, S-01121, S-01125, and V-01129)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	For process weight rates up to 30 tons per hour $E = 4.10P^{0.67}$ where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
Hazardous Air Pollutants	MACT Avoidance Limitations See Section 2.2 B.1	15A NCAC 02Q .0317 (for 15A NCAC 02D .1111)
Toxic Air Pollutants	**State-enforceable only** Control of State Air Toxics – See Section 2.2 B.2	15A NCAC 02D .1100

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

a. Emissions of particulate matter from these sources, **(ID Nos. MAP-1 and PES-1)**, shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from the listed emission sources shall be controlled by bagfilters as detailed in the source listing. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. A monthly visual inspection of the systems ductwork and material collection units for leaks; and
   ii. An annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters' structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .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 bagfilters; and
   iv. Any variance from manufacturer's recommendations, if any, and corrections made.

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

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

e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written

request by the DAQ.

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

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

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

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

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

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

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

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

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

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

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

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

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

D. Fiber Impregnation Line 1 consisting of:

- **Resin Mixing Station (ID No. RMS-1)**
- **Pre-Impregnation Line (ID No. PrePreg-1)**

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	For process weight rates up to 30 tons per hour $E = 4.10P^{0.67}$ where; E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	Emissions shall not exceed 20 percent opacity	15A NCAC 02D .0521
Volatile organic compounds	Less than 104.7 tons used per consecutive 12-month period **See Section 2.2 B.1**	15A NCAC 02D .0524 (40 CFR Part 60, Subpart VVV)
Hazardous Air Pollutants	MACT Avoidance Limitations **See Section 2.2 B.1**	15A NCAC 02Q .0317 (for 15A NCAC 02D .1111)

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

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

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

d. No reporting is required for particulate emissions from these sources

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

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish “normal” for these sources in the first 30

days of beginning operation. If visible emissions from these source are observed to be above normal, the Permittee shall either:

i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 D.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for these sources in the first 30 days of beginning operation.

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

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

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

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

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

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

a. For these emission sources, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart VVV "New Source Performance Standards for Polymeric Coating of Supporting Substates", including Subpart A "General Provisions."

Definitions and Nomenclature

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 60.741 shall apply.

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

c. The amount of "VOC used" as defined in 40 CFR 60.741 in these sources shall be less than 95 Megagrams (104.7 tons) per consecutive 12-month period. [40 CFR 60.740(b)]

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

d. The following notification requirements apply:
   i. The Permittee shall submit a notification of the actual date of initial startup of these sources to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]
   ii. The Permittee shall include with the notification required in paragraph i above a material flow chart indicating the projected VOC usage for the first 12-month period. [40 CFR 60.747(b)]

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

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

e. For these emission sources, the Permittee shall:
   i. make semiannual estimates and maintain records of the projected annual usage of VOC. The first 12-month estimate shall include the month of initial startup of these sources. The second 12-month estimate shall start on January or July, whichever month is the earliest after the initial startup. All subsequent semiannual 12-month estimates shall begin January or July.
   ii. maintain records of the actual monthly and rolling 12-month total VOC usage.

   [40 CFR 60.744(b) and (c)]

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524 if these recordkeeping requirements are not met or indicate the emission limit in Section 2.1 D.3 c above was exceeded.

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

f. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities given in Sections 2.1 D.3.e above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
   i. actual monthly VOC usage for the previous 17 months;
   ii. rolling 12-month total VOC usage for each 12-month period over the previous 17 months;
   iii. if applicable:
      (A) the first semiannual estimate in which projected annual VOC use exceeds 95 Megagrams (104.7 tons).
      (B) the first 12-month period in which the actual VOC use exceeds 95 Megagrams (104.7 tons).
      [40 CFR 60.747(c)]

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. DAP Process Heaters (ID Nos. F0951 through F0956); DAP Hot Water Heaters (ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B, HWH6-C); and DAP Concentrators (ID Nos. S0936, S0937, S0961 and S0970).

1. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION (NO_x)

a. In order to avoid applicability of 15A NCAC 02D .0530 total nitrogen dioxide emissions shall not exceed 28 tons during any consecutive 12-month period from all of the following affected sources and No. 2 fuel oil shall not exceed 300 hours during any consecutive 12-month period from each of the following affected sources:
   i. DAP process heaters **(ID Nos. F0951, F0952, F0953, F0954, F0955, F0956)**;
   ii. DAP hot water heaters **(ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B and HWH6-C)**; and
   iii. DAP concentrator heater **(ID No. S0937)**.

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

b. The Permittee shall keep monthly records of fuel usage at the affected sources in a logbook (written or in electronic format), as follows:
   i. The total quantity (in million scf) of natural gas fired in each affected source; and
   ii. The total quantity (in 1,000 gal) of No. 2 fuel oil fired in each affected source.
   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage are not created and retained as required above.

c. Each calendar month, the Permittee shall calculate NO_x emissions from the affected sources for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
   i. Calculate sources **(ID Nos. F0951, F0952, F0953, F0954, F0955, F0956, HWH1, HWH2, HWH3, HWH4 HWH5, HWH6-A, HWH6-B, HWH6-C, and S0937)** NO_x emissions from the previous calendar month using the following equation:

$$E_{NOx} = (20 \times Q_{FO2}) + (1.24 \times C_{NOx@3\%O2(i)} \times Q_{ng(i)})$$

Where:

E_{NOx}	= NO_x emissions (in pounds) during the previous calendar month;
Q_{FO2}	= Quantity of No. 2 fuel oil fired during the previous calendar month (in 1,000 gallon);
$C_{NOx@3\%O2(i)}$	= Measured or manufacturer guaranteed NOx concentration at 3% O2 (ppm)
$Q_{ng(i)}$	= Quantity of natural gas fired at the affected sources during previous calendar month (million standard cubic feet)
i	= Affected unit

NOx Emission Factors for $C_{NOx@3\%O2(i)}$

Unit ID	Heat Input (million BTU/hour)	$C_{NOx@3\%O2(i)}$ (ppm@3%O2)[1]	NOx (pound/hour)
F0951	6.10	84	0.62
HWH1	8.10	30	0.30
F0952	5.80	76	0.54
HWH2	6.10	30	0.22
F0953	5.60	81	0.55
HWH3	7.90	30	0.29
F0954	5.70	71	0.49
HWH4	7.90	30	0.29
F0955	4.70	65	0.37

HWH5	6.00	30	0.22
F0956	4.70	21	0.12
HWH6A-C	5.25	30	0.19
S0937	2.90	100	0.35

[1]The maximum NO_x concentration @ 3% O_2 recorded as a part of routine combustion checks during the previous five (5) calendar years.

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

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in Section 2.2 A.1.a above.

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

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.2 A.1.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and 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. The following information shall be reported:
   i. Monthly emissions of NO_x emissions from the affected sources for the previous 17 months as calculated in Section 2.2 A.1.c.i above; and
   ii. 12-month rolling emissions of NO_x emissions from the affected sources for each of the six 12-month periods over the previous 17-month period as calculated in Section 2.2. A.1.c.ii above.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530 total sulfur dioxide emissions shall not exceed 39 tons during any consecutive 12-month period from all of the following affected sources and No. 2 fuel oil shall not exceed 300 hours during any consecutive 12-month period from each of the following affected sources:
   i. DAP process heaters **(ID Nos. F0951, F0952, F0953, F0954, F0955 and F0956)**;
   ii. DAP hot water heaters **(ID Nos. HWH1, HWH2, HWH3, HWH4, HWH5, HWH6-A, HWH6-B and HWH6-C)**; and
   iii. DAP concentrator heater **(ID No. S0937)**.

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

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

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the fuel usage and No. 2 fuel oil sulfur content are not created and retained as required above.

c. Each calendar month, the Permittee shall calculate SO_2 emissions from the affected sources for the previous month and previous 12-month period and record calculated emissions in a logbook (written or electronic format), according to the following formulas:
   i. Calculate SO_2 emissions from the previous calendar month using the following equation:

$$E_{SO_2} = 142 * S * Q_{fo2} + 0.6 * Q_{ng}$$

Where,

E_{SO2} = SO_2 emissions (in lbs) during the previous calendar month;
S = Sulfur content in the No. 2 fuel oil (in percent by weight);
Q_{fo2} = Quantity of No. 2 fuel oil fired at the affected sources during the previous calendar month (in 1,000 gal),
Q_{ng} = Quantity of natural gas fired at the affected sources during the previous calendar month (in

million scf)

ii. Sum the SO_2 emissions from the affected sources for the previous 12-month period to determine the 12-month rolling emission total.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if records of the monthly calculations listed above are not retained or if the 12-month rolling emission totals are greater than the emission limit provided in Section 2.2 A.2.a above.

