PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

SHEILA C. HOLMAN
Director

??, 2016

Mr. Wilbur G. Kessinger, Jr.
Vice President of Mill Operations
KapStone Kraft Paper Corporation
100 Gaston Road
Roanoke Rapids, North Carolina 27870

SUBJECT: Air Quality Permit No. 01649T58
Facility ID: 4200007
KapStone Kraft Paper Corporation
Roanoke Rapids, Halifax County, North Carolina
Fee Class: Title V
PSD Status: Major

Dear Mr. Kessinger:

In accordance with your completed Air Quality Permit Application No. 4200007.15B for a significant modification of your Title V permit received June 16, 2015, we are forwarding herewith Air Quality Permit No. 01649T58 to KapStone Kraft Paper Corporation, Roanoke Rapids, North Carolina 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 listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

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

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of 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.

For PSD increment tracking purposes, Halifax County has been triggered for PM_{10}, SO_2 and NOx. However, no tracking is necessary for this modification as there is no change in emissions.

This Air Quality Permit shall be effective from ??, 2016 until December 31, 2017, 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 Mr. Brian Bland at (919) 707-8732.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4
Raleigh Regional Office
Central Files, Halifax County
Connie Horne (cover letter only)

ATTACHMENT to Permit No. 01649T58

Changes to the Title V permit (01649T57) are as follows:

Page(s)	Section(s)	Description of Change(s)
All	All	Update dates and permit revision number
3 – end	All	Update permit revision number in header
47	2.1 K.6.c	Change tune-up requirement from annually to every five years
48	2.1 K.6.d	Specify that tune-ups must be performed no more than 61 (not 13) months from the previous tune-up
48	2.1 K.6.h	Change reporting requirement from annually to every five years

Insignificant Activities associated with Permit No. 01649T58
Pursuant to 15A NCAC 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I-G0101	Woodyard Area Insignificant Units
I-G0209	Digester Area Insignificant Units
I-G0315	Washer Area Insignificant Units
I-G0720	Evaporator Area Insignificant Units
I-G0829	Recovery Area Insignificant Units
I-G0937	Lime Kiln Area Insignificant Units
I-G1043	Causticizing Area Insignificant Units
I-G1158	Power Boiler Area Insignificant Units
I-G1263	Paper Machine Area Insignificant Units
I-G2073	Turpentine Area Insignificant Units
I-G2178	Tall Oil Area Insignificant Units
I-G2384	Mill Area Insignificant Units
IES-10-PU-003	Dregs Mixer Tank
IES-MTanks	Miscellaneous Fuel and Hydraulic Oil Tanks
I-Grinder	Maintenance Area Paper Machine Roll Grinder
I-11-TK-041	One Ultra Low Sulfur No. 2 Fuel Oil Storage Tank (13,000 gallons capacity)

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit”.

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
01649T58	01649T57	??, 2016	December 31, 2017

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: KapStone Kraft Paper Corporation

Facility ID: **05/42/00007**
Facility Site Location: **100 Gaston Road**
City, County, State, Zip: **Roanoke Rapids, Halifax County, NC 27870**

Mailing Address: **100 Gaston Road**
City, State, Zip: **Roanoke Rapids, North Carolina 27870**

Application Numbers: **4200007.15B**
Complete Application Date: **June 16, 2015**
Primary SIC Code: **2611 and 2612**

Division of Air Quality, Regional Office Address: **Raleigh Regional Office**
3800 Barrett Drive, Suite 101
Raleigh, North Carolina 27609

Permit issued this the ??th day of ?? 2016.

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William D. Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

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ATTACHMENT

List of Acronyms

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:

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G101 - Woodyard Miscellaneous Source Groups				
11	ES-01-PU-MISC.1 through ES-01-PU-MISC.9	includes saws, debarking operations, chip storage, chip transfer, chip screening, bark storage, bark hogging/grinding, bark transfer, and vehicular traffic	NA	NA
11	ES-01-PU-016 through ES-01-PU-018***	Three (3) Bark/Fines Transfer Cyclones (bark/fines are transferred from woodyard bark hogging/grinding to the Boiler Fuel Silo)	NA	NA
11	ES-01-PU-019***	Sawdust Transfer Cyclone (sawdust is transferred from woodyard sawdust storage to the Boiler Fuel Silo)	NA	NA
11	ES-01-PU-021***	Boiler Fuel Silo	NA	NA
51, 69	ES-01-PU-014	Portable Low Sulfur Diesel-Fired Log Chipper (1,200 hp maximum rating)	NA	NA
51, 69	ES-01-PU-015	Portable Low Sulfur Diesel-Fired Bark Grinder (1,200 hp maximum rating)	NA	NA
G0208 - Digester System				
12, 58	ES-02-PU-003 through ES-02-PU-014 **MACT Subpart S**	twelve (12) batch digesters: No. 7 Digester through No. 12 digester, and No.14 through No. 19 Digester	ES-09-PU-004 or ES-11-CU-001 ES-02-PU-028 ES-16-AS-020	Lime Kiln via closed LVHC NCG collection system, or No. 1 Power Boiler via closed LVHC NCG collection system, or No. 7 Recovery Furnace via closed LVHC NCG collection system Foul condensates controlled by the vacuum stripper and the waste treatment aerated stabilization basin
13, 58	ES-02-PU-025 **MACT Subpart S**	Secondary Condenser		
13, 58	ES-02-PU-024 **MACT Subpart S**	Hot Water Accumulator		
13, 58	ES-02-PU-015 **MACT Subpart S**	A-Line Blow Tank		
13, 58	ES-02-PU-016 **MACT Subpart S**	B-Line Blow Tank		
13, 58	ES-02-PU-017 **MACT Subpart S**	C-Line Blow Tank		
13, 58	ES-02-PU-018 **MACT Subpart S**	A-Line Cyclone		
13, 58	ES-02-PU-019 **MACT Subpart S**	B-Line Cyclone		

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
13, 58	ES-02-PU-020 **MACT Subpart S**	C-Line Cyclone		
*	ES-02-ST-003-001*	Digester Ventilation System*	21-CD-004-001	Tall Oil Caustic Packed Tower Scrubber (nominal minimum pH of 10 for scrubber effluent)
G0210 - Stripper System				
14, 58	ES-02-PU-028 ES-02-PU-026 ES-02-PU-027 **NSPS Subpart BB** **MACT Subpart S**	Stripper Column Accumulator Overflow Tank Foul Condensate Tank	ES-09-PU-004 or ES-11-CU-001 ES-02-PU-028 ES-16-AS-020	Lime Kiln via closed LVHC NCG collection system, or No. 1 Power Boiler via closed LVHC NCG collection system, or No. 7 Recovery Furnace via closed LVHC NCG collection system Foul condensates controlled by the vacuum stripper and the waste treatment aerated stabilization basin
G0314 -Brown Stock Washing System				
62	ES-03-PU-011 to ES-03-PU-013 ES-03-PU-022 to ES-03-PU-024 **MACT Subpart S**	B-line 1st Stage to 3rd Stage Brownstock Washers C-line 1st Stage to 3rd Stage Brownstock Washers	ES-11-CU-001 or Flare	No. 1 Power Boiler via closed HVLC collection system, or temporary enclosed flare via closed HVLC collection system.
62	ES-03-PU-003 **MACT Subpart S**	A-line 1st Stage Brownstock Washer	NA	NA
62	ES-03-PU-004 **MACT Subpart S**	A-line 2nd Stage Brownstock Washer	NA	NA
62	ES-03-PU-005 **MACT Subpart S**	A-line 3rd Stage Brownstock Washer	NA	NA
62	ES-03-PU-006 **MACT Subpart S**	A-line 4th Stage Brownstock Washer	NA	NA
62	ES-03-TK-027 **MACT Subpart S**	A-line 1st Stage Filtrate Tank	NA	NA
62	ES-03-TK-028 **MACT Subpart S**	A-line 2nd Stage Filtrate Tank	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
62	ES-03-TK-029 **MACT Subpart S**	A-line 3rd Stage Filtrate Tank	NA	NA
62	ES-03-TK-030 **MACT Subpart S**	A-line 4th Stage Filtrate Tanks	NA	NA
62	ES-03-TK-031 **MACT Subpart S**	A-line Foam Tower	NA	NA
62	ES-03-TK-032 **MACT Subpart S**	B-line 1st Stage Filtrate Tank	NA	NA
62	ES-03-TK-033 **MACT Subpart S**	B-line 2nd Stage Filtrate Tank	NA	NA
62	ES-03-TK-034 **MACT Subpart S**	B-line 3rd Stage Filtrate Tank	NA	NA
62	ES-03-TK-035 **MACT Subpart S**	B-line Foam Tower	NA	NA
62	ES-03-TK-037**	Combined Reject Tank**	NA	NA
62	ES-03-TK-038 **MACT Subpart S**	C-line 1st Stage Filtrate Tank	NA	NA
62	ES-03-TK-039 **MACT Subpart S**	C-line 2nd Stage Filtrate Tank	NA	NA
62	ES-03-TK-040 **MACT Subpart S**	C-line 3rd Stage Filtrate Tank	NA	NA
62	ES-03-TK-041 **MACT Subpart S**	C-line Foam Tower	NA	NA
62	ES-03-TK-SRT **MACT Subpart S**	Screen Rejects Tank	NA	NA
G0719-Evaporator Group				
15, 58	ES-07-PU-004 **MACT Subpart S**	B-Line Evaporators	ES-09-PU-004 or ES-11-CU-001 ES-02-PU-028 ES-16-AS-020	Lime Kiln via closed LVHC NCG collection system, or No. 1 Power Boiler via closed LVHC NCG collection system, or No. 7 Recovery Furnace via closed LVHC NCG collection system Foul condensates controlled by the vacuum stripper and the waste treatment
15, 58	ES-07-PU-026 **MACT Subpart S**	B-Line Surface Condenser		
15, 58	ES-07-PU-007 **MACT Subpart S**	Condenser Seal Tank		
15, 58	ES-07-PU-008 **MACT Subpart S**	B-Line Hotwell		
15, 58	ES-07-PU-009 **MACT Subpart S**	C-Line Evaporators		
15, 58	ES-07-PU-024 **MACT Subpart S**	C-Line Concentrators		
15, 58	ES-07-PU-027 **MACT Subpart S**	C-Line Surface Condenser		

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
15, 58	ES-07-PU-013 **MACT Subpart S**	C-Line Hotwell		aerated stabilization basin
G0720 - Evaporator Area Miscellaneous Units				
*	ES-07-TK-WLTs*	Weak Black Liquor Storage*	NA	NA
G0827-No. 7 Recovery Furnace Group				
18, 64	ES-08-PU-012 **PSD,** **NSPS Subpart BB,** **MACT Subpart MM,** **MACT Subpart S** **control device**	No. 7 Recovery Furnace - black liquor solids/ultra low sulfur No. 2 fuel oil blended with black liquor solids/No. 6 fuel oil/No. 4 fuel oil-fired recovery furnace (504 million Btu per hour maximum permitted heat input rate from firing fuel oil)	08-CD-012-001	single stage, cold-side dry bottom electrostatic precipitator (140,000 square feet of plate area)
G0828-No. 7 Dissolving Tank Group				
16, 64	ES-08-PU-013 **PSD** **MACT Subpart MM**	No. 7 Smelt Dissolving Tank	08-CD-013-001	orifice-type wet scrubber (nominal pressure drop of 8 inches of water and 17 gallons per minute minimum liquid injection rate)
*	ES-08-PU-016*	No. 7 Saltcake Mix Tank*		
*	ES-08-PU-024*	No. 7 Precipitator Mix Tank 1*		
*	ES-08-PU-025*	No. 7 Precipitator Mix Tank 2*		
G0832-No. 7 Saltcake Silo Group				
24	ES-08-TK-014	No. 7 Saltcake Silo	08-CD-014-001	bin vent bagfilter (17 square feet of filter area)
G0829- Recovery Boiler Miscellaneous Units				
*	ES-08-TK-SLTs*	Strong Liquor Storage*	NA	NA
*	ES-08-TK-008*	Salt Cake Mix Tank*	NA	NA
*	ES-08-TK-CA*	Chemical Ash Tank*	NA	NA
G0936- Lime Kiln Group				

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
25, 65	ES-09-PU-004 **MACT Subpart S control device, Subpart MM**	Lime Kiln - No. 6 / No. 4 fuel oil / natural gas-fired (85.0 million Btu per hour nominal heat input rate)	09-CD-004-001	variable throat venturi-type wet scrubber (nominal pressure drop of 20 inches of water and 650 gallons per minute minimum water injection)
68	ES-09-PU-016	Lime Kiln Precoat Filter Vacuum Pump Vent	NA	NA
G0937- Lime Kiln Area Other Units				
69	ES-09-PU-LU* ES-09-PU-010 ES-09-TK-LMS*	Fresh Lime Unloading* Lime Precoat Filter Lime Mud Storage Tank*	NA	NA
69	ES-12-TK-001**	High density brownstock storage tank**	NA	NA
69	ES-12-TK-002**	High density brownstock storage tank**	NA	NA
69	ES-12-TK-003**	High density brownstock storage tank**	NA	NA
G1043-Recausticizing Other Units				
*	ES-10-TK-MMT*	Mud Mix Tank*	NA	NA
*	ES-10-PU-MWs*	Mud Washers*	NA	NA
69	ES-10-PU-001	Green Liquor Clarifier No. 1	NA	NA
69	ES-10-PU-002	Green Liquor Clarifier No. 2	NA	NA
*	ES-10-TK-GLCT*	Green Liquor Catch Tank*	NA	NA
*	ES-10-TK-GLS*	Green Liquor Storage*	NA	NA
*	ES-10-PU-DW*	Dregs Washer*	NA	NA
*	ES-10-TK-WWTs*	Weak Wash Storage*	NA	NA
*	ES-10-PU-WLCs*	White Liquor Clarifiers*	NA	NA
*	ES-10-PU-SGPs*	Slaker Grit Piles*	NA	NA
*	ES-10-TK-CTs*	Chemical Tanks*	NA	NA
*	ES-10-PU-023**	Primary Causticizer**	NA	NA
G1149-No. 1 Power Boiler Group				

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
27	ES-11-CU-001 **MACT Subpart S control device, Case by Case MACT**	No. 1 Power Boiler - coal/wood/ No. 6/No. 4 fuel oil-fired (550 million Btu per hour nominal heat input rate)	11-CD-001-001 (West scrubber) in parallel with 11-CD-001-002 (East scrubber)	two venturi scrubbers installed in parallel, (minimum pressure drop of 9.0 inches of water and minimum 1,560 gallons per minute injection, each)
G1150-Bark Feed System Group				
38	ES-11-TK-006	Hog Fuel Storage Bin	ES-11-PU-003	transfer cyclone (96 inches in diameter)
G1151-Sawdust Feed System Group				
38	ES-01-PU-020	Sawdust Blower	ES-11-PU-004 or ES-11-PU-003	transfer cyclone (84 inches in diameter) or transfer cyclone (96 inches in diameter)
G1152-No. 2 Package Boiler Group				
40	ES-11-CU-033 **Case by Case MACT**	No. 2 Package Boiler - No. 2/ No. 6 fuel oil-fired boilers (185 million Btu per hour nominal heat input)	NA	NA
G1153-No. 3 Package Boiler Group				
40	ES-11-CU-034 **Case by Case MACT**	No. 3 Package Boiler - No. 2/ No. 6 fuel oil-fired boiler (185 million Btu per hour nominal heat input)	NA	NA
No. 4 Package Boiler Group				
40	ES-11-CU-035 **NSPS Subpart Db, MACT Subpart DDDDD**	No. 4 Package Boiler – Natural gas/No. 2 fuel oil-fired boiler (245 million Btu per hour nominal heat input)	NA	NA
G1154-No. 1 Temporary Boiler Group				
49, 69	ES-11-CU-044	No. 2 fuel oil-fired temporary boiler (96 million Btu per hour maximum heat input)	NA	NA
G1155-No. 2 Temporary Boiler Group				
49, 69	ES-11-CU-045	No. 2 fuel oil-fired temporary boiler (96 million Btu per hour maximum heat input)	NA	NA
G1156-No. 3 Temporary Boiler Group				
49, 69	ES-11-CU-046	No. 2 fuel oil-fired temporary boiler (96 million Btu per hour maximum heat input)	NA	NA

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
G1157-No. 4 Temporary Boiler Group				
49, 69	ES-11-CU-047	No. 2 fuel oil-fired temporary boiler (96 million Btu per hour maximum heat input)	NA	NA
G1264-No. 3 Paper Machine Group				
69	ES-12-PU-002.1	No. 3 Paper Machine Wet End and Press Section	NA	NA
69	ES-12-PU-002.2	No. 3 Paper Machine Dryers	NA	NA
69	ES-12-PU-002.3	No. 3 Paper Winder Section	NA	NA
G1265-No. 4 Paper Machine Group				
69	ES-12-PU-003.1	No. 4 Paper Machine Wet End and Press Section	NA	NA
69	ES-12-PU-003.2	No. 4 Paper Machine Dryers	NA	NA
69	ES-12-PU-003.3	No. 4 Paper Winder Section	NA	NA
G1669-Biological wastewater Treatment Facility				
59	ES-16-AS-020 **MACT Subpart S Control Device**	Aerated Stabilization Basin (ASB)	NA	NA
G2073-Turpentine Recovery Group				
59	ES-20-PU-001 **MACT Subpart S**	North Turpentine Recovery Cyclone	ES-09-PU-004 or ES-11-CU-001	Lime Kiln via closed LVHC NCG collection system, or No. 1 Power Boiler via closed LVHC NCG collection system, or No. 7 Recovery Furnace via closed LVHC NCG collection system
59	ES-20-PU-002 **MACT Subpart S**	South Turpentine Recovery Cyclone		
59	ES-20-TK-003 **MACT Subpart S**	Sample Tank		
59	ES-20-PU-004 **MACT Subpart S**	North Turpentine Condenser		
59	ES-20-PU-005 **MACT Subpart S**	South Turpentine Condenser		
59	ES-20-PU-006 **MACT Subpart S**	Secondary Turpentine Condenser		
59	ES-20-PU-007 **MACT Subpart S**	Turpentine Heater		
58	ES-20-TK-008 **MACT Subpart S**	Primary Turpentine Decanter Underflow Tank		
59	ES-20-PU-009 **MACT Subpart S**	Secondary Turpentine Decanter		
59	ES-20-TK-011 **MACT Subpart S**	Secondary Turpentine Decanter Underflow Tank		

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
59	ES-20-PU-010 **MACT Subpart S**	Primary Turpentine Decanter		
*	ES-20-TK-010*	Turpentine Storage*		
G2177-Tall Oil Plant				
69	ES-21-PU-004	Tall Oil Reactor	21-CD-004-001	Tall Oil Caustic Packed Tower Scrubber (nominal minimum pH of 10 for scrubber effluent)
69	ES-21-TK-005	No. 1 Tall Oil Decanter		
69	ES-21-TK-006	No. 2 Tall Oil Decanter		
69	ES-21-TK-007	No. 3 Tall Oil Decanter		
69	ES-21-TK-008	Lignin Layer Tank		
69	ES-21-PU-009	Resaponification Tank		
Emergency Reciprocating Internal Combustion Engines				
54	ES-FP-001 **MACT Subpart ZZZZ**	Diesel-fired fire water pump (0.95 million Btu per hour maximum heat input)	NA	NA
54	ES-EG-001 **MACT Subpart ZZZZ**	Diesel-fired No. 7 Recovery Rapid Drain emergency generator (0.26 million Btu per hour maximum heat input)	NA	NA
54	ES-EG-002 **MACT Subpart ZZZZ**	Diesel-fired No. 7 Recovery emergency lighting generator (0.04 million Btu per hour maximum heat input)	NA	NA
54	ES-09-PU-017 **NSPS Subpart IIII, MACT Subpart ZZZZ**	Diesel-fired lime kiln pony motor (0.39 million Btu per hour maximum heat input)	NA	NA
54	ES-EG-003A **NSPS Subpart IIII, MACT Subpart ZZZZ**	Diesel-fired No. 7 Recovery emergency lighting generator (25 KW)	NA	NA
Flare				
58	Flare **MACT Subpart S control device**	Temporary enclosed flare - Liquefied petroleum gas fired (42 million Btu/hr nominal heat input rate)	NA	NA

*Sources identified with one asterisk have no applicable requirements under the North Carolina SIP, but their emissions are greater than the thresholds under 15A NCAC 02Q .0503(8); these sources are permitted pursuant to 15A NCAC 02Q .0508(i)(15).
**Sources identified with two asterisks are only subject to State-Only toxic air emissions limitations under 15A NCAC 02D .1100.
***These emission sources (ID Nos. ES-09-12.0250 and ES-09-12.0050) are listed as a 15A NCAC 02Q .0501(c)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

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. Three Bark/Fines Transfer Cyclones (ID Nos. ES-01-PU-016 through ES-01-PU-018) Sawdust Transfer Cyclone (ID No. ES-01-PU-019) Boiler Fuel Silo (ID No. ES-01-PU-021)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	**$E = 4.10 \times P^{0.67}$** for $P \leq 30$ tons per hour, OR **$E = 55.0 \times P^{0.11} - 40$** for $P > 30$ tons per hour Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from the Bark/Fines Transfer Cyclones **(ID Nos. ES-01-PU-016 through ES-01-PU-018),** Sawdust Transfer Cyclone **(ID No. ES-01-PU-019**) and **Boiler Fuel Silo (ID No. ES-01-PU-021)** shall not exceed an allowable emission rate as calculated by the following equations:

$E = 4.10 \times P^{0.67}$ for process rates $\leq$ 30 tons per hour, or
$E = 55.0 \times P^{0.11} - 40$ for process rates > 30 tons per hour

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

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

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

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

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

c. The Permittee shall maintain records for these sources **(ID Nos. ES-01-PU-016 through ES-01-PU-019 and ES-01-PU-021**) 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 these records are not maintained.

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

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

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

a. Visible emissions from the Bark/Fines Transfer Cyclones **(ID Nos. ES-01-PU-016 through ES-01-PU-018),** Sawdust Transfer Cyclone **(ID No. ES-01-PU-019**) and **Boiler Fuel Silo (ID No. ES-01-PU-021)** shall not be more than **20 percent opacity** when averaged over a six-minute period. However, six-minute averaging periods may

exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources 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 operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A. 2. a. above.

   If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

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 activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. The permittee shall have one year from the date of the initial operation of any of the new sources in Section 2.1 A. to file an amended application following the procedures of Section 15A NCAC 02Q .0500.

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

b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of this source; postmarked no later than 30 days after such date.

B. Digester System (ID No. G0208) consisting of:

- **Twelve (12) batch digesters - No. 7 Digester through No. 12 and No. 14 through No. 19 Digester (ID Nos. ES-02-PU-003 to ES-02-PU-014);**
- **Blowtank A (ID No. ES-02-PU-015);**
- **Blowtank B (ID No. ES-02-PU-016);**
- **Blowtank C (ID No. ES-02-PU-017);**
- **Cyclone A (ID No. ES-02-PU-018);**
- **Cyclone B (ID No. ES-02-PU-019);**
- **Cyclone C (ID No. ES-02-PU-020);**
- **Hot Water Accumulator (ID No. ES-02-PU-024); and**
- **Secondary Condenser (ID No. ES-02-PU-025).**

Odorous gases controlled by LVHC NCG Collection System routed to Lime Kiln (ID No. ES-09-PU-004) or No. 1 Power Boiler (ID No. ES-11-CU-001); and foul condensates controlled by vacuum stripper (ID No. ES-02-PU-028) and waste treatment aerated stabilization basin (ID No. ES-16-AS-020).

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0528
Hazardous air pollutants	See Permit Condition 2.2 A	15A NCAC 02D .1111 (40 CFR Part 63 Subpart S)

1. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed **5 parts per million corrected to 10 percent oxygen** from any digester system, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time periods. [15A NCAC 02D .0528]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 B. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528

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

c. The digester system emission sources shall comply with the limitation above by ensuring the following:
   i. The gases are combusted in the Lime Kiln **(ID No. ES-09-PU-004**); or
   ii. The gases are combusted in the No. 1 Power Boiler **(ID No. ES-11-CO-001).**

d. The Permittee shall follow the closed vent inspection procedures in Section 2.2 A to ensure that the emissions are routed to either the Lime Kiln **(ID No. ES-09-PU-004)** or No. 1 Power Boiler **(ID No. ES-11-CO-001)** as specified above. The Permittee shall be deemed in noncompliance with 02D .0528 if these procedures are not followed or if the records are not maintained.

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

e. The Permittee shall comply with the Subpart S reporting requirements as specified in Section 2.2-A.1.m-n.

C. Condensate Stripper System (ID No. G0210) consisting of:

- **Stripper Column (ID No. ES-02-PU 028);**
- **Accumulator Overflow Tank (ID No. ES-02-PU-026); and**
- **Foul Condensate Tank (ID No. ES-02-PU-027).**

Odorous gases controlled by LVHC NCG Collection System routed to Lime Kiln (ID No. ES-09-PU-004) or No. 1 Power Boiler (ID No. ES-11-CU-001); and foul condensates controlled by Waste Treatment Aerated Stabilization Basin (ID No. ES-16-AS-020).

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0524 (40 CFR Part 60 Subpart BB
Hazardous air pollutants	See Permit Condition 2.2 A	15A NCAC 02D .1111 (40 CFR Part 63 Subpart S)

1. 15A NCAC 02D .0524: NSPS 40 CFR 60 SUBPART BB

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR 60 Subpart BB, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emissions Limitations [15A NCAC 02D .0524]

b. No owner or operator shall cause to be discharged into the atmosphere any gases which contain total reduced sulfur (TRS) in excess of **5 ppm by volume measured as hydrogen sulfide on a dry basis, corrected to 10 percent oxygen**, unless the following conditions are met [40 CFR 60, 40 CFR 60.283(a)(1)]:
   i. The gases are combusted in the Lime Kiln **(ID No. ES-09-PU-004)**; or
   ii. The gases are combusted with other waste gases in the No. 1 Power Boiler **(ID No. ES-11-CO-001)** and are subjected to a minimum temperature of 650 °C (1200 °F) for at least 0.5 seconds.

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

c. The Permittee shall follow the closed vent inspection procedures in Section 2.2 A to ensure that the emissions are routed to either the Lime Kiln **(ID No. ES-09-PU-004)** or No. 1 Power Boiler **(ID No. ES-11-CO-001**) as specified above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these procedures are not followed or if the records are not maintained.

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

d. The Permittee shall report excess emissions in accordance with 40 CFR § 60.284(d).

e. The Permittee shall comply with the Subpart S reporting requirements as specified in Section 2.2-A.1.m-n.

D. The Evaporator Area (ID No. G0719) consisting of:

- **B-Line Evaporators (ID No. ES-07-PU-004);**
- **B-Line Surface Condenser (ID No. ES-07-PU-026);**
- **Condenser Seal Tank (ID No. ES-07-PU-007);**
- **B-Line Hotwell (ID No. ES-07-PU-008);**
- **C-Line Evaporators (ID No. ES-07-PU-009);**
- **C-Line Concentrators (ID No. ES-03-PU-024);**
- **C-Line Surface Condenser (ID No. ES-07-PU-027); and**
- **C-Line Hotwell (ID No. ES-07-PU-013.**

Odorous gases controlled by LVHC NCG Collection System routed to Lime Kiln (ID No. ES-09-PU-004) or No. 1 Power Boiler (ID No. ES-11-CU-001); and foul condensates controlled by Waste Treatment Aerated Stabilization Basin (ID No. ES-16-AS-020).

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0528
Hazardous air pollutants	See Permit Condition 2.2 A	15A NCAC 02D .1111 (40 CFR Part 63 Subpart S)

1. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed **5 parts per million corrected to 10 percent oxygen** from any evaporator system, measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time periods. [15A NCAC 02D .0528]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528.

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

c. The evaporator system emission sources, shall comply with the limitation above by ensuring the following:
   i. The gases are combusted in the Lime Kiln **(ID No. ES-09-PU-004)**; or
   ii. The gases are combusted in the No. 1 Power Boiler **(ID No. ES-11-CO-001)**.

d. The Permittee shall follow the closed vent inspection procedures in Section 2.2 A to ensure that the emissions are routed to either the Lime Kiln **(ID No. ES-09-PU-004)** or No. 1 Power Boiler **(ID No. ES-11-CO-001**) as specified above. The Permittee shall be deemed in noncompliance with 02D .0528 if these procedures are not followed or if the records are not maintained.

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

e. The Permittee shall comply with the Subpart S reporting requirements as specified in Section 2.2-A.1.m and n.

E. No. 7 Dissolving Tank Group (ID No. G0828) consisting of:

- **No. 7 Smelt Dissolving Tank (ID No. ES-08-PU-013);**
- **No. 7 Saltcake Mix Tank (ID No. ES-08-PU-016); and**
- **No. 7 Precipitator Mix Tanks 1 and 2 (ID Nos. ES-08-PU-024 and ES-08-PU-025).**

Controlled by No. 7 Smelt Dissolver Scrubber (ID No. 08-CD-013-001).

The following table provides a summary of limits and standards for the Smelt Dissolving Tanks:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.6 pounds per equivalent tons of air dried pulp	15A NCAC 02D .0508
Visible Emissions	**Affected Source: No. 7 Smelt Tank (ID No. ES-08-PU-013)** 20 percent opacity	15A NCAC 02D .0521
Total Reduced Sulfur (TRS)	0.032 pounds per ton of black liquor solids (BLS).	15A NCAC 02D .0528
Particulate Matter	**Affected Source: No. 7 Smelt Tank (ID No. ES-08-PU-013)** 0.2 lb per ton BLS dry weight	15A NCAC 02D .0530
Hazardous air pollutants	See Permit Condition 2.2 C	15A NCAC 02D .1111 (40 CFR Part 63 Subpart MM)

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the No. 7 Smelt Dissolving Tank **(ID No. ES-08-PU-013)** into the atmosphere shall not exceed **0.6 pounds of particulate matter per equivalent tons of air-dried pulp**. [15A NCAC 02D .0508(a)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

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

c. To ensure compliance, the Permittee shall comply with the 40 CFR 63 Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 C 1.f-q of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the monitoring is not conducted or the records are not maintained.

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

a. Visible emissions from the No. 7 Smelt Dissolving Tank **(ID Nos. ES-08-PU-013)** 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. [15A NCAC 02D .0521 (d)]

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

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

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

c. The No. 7 smelt dissolving tank stack has a wet plume. No visible emissions monitoring is required. To ensure compliance, the Permittee shall comply with the 40 CFR 63 Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 C 1.f-q of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not conducted or the records are not maintained.

3. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed 0.**032 pounds per ton of black liquor solids (dry weight)**, measured as hydrogen sulfide, from any smelt dissolving tank. [15A NCAC 02D .0528]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 E. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528.

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

c. To ensure compliance, the Permittee shall follow the 40 CFR 63 Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 C 1.f-q of this permit. The Permittee shall be deemed in noncompliance with 02D .0528 if the monitoring is not conducted or the records are not maintained.

4. 15A NCAC 02Q.0317 "Avoidance Conditions for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION"

a. The emissions of particulate matter shall not exceed **0.2 pounds per ton of black liquor solids (dry weight)** from the No. 7 Smelt Dissolving Tank **(ID Nos. ES-08-PU-013)**. [15A NCAC 02D .0530]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1E 4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. To ensure compliance, the Permittee shall follow the 40 CFR 63 Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 C 1.f-q of this permit. The Permittee shall be deemed in noncompliance with 02D .0530 if the monitoring is not conducted or the records are not maintained.

F. No. 7 Recovery System (ID No. G0827) consisting of No. 7 Recovery Furnace (ID No. ES-08-PU-012) firing black liquor solids (BLS), ultra low sulfur No. 2 fuel oil blended with BLS, No.4 fuel oil, and No. 6 fuel oil /504 million Btu per hour maximum permitted heat input rate from firing fuel oil) controlled by No. 7 Precipitator (ID No. 08-CD-004-001).

The following table provides a summary of limits and standards for the No. 7 Recovery Furnace:

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	3.0 pounds per equivalent tons of air dried pulp	15A NCAC 02D .0508
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Particulate Matter	0.10 g/dscm (0.044grains/dscf) corrected 8 percent oxygen	15A NCAC 02D .0524 (40 CFR 60 Subpart BB)
Total Reduced Sulfur (TRS)	5 ppm by volume on a dry basis, corrected to 8 percent oxygen	
Visible Emissions	Visible emissions shall not be more than 35 percent opacity	
Particulate Matter	0.021 grains/dscf corrected to 8 percent oxygen; and 144 tons per consecutive 12 month period	15A NCAC 02D .0530
Sulfur Dioxide	75 ppm corrected to 8 percent oxygen, (annual rolling average); 110 ppm corrected to 8 percent oxygen, (3-hour average); and 571 tons per consecutive 12 month period	
Nitrogen Oxides	100 ppm corrected to 8 percent oxygen, (30-day rolling average); and 626 tons per consecutive 12 month period	
Carbon Monoxide	300 ppm corrected to 8 percent oxygen, (8-hour rolling average); and 1,042 tons per consecutive 12 month period	
Volatile Organic Compounds (VOCs)	50 ppm corrected to 8 percent oxygen, (24-hour rolling average); and 95 tons per consecutive 12 month period	
Total Reduced Sulfur (TRS)	5 ppm corrected to 8 percent oxygen, (12-hour average); and 21 tons per consecutive 12 month period	
Nitrogen Oxides	Annual tracking report while burning ultra low sulfur No. 2 fuel oil with black liquor solids	15A NCAC 02D .0530(u)
Sulfur Dioxide	Compliance assurance monitoring	15A NCAC 02D .0608
HAP Emissions	See Permit Condition 2.2 C	15A NCAC 02D .1111 (40 CFR 63 Subpart MM)

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the No. 7 Recovery Furnace (**ID No. ES-08-PU-012)** into the atmosphere shall not **exceed 3.0 pounds of particulate matter per equivalent tons of air dried pulp (ADTP)**. [15A NCAC 02D .0508(a)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1.F.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emissions limit above by testing the No. 7 Recovery Furnace for filterable and condensible particulate matter in accordance with Section 3 – General Condition JJ and a testing protocol approved by the DAQ. During each test, the Permittee shall record and include in the test report, the results of the monitoring requirements for this source as specified in Section 2.2 C pursuant to 40 CFR 63 Subpart MM. The Permittee shall perform stack testing once every five years and conduct the next stack test no later than **July 10, 2017**. The Permittee shall submit the test results (as lbs/ADTP and as either in g/dscf or gr/dscm) to the DAQ along with the Section 2.2.C parameter monitoring results. If the results of the testing demonstrate the emissions are equal to or greater than 80 percent of the limit above, the testing frequency shall be increased to once every calendar year until the results return to less than 80 percent of the limit. If any stack test demonstrates emissions are above the limit given in Section 2.1.F.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

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

d. Particulate matter emissions from the No. 7 Recovery Furnace shall be controlled by the No. 7 Precipitator **(ID No. 08-CD-004-001)**. To assure compliance with the particulate matter standard, the Permittee shall comply with the 40 CFR 63 Subpart MM monitoring and recordkeeping requirements as specified in Section 2.2 C of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the monitoring and recordkeeping is not conducted.