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

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.2 A.2.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and 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. The following information shall be reported:
   i. Monthly emissions of SO_2 emissions from the affected sources for the previous 17 months as calculated in Section 2.2. A.2.c.i above; and
   ii. 12-month rolling emissions of SO_2 emissions from the affected sources for each of the six 12-month periods over the previous 17-month period as calculated in Section 2.2. A.2.c.ii above.

B. Facility-wide

1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS
for 15A NCAC 02D .1111: Maximum Available Control Technology (MACT) Standards

a. In order to remain classified a minor source for hazardous air pollutants (HAP) and avoid applicability of 15A NCAC 02D .1111, "Maximum Achievable Control Technology," facility-wide HAP emissions shall be less than the following limitations:
   i. 25 tons per consecutive 12-month period of total, combined HAP; and
   ii. 10 tons per consecutive 12-month period of any individual HAP.

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

b. Each month, the Permittee shall calculate and record facility-wide emissions of each individual HAP and total combined HAP during the previous calendar month and during the previous consecutive 12-month period.
   i. HAP emissions from the uncontrolled PE Sheet Line **(ID No. PES-1)** shall be based on a mass balance, assuming 100% of solvent is emitted to the atmosphere.
   ii. HAP emissions from the uncontrolled fiber lines **(ID Nos. FL-2, FL-3, FL-5, FL-6 and FL-7)** shall be based on a mass balance, assuming 100% of solvent is emitted to the atmosphere.
   iii. HAP emissions from all other emissions sources shall be estimated in accordance with the terms of this permit.
   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 non-compliance with 15A NCAC 02D .1111 if any individual or combined 12-month rolling HAP emission rate exceeds as limit in Section 2.2 B.2.a above or if the monthly HAP emissions are not calculated and recorded as provided above.

c. The Permittee shall keep records of the MACT applicability determinations, as provided above, on site 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 02D .1111 if the records are not maintained.

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

d. The Permittee shall submit a semiannual summary report of monitoring and recordkeeping activities given in Section 2.2 B.1.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and on or before July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following information:
   i. The greatest individual HAP emission rate (in tons) for each of the six consecutive 12-month periods ending during the previous calendar half;
   ii. The total, combined HAP emission rate (in tons) for each of the six consecutive 12-month periods ending during the previous calendar half; and
   iii. All instances of deviations from the requirements of this permit must be clearly identified.

State-enforceable only

2. 15A NCAC 02D .1100 TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT

The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated December 05, 2012 for the facility's toxic air pollutant emissions as listed in the table below. The modeling analysis was reviewed and approved by the AQAB on September 27, 2013. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

Emission Source ID No. or Group	Emission Source Description	Formaldehyde (lb/hr)	Toluene 1HR (lb/hr)	Toluene 24HR (lb/hr)
RTODAP13	RTO DAP 1-3 Source I.D. No. F0935	1.03E-01	4.67E-03	4.67E-03
RTODAP13	RTO DAP 4-5 Source I.D. No. F0962	7.35E-02	3.33E-03	3.33E-03