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

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

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

a. Emissions of sulfur dioxide from the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 F. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. The maximum sulfur content of any No. 4 or No. 6 fuel oil received and burned in the recovery furnace shall not exceed **2.1 percent by weight**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur content of the fuel oil exceeds this limit.

d. To ensure compliance, the Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. the name of the fuel oil supplier;
   ii. the sulfur and heat content of each shipment of fuel oil received during the quarter;
   iii. the method used to determine the sulfur and content of the fuel oil; and
   iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur and heat content of the oil is not monitored and recorded.

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

e. The Permittee shall submit a summary report of the fuel oil supplier certifications 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 Permittee shall submit a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

3. 15A NCAC 02D .0524: NSPS 40 CFR 60 SUBPART BB

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR 60 Subpart BB, including Subpart A "General Provisions."[15A NCAC 02D .0524]

Emissions Limitations [15A NCAC 02D .0524]

b. Per 40 CFR 60 Subpart BB, emissions from the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** shall not exceed:
   i. **0.10 g/dscm (0.044 gr/dscf) of particulate matter corrected to 8 percent oxygen**. [40 CFR 60.282(a)(1)(i)];
   ii. **35 percent opacity** [40 CFR 60.282(a)(1)(ii)]; or
   iii. **5 ppm of TRS by volume on a dry basis, corrected to 8 percent oxygen** based on a 12-hour average [40 CFR 60.283(a)(2) and 60.284(c)].

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

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the particulate matter limit above by testing the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** for particulate matter in accordance with General Condition JJ and a testing protocol approved by the DAQ. The Permittee shall perform stack testing on or before **July 10, 2017** and once every five years, thereafter and submit the test results to the DAQ. If the results of the testing demonstrate the emissions are equal to or greater than 80 percent of the particulate limit in 2.1 F. 3. b. i. above, the testing frequency shall be increased to once every calendar year until the results return to less than 80 percent of the limit. If any stack test demonstrates emissions are above the limit given in Section 2.1 F. 3. b..i. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

d. Particulate matter emissions from the No. 7 Recovery Furnace shall be controlled by the No. 7 Precipitator **(ID No. 08-CD-004-001)**. To ensure compliance, the Permittee shall comply with the 40 CFR 63 Subpart MM monitoring, recordkeeping and reporting requirements as specified in Section 2.2 C of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these parameters are not monitored or these records are not maintained.

e. 40 CFR § 60.284(a)(1) – The Permittee shall calibrate, maintain, and operate a continuous monitoring system to monitor and record the opacity of the gases discharged into the atmosphere from the No. 7 Recovery Furnace. The span of this system shall be set at 70 percent opacity. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the opacity is not monitored or these records are not maintained.

f. 40 CFR § 60.284(a)(2) - The Permittee shall calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) to monitor and record the concentration of total reduced sulfur (TRS) emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the atmosphere The Permittee shall locate the CEMS downstream of the No. 7 Precipitator and set the CEMS spans as follows:
   i. At a TRS concentration of 30 ppm for the TRS CEMS.
   ii. At 25 percent oxygen for the oxygen CEMS.

g. The CEMS shall be operated in accordance with the applicable requirements of 40 CFR 60 Appendix B and Appendix F unless an alternative monitoring and quality assurance program is approved by the DAQ. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these TRS, oxygen, and opacity are not monitored or if the emissions records are not maintained.

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

h. The Permittee shall follow 40 CFR § 60.284(d) for reporting of excess emissions.

i. The Permittee shall submit a quarterly summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limits shall not be exceeded when the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** is fired exclusively with Black Liquor Solids (BLS) or ultra low sulfur No. 2 fuel oil blended with BLS:

Pollutant	BACT Emission Limits
Particulate Matter	0.021 grains/dscf corrected to 8 percent oxygen; and 144 tons per consecutive 12 month period
Sulfur Dioxide	75 ppm corrected to 8 percent oxygen, (annual rolling average); 110 ppm corrected to 8 percent oxygen, (3-hour average); and 571 tons per consecutive 12 month period
Nitrogen Oxides	100 ppm corrected to 8 percent oxygen, (30-day rolling average); and 626 tons per consecutive 12 month period
Carbon Monoxide	300 ppm corrected to 8 percent oxygen, (8-hour rolling average); and 1,042 tons per consecutive 12 month period
Volatile Organic Compounds (VOCs)	50 ppm corrected to 8 percent oxygen, (24-hour rolling average); and 95 tons per consecutive 12 month period
Total Reduced Sulfur (TRS)	5 ppm corrected to 8 percent oxygen, (12-hour average); and 21 tons per consecutive 12 month period

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above, one or more of the limits given in Section 2.1 F.4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits above by testing the No. 7 Recovery Furnace, while firing BLS or ultra low sulfur No. 2 fuel oil blended with BLS, for particulate matter, carbon monoxide, nitrogen oxides[1], sulfur dioxide, and VOCs emissions in accordance with a General Condition JJ and submitting the results to the DAQ. Testing shall be completed on or before July 10, 2017 and once every five years, thereafter. However, if the results of the testing demonstrate emissions of any pollutant are equal to or greater than 80 percent of the respective emission limit in 2.1 F.4.a above, the testing frequency for that pollutant shall be increased to once every calendar year until the stack test results return to less than 80 percent of the limit. If any stack test demonstrates emissions are above a limit given in Section 2.1 F.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

d. The Permittee shall conduct a stack test for particulate matter within sixty calendar days of any one-hour average opacity reading in exceedance of twenty percent excluding periods of startup, shutdown, or malfunction as provided in 15A NCAC 02D .0535. The testing shall be performed in accordance with General Condition JJ. If the Permittee fails to complete a required stack test as provided above, or if the results of this test are above the particulate matter limit given in Section 2.1 F.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

e. To ensure compliance, the Permittee shall calibrate, maintain, and operate continuous emissions monitoring systems (CEMs) as specified in Section 2.1.F.3.e to g above to determine total reduced sulfur (TRS) emissions (dry basis, corrected to 8 percent oxygen) , and opacity for the No. 7 Recovery Furnace **(ID No. ES-08-PU-012).**

f. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if TRS and opacity are not monitored or if any 12-hour average TRS emissions exceeds the emission limit in Section 2.1.F.4.a above.

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[1] The Permittee may use a continuous emissions monitoring system (CEMS) to monitor nitrogen oxide emissions in place of testing. If used, the CEMS shall be operated in accordance with the applicable requirements of 40 CFR 60 Appendix B and Appendix F or an alternative monitoring and quality assurance program approved by the DAQ and a summary of the CEMS monitoring shall be included with the quarterly reports required in Section 2.1.F.4.i. If any 30-day nitrogen oxides average exceeds 100 ppm corrected to 8 percent oxygen, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

g. To ensure that emissions are less than the annual limits in Section 2.1 F.4.a above, emissions shall be determined as follows:

Filterable Particulate Matter (FPM)
The most recent approved stack test result shall be used to demonstrate compliance with the FPM limits. Annual emissions of FPM shall be determined in accordance with the following equation.

$$\text{FPM Emissions (TPY)} = \sum_{d=1}^{365} \frac{FPM\ Stack\ Test\ Factor, lb}{TBLS} x \frac{TBLS}{day_d} x \frac{ton}{2000\ lb}$$

FPM Emissions = sum of emissions over the past 365 days, (TPY)
FPM Stack Test Factor = emission factor from most recent approved FPM emissions stack test, (lb/TBLS)
Firing Rate = daily TBLS firing rate, (TBLS/day)

Sulfur Dioxide (SO_2)
The most recent approved stack test result shall be used to demonstrate compliance with the SO_2 limits. Annual emissions of SO_2 shall be determined in accordance with the following equation.

$$SO_2\ \text{Emissions (TPY)} = \sum_{d=1}^{365} \frac{SO_2\ Stack\ Test\ Factor, lb}{TBLS} x \frac{TBLS}{day_d} x \frac{ton}{2000\ lb}$$

SO_2 Emissions (TPY) = sum of emissions over the past 365 days, (TPY)
SO_2 Stack Test Factor = emission factor from most recent approved SO_2 emissions stack test, (lb/TBLS)
Firing Rate = daily TBLS firing rate, (TBLS/day)

Nitrogen Oxides (NO_X)
Emissions of Nitrogen Oxides shall be determined using a continuous emissions monitoring system (CEMS) meeting the requirements of 40 CFR Part 60 Appendix B and Appendix F (or an alternative monitoring and quality assurance program approved by DAQ) to demonstrate compliance with the 100 ppm at 8% O_2 (30-day rolling average) limit and to calculate annual NO_X emissions in accordance with the following equation.

$$NO_x\ \text{Emissions (TPY)} = \sum_{d=1}^{365} daily\ avg\ \ ppm\ x \frac{46\ lb\ NO_x}{lbmol} x \frac{lbmol}{386.3\ ft^3} x \frac{daily\ avg\ flow, ft^3}{min} x \frac{60\ min}{hr} x \frac{24\ hr}{day_d} x \frac{ton}{2000\ lb}$$

NO_X Emissions = sum of emissions over the past 365 days, (TPY)
Daily avg ppm = daily average NO_x concentration data from CEMS, (ppm)
46 lb NO_X/lbmol = molecular weight of NO_X, (lb NO_X/lbmol)
Avg daily flow = average flow measured from the most recent approved stack test, (ft^3/min)

Carbon Monoxide (CO)
The most recent approved stack test result shall be used to demonstrate compliance with the CO limits. Annual emissions of CO shall be determined in accordance with the following equation.

$$CO\ \text{Emissions (TPY)} = \sum_{d=1}^{365} \frac{CO\ Stack\ Test\ Factor, lb}{TBLS} x \frac{TBLS}{day_d} x \frac{ton}{2000\ lb}$$

CO Emissions = sum of emissions over the past 365 days, (TPY)
CO Stack Test Factor = emission factor from most recent approved CO emissions stack test, (lb/TBLS)
Firing Rate = daily TBLS firing rate, (TBLS/day)

Volatile Organic Compounds (VOC)
The most recent approved stack test result shall be used to demonstrate compliance with the VOC limits. Annual emissions of VOC shall be determined in accordance with the following equation.

$$VOC\ \text{Emissions (TPY)} = \sum_{d=1}^{365} \frac{VOC\ Stack\ Test\ Factor, lb}{TBLS} x \frac{Firing\ Rate, TBLS}{day_d} x \frac{ton}{2000\ lb}$$

VOC Emissions = sum of emissions over the past 365 days (TPY)
VOC Stack Test Factor = emission factor from most recent approved VOC emissions stack test, (lb/TBLS)
Firing Rate = daily TBLS firing rate, (TBLS/day)

Total Reduced Sulfur (TRS)
Emissions of Total Reduced Sulfur shall be determined using a continuous emissions monitoring system (CEMS) to

demonstrate compliance with the 5 ppm at 8% O_2 (12-hr rolling average) limit and to calculate annual TRS emissions in accordance with the following equation.

$$TRS\ \text{Emissions (TPY)} = \sum_{d=1}^{365} daily\ avg\ \ ppm\ x \frac{34\ lb\ TRS}{lbmol} x \frac{lbmol}{386.3\ ft^3} x \frac{daily\ avg\ flow, ft^3}{min} x \frac{60\ min}{hr} x \frac{24\ hr}{day_d} x \frac{ton}{2000\ lb}$$

TRS Emissions	= sum of emissions over the past 365 days, (TPY)
Daily avg ppm	= daily average TRS concentration data from CEMS, (ppm)
34 lb TRS/lbmol	= molecular weight of TRS as H_2S, (lb TRS/lbmol)
Avg daily flow	= average flow measured from the most recent approved stack test, (ft^3/min)

i. The total amount of No. 6 and No. 4 fuel oil fired in the No. 7 Recovery Furnace shall not exceed **744,000 gallons per consecutive 12-month period**.

Documentation of the most recent approved, by DAQ – Stationary Source Compliance Branch (SSCB), stack test results shall determine the value of the following:
$FPM_{\text{Stack Test Factor}}$;
$SO_{2\text{Stack Test Factor}}$;
$NO_{x\text{Daily Average Flow}}$;
$CO_{\text{Stack Test Factor}}$;
$VOC_{\text{Stack Test Factor}}$; and
$TRS_{\text{Daily Average Flow}}$

Following approval of initial and subsequent completed performance tests for reestablishing operating parameters and stack test factors as noted above, the Permittee shall use the accepted operating parameters and stack test factors to demonstrate compliance with the FPM, SO_2, NOx, CO, VOC and TRS limits.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the annual emissions exceed the annual limits in Section 2.1 F.4.a above or the fuel usage rate exceeds the limits detailed above.

h. To ensure compliance, the Permittee shall maintain records as follows:
   i. The Permittee shall record and maintain records of the amounts (in tons) of BLS fired in the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** per 24 hours and;
   ii. The Permittee shall record and maintain records of the amounts (in gallons) of fuel oil burned in the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** during each month and;

   The record of the amounts of BLS (in tons) per 24 hours and fuel oil (in gallons) burned during each month shall be made available to an authorized representative of DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the BLS firing rate or fuel usage rate exceeds the limits detailed above.

   <u>Reporting</u> [15A NCAC 02Q .0508 (f)]

i. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. The report shall contain the following for this source:
   i. the TRS, FPM, SO2, NOx, CO and VOC emissions and amount of No. 6 and No. 4 fuel oil fired per month for the previous 14 months. The emissions and total fuel oil use must be calculated for each of the 12-month periods over the previous 14 months;
   ii All instances of deviations from the requirements of this permit must be clearly identified.

5. 15A NCAC 02D .0608 OTHER LARGE COAL OR RESIDUAL OIL BURNERS

The Permittee shall determine sulfur dioxide emissions from the No. 7 Recovery Furnace **(ID No. ES-08-PU-012)** in accordance with 15A NCAC 02D .0608 if the annual average capacity factor for residual fuel oil during the three most recent calendar years is greater than 30 percent

G. No. 7 Saltcake Silo Group (ID No. G0832) consisting of No. 7 Saltcake Silo (ID No. ES-08-TK-014) controlled by Bin Vent Bagfilter (ID No. 08-CD-014-001)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	**$E = 4.10 \times P^{0.67}$** for $P \leq 30$ tons per hour, -OR- **$E = 55.0 \times P^{0.11} - 40$** for $P > 30$ tons per hour Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$E = 4.10 \times P^{0.67}$ for process rates $\leq$ 30 tons per hour, or
$E = 55.0 \times P^{0.11} - 40$ for process rates > 30 tons per hour

Where: E = allowable emission rate in pound per hour
P = process weight rate 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 G.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 this source shall be controlled by the bagfilter. To assure compliance, the Permittee shall perform inspections and maintenance, 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 calendar year not to exceed 14 months from the previous 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 bagfilter 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 bagfilter; and
   iv. any 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 bagfilter within 30 days of a written request by the DAQ.

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

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

a. Visible emissions from this source 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. [15A NCAC 02D .0521 (d)]

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

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

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

c. To assure compliance, the Permittee shall conduct observations of the visible emissions from the bagfilter exhaust stack once each quarter and on three separate days, during silo loading, each 12 month period. Each quarterly observation made during silo loading may count as one of the three annually required silo loading VE observations. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions 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 during silo loading in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 G. 2.a. above.

   If the Permittee elects to take action pursuant to paragraph (i) above and the emissions observation is still not normal, the Permittee will be deemed in noncompliance with 15A NCAC 02D .0521 unless, within the same monitoring period, the demonstration required in paragraph (ii) is performed and recorded. Alternatively, the Permittee may take action in accordance with (ii) directly.

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 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.

H. Lime Kiln System (ID No. G0936) consisting of Lime Kiln (ID No. ES-09-PU-004 – No. 6/No. 4 fuel oil/Natural Gas/NCGs-fired (85 million Btu per hour nominal heat input rate) controlled by Scrubber (ID No. 09-CD-004-001)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.5 pounds per equivalent tons of air dried pulp	15A NCAC 02D .0508
Sulfur Dioxide	2.3 pound per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	40 percent opacity	15A NCAC 02D .0521
Total Reduced Sulfur (TRS)	20 ppm by volume on a dry basis, corrected to 10 percent oxygen	15A NCAC 02D .0528
Hazardous air pollutants	See Permit Condition 2.2 C	15A NCAC 02D .1111 (40 CFR 63 Subpart MM)

1. 15A NCAC 02D .0508: PARTICULATES FROM PULP AND PAPER MILLS

a. Emissions from the production of pulp and paper that are discharged from the Lime Kiln **(ID No. ES-09-PU-004)** into the atmosphere shall not exceed **0.5 pounds of particulate matter per equivalent tons of air dried pulp**. [15A NCAC 02D .0508(a)]

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

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ utilizing EPA Methods 1 through 5 or other test methods per a DAQ-approved test protocol. If the results of this test are above the limit given in Section 2.1 H.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508.

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

c. To ensure compliance, the Permittee shall comply with the 40 CFR 63 Subpart MM monitoring, recordkeeping, and reporting requirements as specified in Section 2.2 C of this permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0508 if the monitoring is not conducted or the records are not maintained.

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

a. Emissions of sulfur dioxide from the Lime Kiln **(ID No. ES-09-PU-004)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 H.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. The maximum sulfur content of any No. 4 or 6 fuel oil received and burned in the Lime Kiln **(ID No. ES-09-PU-004)** shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur content of the fuel oil exceeds this limit.

d. To ensure compliance, the Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. the name of the fuel oil supplier;
   ii. the sulfur and heat content of each shipment of fuel oil received during the quarter; and
   iii. the method used to determine the sulfur and heat content of the fuel oil; and
   iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur and heat content of the oil is not monitored and recorded.

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

e. The Permittee shall submit a summary report of the fuel oil supplier certifications 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 Permittee shall submit a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

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

a. Visible emissions from the Lime Kiln **(ID Nos. ES-09-PU-004)** shall not be more than **40 percent opacity** when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 02D .0521 (c)]

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

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

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

c. The Lime Kiln has a wet plume. No visible emissions monitoring is required. To ensure compliance, the Permittee shall follow the monitoring, recordkeeping, and reporting requirements in Section 2.2 H.1 c. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not conducted or the records are not maintained.

4. 15A NCAC 02D .0528: TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

a. The emissions of total reduced sulfur shall not exceed **20 ppm by volume on a dry basis, corrected to 10 percent oxygen** from the Lime Kiln **(ID No. ES-09-PU-004),** measured as hydrogen sulfide on a dry gas basis and averaged per discrete contiguous 12-hour time periods. [15A NCAC 02D .0528]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 H.4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f); 02D .0611; 02D .0613]

c. To ensure compliance, the Permittee shall calibrate, maintain, and operate a continuous monitoring system for determining the total reduced sulfur (as hydrogen sulfide, dry basis, corrected to 10 percent oxygen) emissions discharged to the atmosphere and record the output of the system. The continuous monitoring system shall be operated in accordance with the applicable requirements of 40 CFR 60 Appendix B and Appendix F unless an alternative monitoring and quality assurance program is approved by the DAQ. If any 12-hour block average exceeds the limit above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0528, except that two percent of all 12-hour total reduced sulfur averages per quarter year in excess of the limitation given above, in the absence of start-ups, shutdowns, and malfunctions, shall not be considered in violation.

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

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

I. No. 1 Power Boiler Group (ID No. G1149) consisting of No. 1 Power Boiler (ID No. ES-11-CU-001) – coal, wood, No. 6 /No. 4 fuel oil-fired/NCGs (550 million Btu per hour nominal heat input rate) controlled by two Scrubbers (ID Nos. 11-CD-001-001 and 11-CD-001-002)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	0.19 lbs/million Btu heat input (when firing coal/ fuel oil only); 0.29 lbs/ million Btu heat input (when firing wood only); or Ec = [(0.29)(Qw) + (0.19)(Qo)]/Qt Where; Ec = emission limit for combined firing (lb/mmBtu); Qw=actual wood heat input including wood; Qo=actual heat input other than wood heat input; and Qt = Qw + Qo	15A NCAC 02D .0503 15A NCAC 02D .0504
Sulfur Dioxide	2.3 pounds per million Btu heat input.	15A NCAC 02D .0516

Regulated Pollutant	Limits/Standards	Applicable Regulations
Nitrogen Oxides	0.8 lbs/million Btu heat input while burning oil or natural gas; 1.8 lbs/million Btu heat input while burning coal; or $E = [(E_c)(Q_c) + (E_o)(Q_o)]/Q_t$ Where; E = emission limit for combined firing (lb/mmBtu); Ec = 1.8 lbs/mmBtu while burning coal; Eo = 0.8 lbs/mmBtu while burning oil or natural gas; Qc = coal heat input in mmBtu/hour; Qo = oil and natural gas heat input in mmBtu/ hour; and Qt = Qc + Qo	15A NCAC 02D .0519
Visible Emissions	40 percent opacity.	15A NCAC 02D .0521
Sulfur Dioxide	less than 35 tons per consecutive twelve month period	15A NCAC 02Q .0317 (15A NCAC 02D .0530 Avoidance)
Sulfur Dioxide and Opacity	Continuous Opacity Monitoring and Excess Emissions	15A NCAC 02D .0606
Sulfur Dioxide	Compliance Assurance Monitoring	15A NCAC 02D .0614
Toxic air pollutants	See Permit Condition 2.2 D STATE-ONLY REQUIREMENT	15A NCAC 02D .1100
Hazardous air pollutants	**During No. 6/No. 4 fuel oil firing:** • Total Selected Metals (As and Cr^{6+}): 0.002 lbs/MMBtu • CO: 28 ppmvd, corrected to 7% O_2 **During coal firing:** • Total Selected Metals (As and Cr^{6+}): 0.0004 lbs/MMBtu • CO: 133 ppmvd, corrected to 7% O_2 **During green wood (≥ 20% moisture content) firing:** • Total Selected Metals (As and Cr^{6+}): 0.0003 lbs/MMBtu • CO: 555 ppmvd, corrected to 7% O_2 **During dry wood (< 20% moisture content) firing:** • Total Selected Metals (As and Cr^{6+}): 0.0005 lbs/MMBtu • CO: 834 ppmvd, corrected to 7% O_2	15A NCAC 02D .1109 *[CAA § 112(j)]*
Nitrogen Oxides	Continuous emission monitoring system according to 40 CFR Part 75, Subpart H	15A NCAC 02D .1404

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

a. Emissions of particulate matter from the combustion of coal/No. 4/No. 6 fuel oil that are discharged from this source into the atmosphere shall not exceed **0.19 pound per million Btu heat input**. [15A NCAC 02D .0503(c)]

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

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

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

c. The Permittee shall install, operate, and maintain a scrubbing liquid flowmeter and pressure drop indicator on each scrubber. To ensure compliance and the effective operation of the scrubbers, the Permittee shall monitor and record, at least once per day except as noted, the scrubbing liquid flow rate and pressure drop. The scrubbing liquid flow rate shall be maintained at **1,560 gallons per minute** or above (based on a 12-hour block average) and the pressure drop shall be maintained at **9 inches of water** or above (based on a 12-hour block average). The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the boiler is not operating, a record of this

fact along with the corresponding date and time shall substitute for the daily observation. The readings shall be recorded in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. To ensure quality, the flow rate gauges or devices shall be calibrated annually. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if the scrubbing liquid flow rate or pressure drop is not maintained above the above prescribed limit or if these records are not maintained.

d. If the scrubber liquid flow rate or pressure drop readings recorded as required in Section 2.1. I.1.c., above, are observed to be outside the allowable range, the Permittee shall inspect the scrubber(s) for malfunctions and clean or repair, as necessary. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if the inspections, cleaning, and repairs are not performed.

e. The results of inspection and maintenance activities, discussed above for the scrubbers, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative of DAQ 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 causes for any variance from the allowable operating range for the scrubbers(s); and
   iv. corrective actions taken.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if these records are not maintained.

<u>Reporting</u> [15A NCAC 02Q .0508(f)]

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

2. 15A NCAC 02D .0504: PARTICULATES FROM WOODBURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0504]

Ec = [(0.29)(Qw) + (0.19)(Qo)]/Qt

Where: Ec = emission limit for combined firing (pound per mmBtu);
Qw = actual wood heat input including wood residues, Btu/hour;
Qo = actual heat input other than wood heat input Btu/hour, and
Qt = Qw + Qo

<u>Testing</u> [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limit given in Section 2.1 I.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504.

c. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit(s) above by testing the No. 1 Power Boiler **(ID No. ES-11-CU-001)** for particulate matter in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed once per calendar year and the results submitted to the DAQ. If the results of the testing demonstrate results at less than 80 percent of the limit above, the testing frequency may reduced to every five years. If the results of this or any test is above the limit given in Section 2.1 I.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504.

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

d. To ensure compliance, the Permittee shall follow the monitoring, recordkeeping, and reporting requirements in Sections 2.1 I.1.c-f above. The Permittee shall be deemed in noncompliance with 02D .0504 if the monitoring is not conducted or the records are not maintained.

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

a. Emissions of sulfur dioxide from this source 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. [15A NCAC 02D .0516]

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

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

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0606]

(while burning coal)

c. To assure compliance with 2.1 I. 3. a. and 15A NCAC 02D .0606, the Permittee shall follow the monitoring and recordkeeping requirements of Specific Conditions 2.1 I. 1. c. and d, as well as monitor the sulfur content and heat content of the coal by using coal supplier certification per total shipment received. The results of the coal supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the coal supplier;
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal was in accordance with the following:
      (A) sampling - ASTM Method D 2234;
      (B) preparation - ASTM Method D 2013;
      (C) gross calorific value (Btu) - ASTM Method D-2015, D-3286, D-1989, or D-5865;
      (D) moisture content - ASTM Method D 3173 or D-3302; and
      (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.

   Alternate test methods may be used upon prior DAQ approval per 15A NCAC 02D .0501(c)(18).

d. The Permittee is required to calculate and record in a logbook (written or electronic format) the equivalent emission rate in pounds of sulfur dioxide per million Btu heat content of the coal per total shipment. This equivalent sulfur dioxide emission rate (pounds per million Btu heat input) shall be calculated in accordance with Method 19 of 40 CFR 60, Appendix A, Section 12.6 – Sulfur Retention Credit for Compliance Fuel. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the results show an exceedance of the limit given in Section 2.1 I.3. a. above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0606 if the requirements above are not monitored and recorded.

(while burning fuel oil)

e. To assure compliance with 2.1.I.3. a. and 15A NCAC 02D .0606, the Permittee shall follow the monitoring and recordkeeping requirements of Specific Conditions 2.1 I. 1. c. and d. Additionally, Permittee shall monitor the sulfur and heat content of the fuel oil by using fuel oil supplier certification per shipment. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) and include the following information:
   i. the name of the fuel oil supplier;
   ii. the maximum sulfur content of the fuel oil received during the semi-annual period;
   iii. the method used to determine the maximum sulfur content of the fuel oil;
   iv. the average heating value of the fuel oil received;
   v. the method used to determine the average heating value; and
   vi. the calculation of pounds SO_2 per million Btu.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 15A NCAC 02D .0606 if the sulfur and heat content of the oil is not monitored.

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

Reporting [15A NCAC 02Q .0508(f) and 02D .0606]

g. The Permittee shall submit a summary report of the coal and fuel oil supplier certifications and calculated emission rates 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 Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 and 02D .0606 if the reports are not submitted.

4. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

a. Emissions of nitrogen oxides from this source when burning No. 4/No. 6 fuel oil and coal and shall be calculated by the following equation [15A NCAC 02D .0519]:

E = [(Ec)(Qc) + (Eo)(Qo)]/Qt

where: E = emission limit for combined burning of oil and coal in pounds per million Btu heat input
Ec =1.8 pounds per million Btu heat input for coal only
Eo = 0.8 pounds per million Btu heat input for oil or natural gas
Qc = coal heat input in Btu per hour
Qo = oil and natural gas heat input in Btu per hour
Qt =Qc + Qo

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 I.4.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

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

c. No monitoring/recordkeeping/reporting is required from the firing of No. 4 fuel oil, No. 6 fuel oil, or coal in this source for this regulation.

5. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source shall not be more than **40 percent opacity** when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 02D .0521 (c)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 I.5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f) and 02D .0606]

c. The No. 1 Power Boiler has a wet stack. The monitoring, recordkeeping, and reporting requirements for demonstrating compliance given in section 2.1.I.1 c-e above are deemed sufficient to demonstrate compliance with 02D .0521. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if the monitoring is not conducted or the records are not maintained.

6. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D. 0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications the No. 1 Power Boiler **(ID No. ES-11-CU-001)** shall discharge into the atmosphere less than **35 tons of sulfur dioxide, while burning TRS gases, per consecutive twelve month period**.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the test results are above the limits given in Section 2.1 I.6. a. the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530. The results of the tests may be used to re-establish the SO_2 removal efficiencies in Section 2.1 I.6 c.iv. and used to calculate SO_2 emissions following incorporation of the revised SO_2 removal efficiencies into the permit.

Monitoring/ Recordkeeping [15A NCAC 02Q .0508(f), 02D .0606, and 02D .0614]

c. To ensure compliance, the following conditions apply:
   i. The Permittee shall monitor and record the following parameters while burning TRS gases:
      (A) total pulp production and
      (B) scrubber water pH.
   ii. The scrubber water pH shall be maintained at a pH level of at least 4 when TRS gases are being burned;
   iii. The following emission factors shall be utilized to calculate the uncontrolled SO_2 emission rate while burning TRS gases:
      (A) 2.02 pounds of TRS per ton of pulp from the foul condensate stripper, and

(B) 3.19 pounds of TRS per ton of pulp from the NCG stream reduced to 1.12 pounds per ton of pulp when passing through the white liquor scrubber;

iv. The scrubber water pH measured during TRS burning shall be used to determine scrubber efficiency. Specifically, the following equations shall be used to calculate scrubber SO_2 removal efficiencies

(A) for a pH of less than 5.1: no efficiency shall be claimed
(B) for a pH of 5.1 to 6.2: [(49)(pH) – 232.1]
(C) for a pH of 6.3 to 7.3: [(24.04)(pH) – 78.57]
(D) for a pH of 7.4 to 7.6: [(2.335)(pH) + 80.403]
(E) for a pH of 7.6 to 7.8: [(3.979)(pH) + 67.939]
(F) for a pH of greater than 7.8: 99.1% efficiency should be claimed

d. The Permittee shall maintain monthly records of total pulp production and total sulfur dioxide emissions while burning TRS gases which include:

i. the total pulp production per month;
ii. the scrubber water pH (recorded at least once per day);
iii. the scrubber efficiency associated with each pH reading;
iv. the average scrubber water pH (and scrubber efficiency) for each rolling twelve month period;
v. the SO_2 emissions for each month.

The Permittee shall be deemed in noncompliance with 15A NCAC 02Q .0317 if the monitoring is not conducted or these records are not maintained.

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

e. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. The report shall contain the following for this source while firing TRS gases:

i. the total pulp production per month for the previous 14 months. The production must be calculated for each of the 12-month periods over the previous 14 months;
ii. the average scrubber water pH and scrubber efficiency for the previous 14 months. The parameters must be calculated for each of the 12-month periods over the previous 14 months;
iii. the SO_2 emissions per month for the previous 14 months. The emissions must be calculated for each of the 12-month periods over the previous 14 months;
iv. All instances of deviations from the requirements of this permit must be clearly identified.

7. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)

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

a. Under the provisions of NCGS 143-215.108, the Permittee shall test the No. 1 Power Boiler **(ID No. ES-11-CU-001)** for opacity in accordance with General Condition JJ within 180 days of the effective date of Permit No. 01649T53 unless an alternate date is approved by the DAQ. If the test is not performed or if the test results are above the limit given in Section 2.1 I.5.a above, the Permit shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0606]

b. Visible emissions from the No. 1 Power Boiler **(ID No. ES-11-CU-001)** shall be controlled by two scrubbers **(ID Nos. 11-CD-001-001 and 11-CD-001-002)**. To ensure compliance and the effective operation of the scrubbers, as described in DAQ's April 13, 2012 "Approval of Petition for Alternative Opacity Monitoring on No. 1 Power Boiler" letter, the Permittee shall follow the monitoring and recordkeeping described in Sections 2.1 I.1.c-e above. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0606 AND 02D .0614 if this monitoring is no performed or if records are not maintained.

c. To ensure quality, the Permittee shall develop and implement a quality assurance program for the scrubber parameter monitoring devices that meets the requirements of 15A NCAC 02D .0613. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0606 and 02D .0614 if the quality assurance program is not followed.

d. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the scrubbers. The No. 1 Power Boiler shall be deemed to be properly operated and maintained if the percentage of time the monitored scrubber parameters are below the established operating parameter range does not exceed 3.0 percent of the total operating time for any given calendar quarter adjusted for monitor downtime as calculated below and if the monitor downtime (MD) does not exceed 3.0 percent.

e.