Emission Source ID No. or Group	Emission Source Description	Formaldehyde (lb/hr)	Toluene 1HR (lb/hr)	Toluene 24HR (lb/hr)
RTODAP6	RTO DAP 6 Source I.D. No. F0962	8.13E-02	3.68E-03	3.68E-03
CNCDAP23	Concentrator DAP 2-3 Source I.D. No. S0937	1.03E-01	4.66E-03	4.66E-03
HOFDAP1	Hot oil furnace DAP 1 Source I.D. No. F0951	8.82E-02	4.00E-03	4.00E-03
HWHDAP1	Hot water heater DAP 1	8.82E-02	4.00E-03	4.00E-03
HOFDAP2	Hot oil furnace DAP 2 Source I.D. No. F0952	8.82E-02	4.00E-03	4.00E-03
HWHDAP2	Hot water heater DAP 2	1.26E-01	5.73E-03	5.73E-03
HOFDAP3	Hot oil furnace DAP 3 Source I.D. No. F0953	8.82E-02	4.00E-03	4.00E-03
HWHDAP3	Hot water heater DAP 3	8.82E-02	4.00E-03	4.00E-03
HOFDAP4	Hot oil furnace DAP 4 Source I.D. No. F0954	8.82E-02	4.00E-03	4.00E-03
HWHDAP4	Hot water heater DAP 4	1.26E-01	5.73E-03	5.73E-03
HOFDAP5	Hot oil furnace DAP 5 Source I.D. No. F0955	8.82E-02	4.00E-03	4.00E-03
HWHDAP5	Hot water heater DAP 5	1.26E-01	5.73E-03	5.73E-03
HOFDAP6	Hot oil furnace DAP 6 Source I.D. No. F0956	1.04E-01	4.73E-03	4.73E-03
HWHDAP6A	Hot water heater A DAP 6	1.05E-01	6.80E-03	6.80E-03
HWHDAP6B	Hot water heater B DAP 6	1.05E-01	6.80E-03	6.80E-03
HWHDAP6C	Hot water heater C DAP 6	1.05E-01	6.80E-03	6.80E-03
HWH1MAP	Hot water heater 1 MAP Source I.D.: I-MAP-H1 & H2	1.29E-02	5.85E-04	5.85E-04

State-enforceable only

3. **15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS**
   The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

State-enforceable only

4. **Disclosure of Information Relating to Emissions of Fluorinated Chemicals [15A NCAC 02Q .0308(a); 15A NCAC 02Q .0309(b)]**
   The Permittee shall have an ongoing duty to disclose the presence of materials containing fluorinated chemicals at the facility that have the potential to result in the emission of fluorinated chemicals to the environment. Such disclosures shall be in writing and submitted to the Regional Office Supervisor within thirty days of the Permittee becoming aware of such information, unless such information has already been disclosed to DAQ by the Permittee. The disclosure shall describe the identity, quantity, and use of such material to the extent known. DAQ may require the permittee to conduct analysis or testing of fluorinated chemical emissions as necessary to properly evaluate emissions sources at the facility. As used in this condition, the term “fluorinated chemicals” includes but is not limited to per- and polyfluoroalkyl substances (PFAS).

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

Emission Source ID No.	Emission Source Description[1,2]
I-DAP1-T1101	polyethylene storage silo with fabric filter with 194 sq. ft. of filter area (ID No. S1110)
I-DAP1-V1112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S1112)
I-DAP2-T2101	polyethylene storage silo with fabric filter with 194 sq. ft. of filter area (ID No. S2110)
I-DAP2-V2112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S2112)
I-DAP3-T3101	polyethylene storage silo with fabric filter with 194 sq. ft. of filter area (ID No. S3110)
I-DAP3-V3112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S3112)
I-DAP4-T4101	polyethylene storage silo with fabric filter with 194 sq. ft. of filter area (ID No. S4110)
I-DAP4-V4112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S4112)
I-DAP5-T5101	polyethylene storage silo with fabric filter with 194 sq. ft. of filter area (ID No. S5110)
I-DAP5-V5112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S5112)
I-DAP6-T6101	polyethylene storage silo with a fabric filter with 194 sq. ft. of filter area (ID No. S6110)
I-DAP6-V6112	polyethylene feed hopper with fabric filter venting indoors with 29 sq. ft. of filter area (ID No. S6112)
I-MAP-H1	Natural gas-fired hot water heater for comfort heat (1.75 million Btu per hour heat input capacity)
I-MAP-H2	Natural gas-fired hot water heater for comfort heat (1.75 million Btu per hour heat input capacity)
I-WW-BSN	Wastewater neutralization tanks.
I-WW-ST	Wastewater shunt tanks (125,000 gallon capacity)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

J. **RESERVED**

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

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

15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

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

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

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

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

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

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

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:

a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
c. the applicable requirements under Title IV; or
d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. A permit shall be reopened and revised under the following circumstances:
    a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
    b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;

c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

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

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

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

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

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