Calculations for %EE and %MD

$$\%EE = \frac{\text{Total Excess Emissions Time}}{\text{(Total Source Operating Time) – (Monitor Downtime)}} \times 100\%$$

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

- ***Total Excess Emissions Time*** *is the number of hours excess emissions have occurred in any 3-hour period during the quarter including during startup, shutdown, and malfunction.*
- ***Total Monitor Downtime*** *is the number of hours the parameter monitor has not operated concurrently with the boiler operation and includes downtime for Quality Assurance (QA) activities unless exempted by regulation or defined in an DAQ approved QA manual. The number of hours of exempt QA time shall be reported in the quarterly report as such.*
- ***Total Source Operating Time*** *is the number of hours the boiler has operated during the quarter. If the boiler operates less than 2200 hours during any quarter, the Permittee may calculate %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [NCGS 143-215.110]*

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

f. The Permittee shall submit the excess emissions and downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the 15A NCAC 02D .0606 and 02D .0614 requirements in this permit must be clearly identified.

8. 15A NCAC 02D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

a. The Permittee shall comply with this CAA §112(j) standard until **May 22, 2019**. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 23, 2019**.

Emission Limitations

b. Emissions from the No. 1 Power Boiler **(ID No. ES-11-CU-001)** shall not exceed the emissions limits listed below:

Pollutant	Emission Limitations for the No. 1 Power Boiler (30 day rolling average)	Fuel Combusted
Hydrogen chloride equivalent[1]	422 lb/hr	No. 4/6 fuel oil/wood/coal
Hydrogen cyanide (HCN)	0.326 lb/hr	No. 4/6 fuel oil/wood/coal
Hydrogen fluoride (HF)	3.22 lb/hr	No. 4/6 fuel oil/wood/coal
Mercury (Hg)	0.0666 lb/hr	No. 4/6 fuel oil/wood/coal
Total Selected Metals (TSM)[2] arsenic (As) + chromium VI (Cr^{6+})	0.002 lb/MMBtu	No. 4 and No. 6 fuel oil
	0.0005 lb/MMBtu	Green wood
	0.0003 lb/MMBtu	Dry wood
	0.0004 lb/MMBtu	Coal
Beryllium (Be)	0.00998 lb/hr	No. 4/6 fuel oil/wood/coal

Pollutant	Emission Limitations for the No. 1 Power Boiler (30 day rolling average)	Fuel Combusted
Cadmium (Cd)	0.0146 lb/hr	No. 4/6 fuel oil/wood/coal
Lead (Pb)	0.557 lb/hr	No. 4/6 fuel oil/wood/coal
Manganese (Mn)	0.305 lb/hr	No. 4/6 fuel oil/wood/coal
Nickel (Ni)	1.44 lb/hr	No. 4/6 fuel oil/wood/coal
Selenium (Se)	5.5 lb/hr	No. 4/6 fuel oil/wood/coal
Carbon Monoxide (CO)[2] *measured on a 30-day average*	28 ppmvd @ 7% O_2	No. 4 and No. 6 fuel oil
	834 ppmvd @ 7% O_2	All wood biomass
	133 ppmvd @ 7% O_2	Coal

1. HCl-equivalent is defined by the following equation:

$$\mathbf{E = E_{HCl} + E_{Cl2}*(RfC_{HCl}/RfC_{Cl2})}$$

Where:
E = HCl-equivalent emission rate (in lbs/hr);
E_{HCl} = Hydrogen chloride emission rate (in lbs/hr);
E_{Cl2} = Chlorine emission rate (in lbs/hr);
RfC_{HCl} = Reference concentration for HCl (20 µg/m^3); and
RfC_{Cl2} = Reference concentration for Cl_2 (0.20 µg/m^3)

2. The emissions limitation is proportional to the heat input of the particular fuels combusted.

TSM (arsenic and chromium VI combined)

$$\mathbf{E_{TSM} = [(0.0005)(GW) + (0.0003)(DW) + 0.0004(C) + 0.002(RFO)]/(GW + DW + C + RFO)}$$

Where:
E_{TSM} = TSM emission limitation in pounds per million Btu
GW = heat input of green wood in million Btu per hour;
DW = heat input of dry wood in million Btu per hour;
C = heat input of coal in million Btu per hour, and
RFO = heat input of residual No. 4/6 fuel oil in million Btu per hour

Carbon monoxide
The CO emissions limitation is proportional to the heat input of the particular fuels combusted. The limit in ppmvd, corrected to 7% O_2, measured on a 30-day average, is calculated as follows:

$$\mathbf{E_{CO} = [(834)(GW + DW) + (133)(C) + 28(RFO)]/(GW + DW + C + RFO)}$$

Where:
E_{CO} = CO emission limitation in ppmvd, corrected to 7% oxygen
GW = heat input of green wood in million Btus per hour;
DW = heat input of dry wood in million Btus per hour;
C = heat input of coal in million Btus per hour; and
RFO = heat input of residual No. 4/6 fuel oil in million Btus per hour.

c. The emissions limitations for a specific fuel type in Section 2.1. I. 8. b. above shall only apply when the Permittee fires at least 10% of that fuel in the boiler on a 12-month rolling average heat input basis. If the Permittee fires less than 10% of a specific fuel in the boiler, the respective emissions limitations and the associated testing, monitoring, and recordkeeping for that particular fuel shall not apply. However, the Permittee shall retain records of the fuels fired in the boiler in accordance with Section 2.1.I.8.u.viii below. **The initial compliance date for these emission limitations and associated testing, monitoring, recordkeeping, and reporting requirements is February 21, 2014.**

Control Device and Continuous Monitoring System Requirements

d. If the Permittee demonstrates compliance with any emission limit in Section 2.1.I.8.b. above through a performance test of the boiler while operating the wet scrubbers**,** the Permittee shall install, operate and maintain control devices and continuous monitoring systems (CMS) for the boiler as follows:
   i. The Permittee shall continuously operate the wet scrubbers **(ID Nos. 11-CD-001-001 and 11-CD-001-002)** when the boiler is in operation**.**
   ii. For each scrubber, the Permittee shall perform a monthly external inspection and an internal inspection when the boiler is shut down at least once every 18 months and perform maintenance as recommended by the manufacturer.
   iii. The Permittee shall install, operate, and maintain an effluent pH monitor CMS, a liquid flow meter CMS and a gas pressure drop indicator CMS on each scrubber. In lieu of the scrubbing liquid flowmeter, the Permittee may use motor amperage and corresponding pump curve to monitor the flow to the scrubber.
   iv. The liquid flow rate for each scrubber **(ID Nos. 11-CD-001-001 and 11-CD-001-002)** shall be maintained at or above the respective minimum rate established during the performance test on a 12-hour block average.
   v. The pressure drop across each scrubber **(ID Nos. 11-CD-001-001 and 11-CD-001-002)** shall be maintained within the respective operating limits established during the performance test on a 12-hour block average.
   vi. The pH of the scrubber effluent shall be maintained within the respective operating limits established during the performance test on a 12-hour block average.

e. The Permittee shall maintain applicable records of the continuous and 12-hour block average liquid flow rates, pressure drops, and effluent pH for each scrubber **(ID Nos. 11-CD-001-001 and 11-CD-001-002).** The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if applicable records are not created and maintained or if any 12-hour block average is not within the allowable limit, as provided above in Section 2.1 I.8.d. iv to vi.

Continuous Emissions Monitoring System (CEMS) for Carbon Monoxide

f. The Permittee shall install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide (CO) and oxygen (O_2) according to the procedures listed in i. through vii. below. CO and O_2 shall be monitored at the same location in the boiler exhaust stack on the outlet side of the scrubbers.
   i. The Permittee must install, operate, and maintain the CEMS according to the applicable procedures under Performance Specification (PS) 3 or 4A of 40 CFR 60, Appendix B, and according to the site-specific monitoring plan in Condition 2.1.I.8.h.
   ii. The Permittee must conduct a performance evaluation of the CEMS according to the requirements in 40 CFR 63.8 and according to PS 4A of 40 CFR 60, Appendix B.
   iii. The Permittee must complete for the CEMS a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
   iv. The Permittee must reduce the CEMS data as specified in 40 CFR 63.8(g)(2) and calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.
   vi. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
   vii. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler or process heater is operating at less than 50 percent of its rated capacity. The Permittee must use all the data collected during all other periods in assessing compliance.

g. If a 30-day rolling average CO concentration exceeds the applicable CO emission limitation in Section 2.1.I.8.b. above, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1109.

Site-Specific Monitoring Plan

h. The Permittee must develop a site-specific monitoring plan for each required CEMS and CMS. The plan shall be submitted to the NC DAQ Stationary Source Compliance Branch (SSCB) at least 60 days before the initial performance evaluation of the monitoring system.

Boiler Inspection and Maintenance

i. If operation and performance monitoring of the scrubbers as specified in Section 2.1.I.8.d. is not required, the Permittee shall perform an annual inspection of the boiler and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burners, and clean or replace any components of the burners as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burners necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.
   iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.

j. The results of any required annual burner 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 of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the required boiler inspection and maintenance records are not maintained.

Initial Compliance Requirements

k. The Permittee must demonstrate initial compliance with each emission limit in Section 2.1.I.8.b. that applies, unless exempt by 2.1.I.8 l. or m., by either:
   i. Conducting initial performance tests in accordance with General Condition JJ and establishing required operating limits within 180 days of the initial compliance date. During this testing, the boiler shall combust the fuel or fuel combination which is expected to result in the highest emissions of each HAP and which is expected to contribute at least 10% of the 12-month average heat input for the boiler; or
   ii. Conducting initial fuel analyses to determine emission rates and establishing required operating limits within 180 days of the initial compliance date.

l. No performance testing is required for CO if the facility demonstrates compliance using CEMS.

m. No performance testing or fuel analysis is required for HF and HCN.

n. The Permittee shall submit a permit application within 60 days of initial compliance test to incorporate the operating parameter limitations for the scrubbers into the Title V air quality permit. Such modification may be made by Administrative Amendment to the Title V air quality permit.

o. After the initial compliance date, if the 12-month average heat input of a fuel not accounted for during the initial compliance demonstration is equal to or greater than 10% for any 12-month period, the Permittee shall conduct an initial compliance test within 90 days following the end of the 12-month period (unless such date is *earlier than* 180 days following the initial compliance date, in which case the test shall be performed 180 days following the initial compliance date). Monitoring and recordkeeping requirements associated with the specific fuel firing shall be implemented as soon as practicable, and in no case later than 90 days following the end of the 12-month period.

Fuel Analyses Plan

p. If the Permittee demonstrates compliance with this standard using one or more fuel analyses, the analyses shall be conducted according to a DAQ approved site-specific fuel analysis plan.

q. The Permittee shall follow the site-specific fuel analysis plan approved May 12, 2006 or develop and submit a new site-specific fuel analysis plan to the NC DAQ – SSCB for review and approval no later than 60 days before the date that the Permittee plans to demonstrate compliance.

Periodic Testing/Fuel Analysis Requirements

r. If the Permittee uses performance testing to demonstrate compliance with the standard, the Permittee must conduct all applicable performance tests on an annual basis, unless it meets the requirements listed in i. through iii. below. Annual performance tests, if required, must be completed between 11 and 13 months after the previous performance test.
   i. The Permittee may conduct performance tests less often for a given pollutant if the performance tests for at least 3 consecutive years show the emission rate is less than or equal to 80 percent of the allowable limit. In this case, the Permittee need not conduct a performance test for that pollutant for the next 2 years, but must conduct a performance test during each third year and no more than 36 months after the previous performance test.

ii. If the affected boiler or process heater continues to meet the emission limit, the Permittee may conduct performance tests every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.

iii. If a performance test shows noncompliance with an emission limit, the Permittee must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show the emission rate is less than or equal to 80 percent of the allowable limit.

s. If the Permittee uses fuel analysis to demonstrate compliance with the standard, the Permittee must conduct a fuel analysis on an annual basis for each fuel which contributes at least 10% of the 12-month average heat input of the fuels burned in the boiler. Each fuel analysis shall be conducted between 11 and 13 months after the previous analysis. If a fuel analysis shows a potential exceedance of an emission limitation in condition 2.1 K.8.b. above, the Permittee shall conduct a follow-up stack test of the affected source within 90 days. If the Permittee cannot conduct a follow-up test within 90 days or if the follow-up test shows an exceedance of the emission limitation in condition 2.1 I.8.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109.

t. If all fuel samples show a compound is below the detection limit, emissions of that compound can be considered zero. If some samples show the compound is detected, any non-detect values shall be considered at half the detection limit.

Recordkeeping Requirements

u. The Permittee shall maintain the following in a logbook (written or electronic format) on-site and make available to an authorized representative upon request:

i. A copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status;

ii. Records of performance tests, fuel analyses, or other compliance demonstrations, and CEMS and CMS performance evaluations including calculations and supporting documentation;

iii. Records of the CEMS and CMS measurements needed to demonstrate compliance with a relevant standard (including, but not limited to raw performance testing and evaluation measurements;

iv. A record of each period during which a CEMS or CMS is malfunctioning or inoperative (including out-of-control periods);

v. Records of all CEMS and CMS calibration checks and all adjustments and maintenance performed on the CEMS and CMS;

vi. Records of all monitoring data and calculated averages for applicable operating limits, such as pressure drop and flow rate, used to demonstrate compliance with the standard;

vii. Records of monthly fuel use by each affected source, including the type(s) of fuel and amount(s) used

viii. If the Permittee limits the firing of a specific fuel to less than 10% on 12-month average heat input basis, he shall create and retain the following records at least once per calendar month:

A. Record the fuel use by each affected source, including the type(s) of fuel and amount(s) used, during the previous calendar month; and,

B. Calculate the 12-month average heat input from each fuel for each affected source during the previous 12-month period.

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

v. Notification of Compliance Status. The Permittee shall submit a Notification of Compliance Status in accordance with 40 CFR 63.9(h)(2)(ii) within 60 days of completion of the final performance test or fuel analyses required for the initial compliance demonstration. The Notification of Compliance Status report must contain the following information, as applicable:

i. A description of the boiler including the fuels combusted, heat input capacity, and add-on controls used.

ii. A justification for the fuel(s) burned during the initial performance test.

iii. A summary of the results of all performance tests and calculations conducted to demonstrate initial compliance.

iv. A justification for establishing the liquid flow rate, effluent pH, and pressure operating ranges for each scrubber**.**

v. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.

w. Semiannual Summary Report. The Permittee shall submit a summary report by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The first summary report shall be required following the initial compliance date, but no earlier than July 30, 2014. The report shall include the following:

i. The company name and address;
ii. A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
iii. The date of report and beginning and ending dates of the reporting period;
iv. The highest 30-day rolling average CO concentration measured during the preceding six-month period and identification of all periods during which the 30-day rolling average CO concentration exceeded the applicable emission limitation in Section 2.1.I.8.a above;
v. Identification of all periods during which the 12-hour average scrubber liquid flow rate, pressure drop, and/or effluent pH was measured outside of the allowable operating range;
vi. A summary of the results of any annual stack tests or fuel analyses performed during the preceding six-month period; and
vii. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.

x. Startup, Shutdown, and Malfunction Report. The facility shall comply with the startup, shutdown, and malfunction requirements in 15A NCAC 02D .0535.

9. 15A NCAC 02D .1404 RECORDKEEPING, REPORTING, MONITORING

a. Pursuant to 15A NCAC 02D .1404(d)(1), the Permittee shall install, operate, and maintain a continuous emission monitoring system according to 40 CFR Part 75, Subpart H for the No. 1 Power Boiler (ID No. ES 11-CU-001)

b. The requirements of Section 2.1 9.a, above apply during the May 1 through September 30 ozone season each year.

J. Bark Feed System Group (ID No. G1150) consisting of Hog Fuel Storage Silo (ID No. ES-11-TK-006) and associated Transfer Cyclone (ID No. ES-11-PU-003), and

Sawdust Feed System Group (ID No. G1151) consisting of Sawdust Blower (ID No. ES-01-PU-020) and associated Transfer Cyclone (ID NO. ES-11-PU-004 or ES-11-PU-003)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate Matter	$\mathbf{E = 4.10 \times P^{0.67}}$ for $P \leq 30$ tons per hour, -OR- $\mathbf{E = 55.0 \times P^{0.11} - 40}$ for $P > 30$ tons per hour Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	**Affected Source: (ID No. G1151) with Transfer Cyclone (ID No. ES-11-PU-004)** 40 percent opacity **Affected Source: (ID No. G1150) and (ID No. G1151) with Transfer Cyclone (ID No. ES-11-PU-003)** 20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from the Bark Feed System Group **(ID No. G1150)** and the Sawdust Feed System (**ID No. G1151**) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$\mathbf{E = 4.10 \times P^{0.67}}$ for process rates ≤ 30 tons per hour, or
$\mathbf{E = 55.0 \times P^{0.11} - 40}$ for process rates > 30 tons per hour

Where: E = allowable emission rate in pound per hour
P = process weight rate 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 J.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 these sources shall be controlled by the cyclones. To ensure compliance, the Permittee shall perform inspections and maintenance, 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 calendar year not to exceed 14 months from the previous inspection) internal inspection of the cyclones' structural integrity.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and cyclones 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 cyclones; and
   iv. any 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 cyclones within 30 days of a written request by the DAQ.

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

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

a. Visible emissions from the Sawdust Feed System Group **(ID No. G1151)** with associated Transfer Cyclone (**ID No. ES-11-PU-004)** shall not be more than 40 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 90 percent opacity. [15A NCAC 02D .0521 (c)]

b. Visible emissions from the Bark Feed System Group **(ID No. G1150)** and Sawdust Feed System Group **(ID No. G1151)** with associated Transfer Cyclone (**ID No. ES-11-PU-003)** 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. [15A NCAC 02D .0521 (d)]

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

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

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

d. To ensure compliance, once a month the Permittee shall observe the emission points of the sources for any visible emissions above normal. If visible emissions from any source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions 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 above.

If the Permittee elects to take action pursuant to paragraph (i) above and the emissions observation is still not normal, the Permittee will be deemed in noncompliance with 15A NCAC 02D .0521 unless, within the same monitoring period, the demonstration required in paragraph (ii) is performed and recorded. Alternatively, the Permittee may take action in accordance with (ii) directly.

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

e. 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)]

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

K. No. 2 and No. 3 Package Boilers (ID No. ES-11-CU-033 and ES-11-CU-034; 185 million Btu per hour maximum permitted heat input rate each firing No. 2 and No. 6 fuel oil); and

No. 4 Package Boiler (ID No. ES-11-CU-035; 245 million Btu per hour maximum permitted heat input rate firing natural gas and No. 2 fuel oil)

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate matter	**For No. 2 and No. 3 Package Boilers (ES-11-CU-033/34)** 0.19 pounds per million Btu heat input **For No. 4 Package Boiler (ES-11-CU-035)** 0.17 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	**For No. 2 and No. 3 Package Boilers (ES-11-CU-033/34)** 2.3 pounds per million Btu heat input.	15A NCAC 02D .0516
Visible emissions	**For No. 2 and No. 3 Package Boilers (ES-11-CU-033/34)** 20 percent opacity	15A NCAC 02D .0521
Nitrogen oxides	**For No. 4 Package Boiler (ES-11-CU-035)** 0.10 lbs/million Btu heat input with low heat release rates $\leq$ 70 Btu/hr-ft^3	15A NCAC 02D .0524 40 CFR Part 60, Subpart Db, §60.44b (b)(1)
Sulfur dioxide	**For No. 4 Package Boiler (ES-11-CU-035)** Burn low sulfur fuel oil with no more than a 0.3 percent sulfur content by weight	15A NCAC 02D .0524 40 CFR Part 60, Subpart Db, §60.42b (j)
Visible emissions	**For No. 4 Package Boiler (ES-11-CU-035)** 20 percent opacity	15A NCAC 02D .0524 40 CFR Part 60, Subpart Db, §60.43b (f)

Regulated Pollutant	Limits/Standards	Applicable Regulations
Hazardous air pollutants	**For No. 2 and No. 3 Package Boilers (ES-11-CU-033/34)** **From No. 2 fuel oil firing:** Work Practice Standards **From No. 6 fuel oil firing:** Total Selected Metals (As and Cr^{6+}): 0.002 lbs/MMBtu CO: 28 ppmvd, corrected to 7% O_2	15A NCAC 02D .1109 *[CAA § 112(j)]*
Hazardous Air Pollutants	**For No. 4 Package Boiler (ES-11-CU-035)** Work Practices	15A NCAC 02D .1111 40 CFR Part 63, Subpart DDDDD
Carbon monoxide Nitrogen oxides Particulate matter (PM) PM_{10} $PM_{2.5}$ Sulfur dioxide CO_2 equivalent	**Combined Emissions from All Package Boilers (ES-11-033/034/035)** 156.0 tons per year 123.2 tons per year 63.2 tons per year 42.1 tons per year 29.8 tons per year 488.2 tons per year 112,468 tons per year	15A NCAC 02Q .0317 Avoidance of 15A NCAC 02D .0530

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

a. Emissions of particulate matter from the combustion of fuel oil that are discharged from No. 2 and No. 3 Package Boilers (**ID Nos. ES-11-033 and ES-11-034)** into the atmosphere shall not exceed **0.19 pounds per million Btu heat input**. [15A NCAC 02D .0503(a)]

b. Emissions of particulate matter from the combustion of fuel oil that are discharged from the No. 4 Package Boiler **(ID Nos. ES-11-035)** into the atmosphere shall not **exceed 0.17 pounds per million Btu heat input**. [15A NCAC 02D .0503(a)]

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

c. If emissions testing is required, the testing shall be performed in accordance General Condition JJ utilizing EPA Methods 1 through 5 or other test methods per a DAQ-approved test protocol. If the results of this test are above the limit given in Section 2.1 K.1. a. or b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

d. No monitoring/recordkeeping/reporting is required from the firing of natural gas or No. 2 or No. 6 fuel oil in these boilers for this regulation.

For No. 2 and 3 Package Boilers (ID Nos. ES-11-CU-033 and ES-11-CU-034)

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

a. Emissions of sulfur dioxide from the No. 2 and No. 3 Package Boilers **(ID Nos. ES-11-033 and ES-11-034)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 K.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. The maximum sulfur content of No. 6 fuel oil received and burned in the boilers **(ID Nos. ES-11-033 and ES-11-034)** shall not exceed 2.1 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur content of the fuel oil exceeds this limit.

d. To ensure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per month. The results of the fuel oil supplier certifications shall be recorded in a logbook (written or electronic format) on a quarterly basis and include the following information:
   i. the name of the fuel oil supplier;
   ii. the sulfur and heat content of each fuel oil shipment received during the quarter;
   iii. the method used to determine the sulfur and heat content of the fuel oil; and
   iv. a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired received during the period.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if the sulfur content of the oil is not monitored and recorded.

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

e. The Permittee shall submit a summary report of the fuel oil supplier certifications 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 Permittee must submit a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the fuel oil fired during the period.

For No. 2 and 3 Package Boilers (ID Nos. ES-11-CU-033 and ES-11-CU-034)

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

a. Visible emissions from the No. 2 and No. 3 Package Boilers **(ID Nos. ES-11-033 and ES-11-034)** 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. [15A NCAC 02D .0521(c)]

   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 K.3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a day the Permittee shall observe the emission points of the No. 2 and No. 3 Package Boilers for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission source(s) is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions 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 K.3.a. above.

   If the Permittee elects to take action pursuant to paragraph (i) above and the emissions observation is still not normal, the Permittee will be deemed in noncompliance with 15A NCAC 02D .0521 unless, within the same monitoring period, the demonstration required in paragraph (ii) is performed and recorded. Alternatively, the Permittee may take action in accordance with (ii) directly.

   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 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.

For No. 4 Package Boiler (ID No. ES-11-CU-035)

4. 15A NCAC 02D .0524: NSPS 40 CFR PART 60 SUBPART Db

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Db, including Subpart A "General Provisions."[15A NCAC 02D .0524]

NSPS Emission Limitations

b. As required by 15A NCAC 02D .0524, the following permit limits shall not be exceeded when firing natural gas or No. 2 fuel oil in the No. 4 Package Boiler **(ID No. ES-11-CU-035):**

Affected Boiler	Pollutant	Emission Limit
ES-11-CU-035	Nitrogen Oxides 40 CFR 60.44b (a)(l)(i)	**0.10 pounds per million Btu heat input** for boilers with a low heat release rate.
	Sulfur Dioxide 40 CFR 60.42b(d)	Fuel oil sulfur content not to exceed **0.3% by weight**
	Opacity 40 CFR 60.43b(f)	**20 percent opacity** six minute average except for one six-minute period per hour of not more than 27% opacity

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

c. The Permittee shall conduct an initial performance test as required under 40 CFR § 60.8 using a continuous emissions monitoring system (CEMS) to record hourly NOx emissions for 30 successive boiler operating days and calculate a 30-day average hourly emission rate to determine compliance with the NO_x limitation in Section 2.1.K.4.b above.

d. The Permittee shall conduct an initial performance test as required under 40 CFR § 60.8 to determine compliance with the opacity limits in Section 2.1.K.4.b above.

e. The Permittee shall conduct subsequent performance tests to demonstrate ongoing compliance with the opacity limits, as requested by the Regional Air Quality Supervisor, in accordance with General Condition JJ, following the procedures and reference methods in 40 CFR § 60.46b.

f. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if any of the test results exceed a limit in Section 2.1.K.4.b above.

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

g. The Permittee shall install, calibrate, maintain, and operate a CEMS for measuring and recording 1-hour average NO_X and O_2(or CO_2) emission rates in lb/MMBtu heat input during all periods of boiler operation, except for periods of CEMS breakdowns and repairs, in accordance with §60.13 and §60.48b. Data shall be recorded during calibration checks, and zero and span adjustments.

h. The Permittee shall monitor visible emissions from the boiler firing No. 2 fuel oil according to a written site-specific monitoring plan approved by the Regional Air Quality Supervisor. No visible observations are required during natural gas combustion.

i. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if NO_x and opacity emissions from the boiler are not monitored as specified in Section 2.1.K.4.g and i above.

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

j Pursuant to 40 CFR 60.49b(d) the Permittee shall record and maintain records of the amounts of each fuel burned during each day.

k. Pursuant to 40 CFR 60.49b(f), the Permittee shall record and maintain records of opacity.

l. Pursuant to 40 CFR 60.47b(f) and 60.49b(r), the Permittee shall obtain and maintain at the facility fuel receipts from the supplier that certify that:

i. the gaseous fuel meets the definition of natural gas as defined in 40 CFR 60.41b; and

ii. the No. 2 fuel oil contains no more than 0.30 weight percent sulfur.

m. Pursuant to 40 CFR 60.7(f), the Permittee shall maintain records of all measurements, including CEMS data, routine monitoring data, performance testing measurements; CEMS performance evaluations, calibration checks, adjustments, and maintenance performed; and all other information required by 40 CFR 60 Subpart A and Subpart Db recorded in an on-site logbook (written or electronic format) and made available to an authorized representative upon request. The records shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the records in Section 2.1 K.4.j through 2.1 K.4.m are not maintained.

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

o. In addition to any other reporting required by 40 CFR § 60.49b or notification requirements to the EPA, the Permittee shall submit the following reports to the DAQ:
   i. a quarterly summary report of any excess NO_x emissions. If there are no excess emissions during the calendar quarter, the Permittee shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period. The Permittee shall include a summary of the CEMS performance with all quarterly and semiannual NO_x emissions reports.
   ii. a semiannual report certifying that only No. 2 fuel oil with a sulfur content of 0.30 percent by weight or less and/or natural gas were combusted in at the No. 4 Package Boiler during the reporting period.

p. The quarterly excess emissions reports shall be postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September. The semiannual reports shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 for the calendar year for the preceding six-month period between January and June. All records required under this section shall be maintained by the owner or operator of an affected facility for a period of two years following the date of such record.

For No. 2 and No. 3 Package Boilers (ID Nos. ES-11-CU-033 and ES-11-034)

5. 15A NCAC 02D .1109: CAA § 112(j); Case-by-Case MACT for Existing Boilers

a. The Permittee shall comply with this CAA §112(j) standard until **May 22, 2019**. The initial compliance date for the applicable CAA §112(d) standard for ‘‘National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters” is **May 23, 2019**.

Emission Limitations for Operating Scenario 1 – No. 6 Fuel Oil Firing

b. Emissions from the firing of No. 6 residual fuel oil in the No. 2 and No. 3 Package **Boilers (ID No. ES-11-CU-033 and ES-11-CU-034)** shall not exceed the limitations listed below:

Pollutant	Emission Limitations for the No. 2 Package Boiler (30 day rolling average)	Emission Limitations for the No. 3 Package Boiler (30 day rolling average)
Hydrogen chloride equivalent[1]	8.26 lb/hr	8.26 lb/hr
Hydrogen cyanide (HCN)	0.0593 lb/hr	0.0593 lb/hr
Hydrogen fluoride (HF)	0.0484 lb/hr	0.0484 lb/hr
Mercury (Hg)	0.000146 lb/hr	0.000146 lb/hr
Total Selected Metals (TSM)[2] arsenic (As) + chromium VI (Cr^{6+})	0.002 lb/MMBtu	
Total Selected Metals (TSM)[2] arsenic (As) + Beryllium (Be) + Cadmium (Cd) + Selenium (Se) + chromium VI (Cr^{6+})		0.002 lb/MMBtu
Beryllium (Be)	0.000555 lb/hr	
Cadmium (Cd)	0.000491 lb/hr	
Lead (Pb)	0.182 lb/hr	0.182 lb/hr

Pollutant	Emission Limitations for the No. 2 Package Boiler (30 day rolling average)	Emission Limitations for the No. 3 Package Boiler (30 day rolling average)
Manganese (Mn)	0.0141 lb/hr	0.0141 lb/hr
Nickel (Ni)	0.259 lb/hr	0.259 lb/hr
Selenium (Se)	0.000842 lb/hr	
Carbon Monoxide (CO) *measured on a 30-day average*	28 ppmvd @ 7% O_2	28 ppmvd @ 7% O_2

1. HCl-equivalent is defined by the following equation:

$$\mathbf{E = E_{HCl} + E_{Cl2}*(RfC_{HCl}/RfC_{Cl2})}$$

Where:
E = HCl-equivalent emission rate (in lbs/hr);
E_{HCl} = Hydrogen chloride emission rate (in lbs/hr);
E_{Cl2} = Chlorine emission rate (in lbs/hr);
RfC_{HCl} = Reference concentration for HCl (20 µg/m^3); and
RfC_{Cl2} = Reference concentration for Cl_2 (0.20 µg/m^3)

c. The emissions limitations in Section 2.1.K.5.b. above and the associated monitoring, recordkeeping, and reporting shall only apply when at least 10% of the fuel fired in a boiler on a 12-month rolling average heat input basis is No. 6 fuel oil. If the Permittee fires less than 10% No. 6 fuel oil in a boiler on a 12-month rolling average heat input basis, only the work practices and recordkeeping requirements in Sections 2.1.K.5.h, i, and j shall apply for that combustion source. **The initial compliance date for these emission limitations and associated testing, boiler inspection and maintenance, monitoring, recordkeeping, and reporting requirements is February 21, 2014.**

d. If, after the compliance date, the average heat input of No. 6 fuel oil for a boiler is equal to or greater than 10% for any 12-month period and if the Permittee has not previously conducted the initial compliance test for that boiler, the Permittee shall conduct an initial compliance test within **90 days** following the end of the 12-month period (unless such date is *earlier than* 180 days following the initial compliance date, in which case the test shall be performed 180 days following the initial compliance date). Monitoring and recordkeeping requirements associated with No. 6 fuel oil firing shall be implemented as soon as practicable, and in no case later than **90 days** following the end of the 12-month period.

Continuous Emissions Monitoring System (CEMS) for Carbon Monoxide for Operating Scenario 1 –No. 6 Fuel Oil Firing

e. The Permittee shall develop a site-specific monitoring plan for each required CEMS and submit to the NC DAQ Stationary Source Compliance Branch (SSCB) at least 60 days before the initial performance evaluation of the CEMS.

f. The Permittee shall install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide (CO) and oxygen (O_2) according to the procedures listed in i. through vi. below for each boiler firing No. 6 fuel oil. CO and O_2 shall be monitored at the same location at the outlet the boiler.

i. The Permittee must install, operate, and maintain each CEMS according to the applicable procedures under Performance Specification (PS) 3 or 4A of 40 CFR 60, Appendix B and according to the site-specific monitoring plan in Condition 2.1.K.5.e above.

ii. The Permittee must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to PS 4A of 40 CFR 60, Appendix B.

iii. The Permittee must complete for each CEMS a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

iv. The Permittee must reduce the CEMS data as specified in 40 CFR 63.8(g)(2) and calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.

v. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.

vi. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler or process heater is operating at less than 50 percent of its rated capacity. The Permittee must use all the data collected during all other periods in assessing compliance.

g. If a 30-day rolling average CO concentration exceeds the applicable CO emission limitation in Section 2.1. K.5.b above, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1109.

Boiler Inspection and Maintenance for Operating Scenarios 1 and 2 – No. 6 and No. 2 Fuel Oil Firing

h. For boilers **(ID No. ES-11-CU-033 and ES-11-CU-034)**, the Permittee shall perform an annual inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
   i. Inspect the burners, and clean or replace any components of the burners as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burners necessary to optimize the flame pattern; and,
   iii. Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.
   iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.

i. The results of any required annual burner 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 of each recorded action;
   ii. The results of each inspection; and,
   iii. The results of any maintenance performed on the boilers.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the inspection and maintenance records are not maintained.

Compliance Demonstration for Operating Scenario 1 –No. 6 Fuel Oil Firing [15A NCAC 02Q .0508(f)]

j. The Permittee shall demonstrate compliance with each emission limitations listed in Section 2.1.K.5.b above for each boiler by either of the following methods:
   i. Initial and Periodic Stack Testing. Stack testing shall be performed for the boiler while firing No. 6 fuel oil at the maximum normal operating load in accordance with General Condition JJ in Section 3 of this permit. The initial stack test shall be performed within 180 days of the initial compliance date or in accordance with the time schedule in Section 2.1.K.5.d above. Thereafter, each stack test shall be conducted between 11 and 13 months after the previous stack test. However, if a stack test shows that the emission rates of hazardous air pollutants are less than or equal to 80 percent of the allowable limit, the stack test frequency may be reduced to once every five years for that pollutant.
   ii. Fuel Analysis. Fuel analysis shall be conducted in accordance with the site-specific fuel analysis plan approved May 2006 or an alternate plan approved by the NC DAQ - SSCB prior to the initial compliance demonstration. Within 180 days of the initial compliance date, the Permittee shall perform the initial fuel analyses. Thereafter, each fuel analysis shall be conducted between 11 and 13 months after the previous analysis. If a fuel analysis shows a potential exceedance of an emission limitation in Sections 2.1 K.5.b above, the Permittee shall conduct a follow-up stack test of the affected source within 90 days.
   iii. No performance testing is required for CO if the facility demonstrates compliance using a CEMS.
   iv. No performance testing or fuel analysis is required for HF and HCN.

   If stack testing shows an exceedance of an emission limit in Section 2.1.K. 5.b above, the Permittee shall be deemed in non-compliance with 15A NCAC 02D .1109.

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

k. The Permittee shall create and retain the following records at least once per calendar month:
   i. The Permittee shall record the fuel use by each affected source, including the type of fuel and amount of fuel used, during the previous calendar month; and,
   ii. The Permittee shall calculate the annual average heat input from distillate fuel oil and from residual fuel oil for each affected source during the previous 12-month period.

l. The Permittee shall maintain a copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status.

m. The Permittee shall maintain records of performance tests, fuel analyses, and CEMS performance evaluations.

n. For each CEMS, the Permittee shall maintain the following records:
   i. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CEMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
   ii. A record of each period during which a CEMS is malfunctioning or inoperative (including out-of-control periods);
   iii. All CEMS calibration checks; and,
   iv. All adjustments and maintenance performed on CEMS.

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

o. Notification of Compliance Status. The Permittee shall submit a Notification of Compliance Status that meets the requirements of 40 CFR 63.9(h)(2)(ii) before the close of business on the 60th day following the completion of the final required performance test and/or other initial compliance demonstration. The Notification of Compliance Status report must contain the following information, as applicable:
   i. A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.
   ii. Summary of the results of all performance tests and calculations conducted to demonstrate initial compliance.
   iii. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.

p. Semiannual Summary Report. The Permittee shall submit a summary report by January 30 of each calendar year for the preceding six-month period between July and December, and by July 30 of each calendar year for the preceding six-month period between January and June. The first summary report shall be required following the initial compliance date, but no earlier than July 30, 2014. The report shall include the following:
   i. The company name and address;
   iv. A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
   v. The date of report and beginning and ending dates of the reporting period;
   vi. The highest 30-day rolling average CO concentration measured during the preceding six-month period and identification of all periods during which the 30-day rolling average CO concentration exceeded the applicable emission limitation in Section 2.1.K.5.b above;
   vii. A summary of the results of any annual stack tests or fuel analyses performed during the preceding six-month period; and
   viii. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.

q. Startup, Shutdown, and Malfunction Report. The facility shall comply with the startup, shutdown, and malfunction requirements in 15A NCAC 02D .0535.

For No. 4 Package Boiler (ID No. ES-11-CU-035)

6. 15A NCAC 02D .1111 National Emission Standard for Hazardous Air Pollutants, 40 CFR Part 63, Subpart DDDDD – Boiler and Process Heaters

a. The Permittee shall use best combustion practices when operating the No. 4 Package Boiler (**ID No. ES-11-CU-035)**.

b. The Permittee shall operate the No. 4 Package Boiler to meet the "unit designed to burn gas 1 subcategory" definition in 40 CFR 63.7575**.**

Work Practice [40 CFR 63.7540(a)(10), 63.7540(a)(12) and 63.7515(d)]

c. Within 61 months of initial startup of the No. 4 Package Boiler and every five years thereafter, the Permittee shall conduct a boiler tune-up as recommended by the manufacturer. As a minimum, the Permittee shall perform the following for each tune-up:
   i. Inspect the burner, and clean or replace any components of the burner as necessary;
   ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern consistent with the manufacturer's specifications;
   iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly;
   iv. Optimize the total emissions of carbon monoxide consistent with the manufacturer's specifications; and
   v. Measure in the effluent stream the concentration of carbon monoxide in parts per million volume dry (ppmvd)

and the percent oxygen on a volume basis before and after the adjustments are made.

d. Each 5-year tune-up must be performed no more than 61 months from the previous tune-up. If the boiler is not in operation during the time of the required tune-up, the tune-up may be delayed, provided the Permittee conducts the tune-up within one week of the boiler resuming operations. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the affected boiler is not inspected and maintained as required above.

Recordkeeping [15A NCAC 02Q .0508(f) and 40 CFR 63.7555 and 63.7560]

e. Following initial startup of the boiler, the Permittee shall maintain in a logbook (written or electronic format) a record of each boiler tune-up and the number of hours that No. 2 fuel oil is burned during testing or periods of gas curtailment or gas supply emergencies and make available to an authorized representative upon request. The Permittee shall maintain all records for a period of five years during which time the records shall be kept onsite for at least the first two years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 63.7545 and 63.7550]

f. The Permittee shall submit a notification of the actual date of the No. 4 Package Boiler startup signed by the responsible official and delivered or postmarked no later than 15 calendar days of startup of the boiler.

g. The Permittee shall submit a notification of alternative fuel use within 48 hours of natural gas curtailment or supply interruption in accordance with 40 FR 63.7545(f).

h. The Permittee shall submit a summary report by January 30th of each calendar year after the calendar year during which a tune-up is completed, for the preceding twelve-month period between January and December. The summary report shall contain the concentrations in the boiler effluent stream of CO (ppmvd) and oxygen (percent volume basis) measured before and after the adjustments of the boiler and a description of any corrective actions taken as a part of the combustion adjustment.

7. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: Prevention of Significant Deterioration

a. In order to avoid applicability of 15A NCAC 02D .0530(g) for major sources and major modifications, the combined emissions from No. 2, 3, and 4 Package Boilers **(ID Nos. ES-11-033, ES-11-034, and ES-11-035)** into the atmosphere per each consecutive 12-month period shall not exceed any of the following emission limits:

Pollutant	Emission Limit (tons/12-month period)
Carbon monoxide	156.0
Nitrogen oxides	123.2
Particulate matter (PM)	63.2
PM_{10}	42.1
$PM_{2.5}$	29.8
Sulfur dioxide	488.2
CO_2 equivalent	112,468.0

[15A NCAC 02D .0530]

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.7 a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. The Permittee shall keep monthly records of the amount of fuel used and the sulfur content, including certification of the sulfur content of the fuel oil in a logbook (written or in electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur content of the fuel oil is not monitored.

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

d. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month periods between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:

i. The monthly carbon monoxide, nitrogen oxides, PM, PM_{10}, $PM_{2.5}$, sulfur dioxide, and CO_2 equivalent emissions in tons for the previous 17 months from the three package boilers combined. The emissions must be calculated for each of the 12-month periods over the previous 17 months;

ii. The monthly quantities of natural gas, No. 2 fuel oil, and No. 6 fuel oil consumed in each boiler **(ID Nos. ES-11-033, ES-11-034, and ES-11-035)** for the previous 17 months; and

iii. The average sulfur content of the No. 2 fuel oil and the No. 6 fuel oil fired in the No. 2, 3, and 4 Package Boilers.

L. Temporary Boiler Groups (ID Nos. G1154 through G1157) consisting of Four Temporary Boilers (ID Nos. ES-11-CU-044 through ES-11-CU-047) – No. 2 fuel oil-fired boilers (96 million Btu per hour maximum permitted heat input rate each).

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

Regulated Pollutant	Limits/Standards	Applicable Regulations
Particulate matter	0.16 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur dioxide	2.3 percent sulfur content fuel	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Toxic air pollutants	See Permit Condition 2.2 D STATE-ONLY REQUIREMENT	15A NCAC 02D .1100
Sulfur dioxide and visible emissions	On site less than 180 days per consecutive twelve month period and use of low sulfur fuels	15A NCAC 02Q .0317 (15A NCAC 02D .0524 Avoidance)
Sulfur dioxide and nitrogen oxide emissions	Less than 40 tons per consecutive twelve month period.	15A NCAC 02Q .0317 (15A NCAC 02D .0530 Avoidance)
Hazardous air pollutants	On site less than 180 days per consecutive twelve month period.	15A NCAC 02Q .0317 (15A NCAC 02D .1109 and 15A NCAC 02D .1111 Avoidance)
Toxic air pollutants	See Permit Condition 2.2 E STATE-ONLY REQUIREMENT	15A NCAC 02Q .0711

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

a. Emissions of particulate matter from the combustion of fuel oil that are discharged from the Temporary Boilers into the atmosphere shall not exceed **0.16 pounds per million Btu heat input**. [15A NCAC 02D .0503(a)]

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

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ utilizing EPA Methods 1 through 5 or other test methods per a DAQ-approved test protocol. If the results of this test are above the limit given in Section 2.1 L. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

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

sources.

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

a. Emissions of sulfur dioxide from the Temporary Boilers 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 L.2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in these sources.

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

a. Visible emissions from the Temporary Boilers 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. [15A NCAC 02D .0521(c)]

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 L.3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of No. 2 fuel oil in these sources.

15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. In order to avoid the applicability of 15A NCAC 02D .0524, the Temporary Boilers shall combust distillate oil with a potential sulfur dioxide emission rate no greater than 0.060 lb/MMBtu, be capable of being moved from one location to another, and remain onsite for no longer than 180 consecutive days as defined in 40 CFR 60.41c.

b. The Permittee shall notify the Regional Office in writing within ten days of exceeding the 180 day period.

5. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: Prevention of Significant Deterioration

a. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications, the Temporary Boilers shall discharge into the atmosphere less than **40 tons of sulfur dioxide or nitrogen oxides per consecutive twelve month period**.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 L.5. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. To ensure that emissions are less than the above-specified limits;
   i. the Permittee shall not burn a more than a total of **2,634,240** gallons of No. 2 fuel oil in the Temporary Boilers per consecutive twelve (12) month period.); and
   ii. the sulfur content of the No. 2 fuel oil shall not exceed 0.2 percent by weight.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amount of fuel burned or fuel sulfur content exceeds these limits.

d. The Permittee shall record and maintain records of the amount (in gallons) of No. 2 fuel oil burned in the Temporary Boilers during each month.

e. The Permittee shall obtain and maintain at the facility fuel receipts from the supplier that certify that the No. 2 fuel oil contains no more than 0.20 weight percent sulfur.

f. The record of the amounts of fuel (in gallons) burned and fuel sulfur content for each month shall be made available to an authorized representative of DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amounts of fuel burned during each month or fuel sulfur content are not recorded.

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

g. The Permittee shall submit a semiannual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month periods between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall identify all instances of deviations from the requirements of this permit or a statement that no deviations occurred during the reporting period. The report shall contain the following:

i. the monthly quantities of fuel oil burned in the boilers for the previous 17 months. The total quantities burned must be calculated for each of the 12-month periods over the previous 17 months;

ii. the sulfur content of the fuel oil burn in the boilers for each of the 12-month periods over the previous 17 months; and

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

5. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters
15A NCAC 02D .1111: 40 CFR 63 Subpart DDDDD; MACT for Boilers & Process Heaters

a. In order to avoid the applicability of 15A NCAC 02D .1109 and 15A NCAC 02D .1111, the Temporary Boilers shall not remain on site for more than 180 consecutive days.

b. If any of these boilers remains on site for longer than 180 consecutive days, the Permittee shall notify the Regional Office in writing within ten days of exceeding the 180 day period.

M. One Portable Log Chipper (diesel-fired); ID No. ES-01-PU-014 and One Portable Bark Grinder (diesel-fired); ID No. ES-01-PU-015

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	**$E = 4.10 \times P^{0.67}$** for $P \leq 30$ tons per hour, -OR- **$E = 55.0 \times P^{0.11} - 40$** for $P > 30$ tons per hour Where: E = allowable emission rate in pound per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity each	15A NCAC 02D .0521
Nitrogen Oxides	**ES-01-PU-014** Less than 40 tons per consecutive twelve month period. **ES-01-PU-015** Less than 40 tons per consecutive twelve month period.	15A NCAC 02Q .0317 (15A NCAC 02D .0530 Avoidance)
Multiple emissions	**ES-01-PU-014 and ES-01-PU-015** Onsite no more than 12 consecutive months.	15A NCAC 02Q .0317 (15A NCAC 02D .0524 and 02D .1100 Avoidance)
Toxic air pollutants	**See Permit Condition 2.2 D** **STATE-ONLY REQUIREMENT**	15A NCAC 02D .1100
Toxic air pollutants	**See Permit Condition 2.2 E** **STATE-ONLY REQUIREMENT**	15A NCAC 02Q .0711

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

a. Emissions of particulate matter from the Portable Log Chipper and Bark Grinder **(ID Nos. ES-01-PU-014 and ES-01-PU-015)** shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$\mathbf{E = 4.10 \times P^{0.67}}$ for process rates $\leq$ 30 tons per hour, or
$\mathbf{E = 55.0 \times P^{0.11} - 40}$ for process rates > 30 tons per hour

Where: E = allowable emission rate in pound per hour
P = process weight rate 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 M.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. The Permittee shall maintain records for the Portable Log Chipper and Bark **Grinder (ID Nos. ES-01-PU-014 and ES-01-PU-015)** such that the process rates "P" in tons per hour, as specified by the formulas contained above (or the formulas contained in 15A NCAC 02D .0515) can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if production records are not maintained.

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

a. Emissions of sulfur dioxide from the Portable Log Chipper and Bark Grinder **(ID No. ES-01-PU-014 and ES-01-PU-015)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 M.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing diesel fuel.

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

a. Visible emissions from the Portable Log Chipper and Bark Grinder (**ID No. ES-01-PU-014 and ES-01-PU-015)** shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

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

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

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

c. When the Portable Log Chipper and/or Bark Grinder are in operation on site, Permittee shall observe once each month the emission points of the source(s) for any visible emissions above normal. The Permittee shall establish normal for the source(s) in the first 30 days of operation. If visible emissions from the emission source(s) are observed to be above normal, the Permittee shall either:

i. take appropriate action to correct the above-normal emissions 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 M.3.a above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

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 postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0530: Prevention of Significant Deterioration

a. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications, the Portable Log Chipper **(ID No. ES-01-PU-014)** shall discharge into the atmosphere less than **40 tons of nitrogen oxides per consecutive twelve month period**.

b. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications, the Portable Bark Grinder **(ID No. ES-01-PU-015)** shall discharge into the atmosphere less than **40 tons of nitrogen oxides per consecutive twelve month period.**

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

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 M.4.a or b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

d To ensure compliance, the Permittee shall record and maintain the following records for the Portable Log Chipper and Bark Grinder **(ID Nos. ES-01-PU-014 and ES-01-PU-015)** in a logbook:
   i. hours of operation;
   ii. engine type and model;
   iii. rated power for engine output in kW;
   iv. rated power for engine output in hp;
   v. date manufactured and manufacturer;
   vi. manufacturer's NOx emission factor at maximum rated power, if available, or AP-42, *Compilation of Air Pollutant Emission Factors*, otherwise, and,
   vii. monthly NOx emissions determined using the information in Section 2.1 M.4.d.i to 2.1.M.4.d.vi above.

   The monthly records, as specified above, shall be made available to an authorized representative of DAQ upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the records in 2.1.M.4.d.i to 2.1.4.d.vii are not maintained, or if the NOx emissions exceed the limit in 2.1 M.4.a or 2.1.M.4.b above.

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

e. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly hours of operation for the Portable Log Chipper and Bark Grinder for the previous 17 months.

5. 15A NCAC 02Q. 0317: AVOIDANCE CONDITIONS for
15A NCAC 02D .0524; (40 CFR Part 60, Subpart III)
15A NCAC 02D .1111, (40 CFR Part 63, Subpart ZZZZ)

a. In order to avoid the applicability of 15A NCAC 02D .0524 and 15A NCAC 02D .1111, the Portable Log Chipper and Bark Grinder **(ID Nos. ES-01-PU-014 and ES-01-PU-015)** shall not remain on site for more than 12 consecutive months.

b. If either of these portable emission sources remains on site for longer than 12 consecutive months, the Permittee shall notify the Regional Office in writing within ten days of exceeding the 12 month period.

N. One Diesel-Fired Fire Water Pump; ID No. ES-FP-001; Two Diesel-Fired Emergency Generators; ID Nos. ES-EG-001 and ES-EG-002

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity each	15A NCAC 02D .0521
Hazardous air pollutants	Comply with work practices beginning May 3, 2013 for existing CI emergency generators with a site rating no more than 500 hp.	15A NCAC 02D .1111 40 CFR Part 63, Subpart ZZZZ

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

a. Emissions of sulfur dioxide from the emergency engines **(ID Nos. ES-FP-001, ES-EG-001, and ES-EG-002)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 N.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing diesel fuel.

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

a. Visible emissions from the emergency engines **(ID Nos. ES-FP-001, ES-EG-001, and ES-EG-002**) shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 N.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of diesel fuel.

3. 15A NCAC 02D 1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
40 CFR Part 63, Subpart ZZZZ "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines (RICE).

Compliance Date [40 CFR § 63.6595 (a)]

a. Beginning May 3, 2013, the Permittee shall comply with the operating restrictions, work practices, monitoring, recordkeeping, and reporting requirements identified in Sections 2.1 N.3.b-k below and shall install a non-resettable hour meter if one is not already installed for existing compression ignition (CI) emergency engines no more than 500 **HP (ID Nos. ES-FP-001, ES-EG-001, and ES-EG-002).**

Operating Restrictions Applicable to Stationary CI Emergency Engines No More Than 500 HP.
[40 CFR § 63.6605(b) and 63.6640(f)]

b. The Permittee shall operate and maintain each engine in a manner consistent with safety and good air pollution control practices for minimizing emissions.

c. The Permittee shall restrict the operation of each engine as follows to maintain its status as an "emergency" engine as required by 40 CFR §63.6640 (f)(1)(i) through (iii):
   i. Operate the emergency engine in emergency situations as needed with unrestricted hours.
   ii. Limit the operation of the engine in non-emergency situations to 50 hours per year. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid.
   iii. Limit the operation of the engine to no more than 30 minutes prior to the time when the emergency condition is expected to occur, and terminate the engine's operation immediately after the facility is notified that the emergency condition is no longer imminent.
   iv. Limit the operation of the engine for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine, to 100 hours per year unless records indicate that more time is allowed. The owner/operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing. All non-emergency operation of the RICE count towards the 100 hours per year provided for maintenance and testing.
   v. Restrict the operation of the emergency engine to a maximum of 15 hours per year when used as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout. These 15 hours are counted as part of the 50 hours of operation per year provided for nonemergency situations.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the non emergency operation of the engine, with the exception of routine maintenance, exceeds 50 hours during any calendar year or if maintenance checks and readiness testing exceed 100 hours per year.

Work Practices Applicable to Stationary CI Emergency Engines No More Than 500 HP [§63.6603, 63.6625(h), and 63.6640; Table 2c]

d. For each emergency engine, the Permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

e. An oil analysis program <u>may</u> be used to extend the time allowed in Section 2.1 N.3.f above between oil changes. The analysis program must, at a minimum, analyze the (1) total base number, (2) viscosity, and (3) percent water content. An oil change is <u>not</u> required if <u>all</u> three of the following conditions are meet:
   i. the total base number is greater than or equal to 30 percent of the total base number of the oil when new;
   ii. the viscosity of the oil has not changed by more than 20 percent from the viscosity of the oil when new; and
   iii. the percent water content (by volume) is less than or equal to 0.5.

   If one of the above limits is exceeded, the owner or operator must change the oil within 2 days of receiving the results of the analysis or before commencing operation, whichever is later. If using an oil analysis program to extend the time between oil changes, the owner or operator must keep records of the results of the analysis and the oil changes for the engine and include the analysis program in the maintenance plan for the engine.

f. For each existing emergency engine, the Permittee shall inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first.

g. For each emergency engine, the Permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary or follow approved alternate work practice..

h. The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes for each existing emergency engine.

i. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the applicable work practices specified in Sections 2.1.N.d-h. above are not followed.

Operation/Maintenance/Recordkeeping Requirements Applicable to Stationary CI Emergency Engines No More Than 500 HP [15A NCAC 02Q .0508(f)]

j. The Permittee shall operate and maintain each engine according to the manufacturer's emission-related operation and maintenance instructions; *OR* develop and follow a site specific maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good practice for minimizing air emissions maintenance checks and readiness testing.

k. The Permittee shall keep records of maintenance performed and the hours of operation of each engine that is recorded through the non-resettable hour meter and document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if maintenance performed on the emergency engines is not recorded and maintained on site for a period of two years.

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

l. The Permittee shall submit a semi-annual compliance report 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 must contain a description and the corrective actions taken for all deviations from any operating limitation and any malfunction during the reporting period. If there are no deviations from any operating limitations (work practice requirements), provide a statement that there were no deviations during the reporting period.

O. One Diesel-Fired Lime Kiln Pony Motor and Emergency Lighting Generator; ID Nos. ES-09-PU-017 and ES-EG-003A

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity each	15A NCAC 02D .0521
Multiple emissions	Purchase an engine certified to meet emission standards.	15A NCAC 02D .0524 40 CFR 60, Subpart IIII
Hazardous air pollutants	Comply with the requirements of 40 CFR 60 Subpart IIII for compression ignition engines.	15A NCAC 02D .1111 40 CFR 63, Subpart ZZZZ

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

a. Emissions of sulfur dioxide from the Lime Kiln Pony Motor and Emergency Lighting Generator **(ID Nos. ES-09-PU-017 and ES-EG-003A)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 O.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing diesel fuel.

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

a. Visible emissions from the Lime Kiln Pony Motor and Emergency Lighting Generator **(ID Nos. ES-09-PU-017 and ES-EG-003A)** shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 O.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of diesel fuel.

3. 15A NCAC 02D .0524: NSPS, STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES [40 CFR 60 SUBPART IIII]

a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR 60 Subpart IIII, including Subpart A "General Provisions for the Lime Kiln Pony Motor and Emergency Lighting Generator **(ID Nos. ES-09-PU-017 and ES-EG-003A)**." [15A NCAC 02D .0524]

b. The Permittee shall purchase an engine certified to meet the following emission standards for compression ignition (CI) engines for model year 2007 and later for the same model year and maximum engine power:

Exhaust emission standards:
NMHC and NOx (combined): 4.0 g/kW-hr
CO: 5.0 g/kW-hr
PM: 0.3 g/kW-hr
[§60.4205(b), §60.4211(c), and §89.112(a)]

c. The engine must be installed and configured according to the manufacturer's specifications.

d. The Permittee shall use diesel fuel in the CI engine of each emergency generator with a sulfur content of less than **15 ppm** beginning October 1, 2010. [§60.4207, and §80.510(a) and (b)]

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

e. 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 exhaust emission standards in Section 2.1 O.3.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. Owners and operators of CI internal combustion engines (ICE) must operate and maintain stationary CI ICE that achieve the emissions standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. The Permittee may only change engine settings that are permitted by the manufacturer. The Permittee shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this section are not met. [§60.4206 and §60.4211(a)]

g. The CI emergency engine shall be equipped with a non-resettable hour meter prior to startup. If the CI engine of each emergency generator is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [§60.4209(a)]

h. The Permittee may operate the CI emergency engine for maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100

hours per year. Because the Permittee is required to comply with emission standards under §60.4205 for the CI engine in the emergency generator, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this section are not met. [§60.4211(e)]

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

i. Starting with emergency engine model year 2011, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if these records are not maintained. [§60.4214(b)]

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

j. No initial notification under §60.7 is required for the emergency use CI engines. [§60.4214(b)]

P. Temporary enclosed flare - Liquefied petroleum gas fired (42 million Btu/hr nominal heat input rate)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity each	15A NCAC 02D .0521

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

a. Emissions of sulfur dioxide from this source **(ID No. Flare)** 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. [15A NCAC 02D .0516]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 P.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

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

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of liquefied petroleum gas.

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

a. Visible emissions from this source **(ID No. Flare)** shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 P.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of liquefied petroleum gas.

2.2 - Multiple Emission Sources, Specific Limitations and Conditions

A. 40 CFR 63, Subpart S Affected Low Volume High Concentration (LVHC) Sources:

ID No.	Emissions Source Description	ID No.	Control Device Description
G0208	**Digester System**		
	Twelve (12) batch digesters:	ES-09-PU-004	Lime Kiln via closed LVHC NCG collection system
ES-02-PU-003 to ES-02-PU-014	No. 7 Digester through No. 12 digester, and No.14 through No. 19 Digester	ES-11-CU-001	No. 1 Power Boiler via closed LVHC NCG collection system
ES-02-PU-015	A-Line Blow Tank	ES-02-PU-028	vacuum stripper
ES-02-PU-016	B-Line Blow Tank	ES-16-AS-020	aerated stabilization basin
ES-02-PU-017	C-Line Blow Tank		
ES-02-PU-018	A-Line Cyclone		
ES-02-PU-019	B-Line Cyclone		
ES-02-PU-020	C-Line Cyclone		
ES-02-PU-024	Secondary Condenser		
ES-02-PU-025	Hot Water Accumulator		
G0210	**Stripper System**		
ES-02-PU-028	Stripper Column		
ES-02-PU-026	Accumulator Overflow Tank		
ES-02-PU-027	Foul Condensate Tank		
G0719	**Evaporator Group**		
ES-07-PU-004	B-Line Evaporators		
ES-07-PU-026	B-Line Surface Condenser		
ES-07-PU-007	Condenser Seal Tank		
ES-07-PU-008	B-Line Hotwell		
ES-07-PU-009	C-Line Evaporators		
ES-03-PU-024	C-Line Concentrators		
ES-07-PU-027	C-Line Surface Condenser		
ES-07-PU-013	C-Line Hotwell		
G2073	**Turpentine Recovery Group**		
ES-20-PU-001	North Turpentine Recovery Cyclone		
ES-20-PU-002	South Turpentine Recovery Cyclone		
	Sample Tank		
ES-20-TK-003	North Turpentine Condenser		
ES-20-PU-004	South Turpentine Condenser		
ES-20-PU-005	Secondary Turpentine Condenser		
ES-20-PU-006	Turpentine Heater		
ES-20-PU-007	Primary Turpentine Decanter Underflow Tank		
ES-20-TK-008	Secondary Turpentine Decanter		
ES-20-PU-009	Secondary Turpentine Decanter		
ES-20-TK-011	Underflow Tank		
ES-20-PU-010	Primary Turpentine Decanter		

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	**LVHC System** Route system vents to Lime Kiln or No. 1 Power Boiler	15 A NCAC 02D .1111 (40 CFR 63 Subpart S)
	Pulping Condensate Collection Collect a minimum **7.2 pounds per ton ODTP** (15-day rolling average) followed by treatment in the Biological Wastewater Treatment Facility ASB meeting either **92 percent HAP removal**, or **6.6 pounds per ton ODP removal**	

1. 15A NCAC 02D .1111: MACT 40 CFR 63 SUBPART S

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart S, including Subpart A "General Provisions" as defined per 63.440(g) and indicated per Table 1 of Subpart S. These emission standards shall apply at all times except as specified in 40 CFR 63.443(e) and 63.446(g). Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.441. Units and abbreviations are defined in 40 CFR 63.3 [15A NCAC 02D .1111]

Standards for the LVHC pulping systems at Kraft processes [15A NCAC 02D .1111 and 40 CFR 63.443(a)]

b. The Permittee shall meet the following control requirements for the total HAP emissions from the LVHC system [40 CFR 63.443]:
   i. Each LVHC system component shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450, and routed to:
      (A) The Lime Kiln by introducing the HAP emission stream with the primary fuel or into the flame zone: or
      (B) The No. 1 Power Boiler by introducing the HAP emission stream into the flame zone.

c. Periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.443 (c) and (d) provided that the time of excess emissions (excluding periods of startup, shutdown, and malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed:
   i. **One (1) percent** for control devices used to reduce the total HAP emissions from the LVHC system; and
   ii. **Four (4) percent** for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

Standards for Kraft pulping process condensates [40 CFR 63.446].

d. The pulping process condensates as identified per 40 CFR 63.446(b) shall be conveyed in a closed collection system that is designed and operated to meet the following requirements:
   i. Each closed collection system, except for the closed vent systems, shall meet the individual drain system requirements specified in 40 CFR 63.960, 63.961, and 63.962;
   ii. Each closed vent system shall be designed and operated in accordance with 40 CFR 63.450;
   iii. Each process condensate stream, collected in total, shall contain a minimum of **7.2 pounds of HAP per ton of oven dried pulp produced** (based on a 15-day rolling average);
   iv. Each stripper feed tank shall meet the requirements per 40 CFR 63.446(d)(2); and
   v. The collected pulping process condensates shall be treated by the vacuum stripper (ID ES-02-PU-028) and the Biological Wastewater Treatment Facility **(ID No. G1669)** consisting of the Aerated Stabilization Basin (ASB) **(ID No. ES-16-AS-020)** which shall:
      (A) Reduce or destroy the total HAPs by at least **92 percent or more by weight**; or
      (B) Remove a minimum of **6.6 pounds per ton of oven dried pulp (ODP).**
   vi. For each steam stripper system used to comply with the requirements specified in paragraph 40 CFR 63.456(e)(3), periods of excess emissions reported under 40 CFR 63.455 shall not be a violation of 40 CFR 63.446(d), (e), and (f) provided that the time of excess emissions (including periods of startup, shutdown, and malfunction) divided by the total process operating time in a semi-annual reporting period does not exceed **10 percent**. [40 CFR 63.446(g)]

Monitoring for the LVHC systems Control Devices [40 CFR 63.453]

e. No control device parameter monitoring is required for LVHC vents routed to the Lime Kiln or the No. 1 Power Boiler. [40 CFR 63.453]

Monitoring for the pulping process condensates [40 CFR 63.453]
Condensate Collection:

f. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) to monitor condensate stream collection. The CMS shall include a continuous recorder. The CMS shall be operated to ensure that the minimum of **7.2 pounds of HAP per ton of oven dried pulp produced** (based on a 15-day rolling average) is collected. [40 CFR 63.453] The CMS shall monitor the following:
   i. Foul condensate tank outlet stream flow rate;
   ii. Accumulator overflow tank outlet stream flow rate;
   iii. Foul Condensate Stripper effluent stream flow rate;
   iv. Hard pipe feed tank effluent stream flow rate;
   v. Daily concentration of methanol in the hard pipe feed tank; and
   vi. Oven dried tons of pulp produced per day.

   If any monitoring parameter demonstrates collection less **than 7.2 pounds per oven dried pulp** (based on a 15-day rolling average) or if one or more of the above parameters are not monitored, the Permittee shall be deemed in noncompliance with 02D .1111.

Monitoring for the pulping process condensates [40 CFR 63.453]
Biological Wastewater Treatment Facility:

g. The Permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system (CMS) on the Biological Wastewater Treatment Facility Aerated Stabilization Basin (ASB) **(ID No. ES-16-AS-020)**. The CMS shall include a continuous recorder for the hard-pipe flow. The CMS shall be operated to ensure the following operational parameters are maintained. [40 CFR 63.453]:
   i. The Total Organic Carbon (TOC) in lb/day to aerator horsepower (HP) in hp/day ratio (TOC/HP) shall be maintained above **24.6.**

   If any monitoring parameter values are exceeded, the Permittee shall conduct a performance test in accordance with the provisions of 40 CFR 63 Subpart S to evaluate compliance as allowed by 40 CFR 63 Subpart S. Additionally, the Permittee shall follow all applicable monitoring procedures under 40 CFR 63 Subpart S for the Biological Wastewater Treatment Facility. If the monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 02D .1111.

Monitoring for Enclosures and Closed Vent Systems [40 CFR 63.453]

h. Each enclosure and closed vent system shall meet the monitoring requirements of 40 CFR 63.453. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring is not performed.

Recordkeeping/Reporting [40 CFR 63.454; 63.455]

i. The results or the CMS monitoring, Enclosure System monitoring, and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

j. When actions taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) are not consistent with the procedures specified in the facility's Startup, Shutdown, and Malfunction (SSM) Plan, the Permittee shall record the actions taken for that event for inclusion in the semiannual report. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

k. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the facility's SSM plan, the Permittee shall keep records for that event that demonstrate that the procedures specified in the SSM plan were followed. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

Reporting [40 CFR 63.454; 63.455]

l. Permittee shall submit a summary report of excess emissions 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. When no exceedances of an operating parameter have occurred, such information

shall be included in the report.

m. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440.

B. 40 CFR 63, Subpart S Affected High Volume Low Concentration (HVLC) Sources Permitted per 40 CFR 63.94 Equivalency by Permit:

HVLC Sources Under the Equivalency by Permit			
Source ID	**Source Description**	**Control Device ID**	**Control Device Description**
G0314 Brown Stock (BS) Washing Systems[1]:			
ES-03-PU-003 to ES-03-PU-006 ES-03-TK-027 to ES-03-TK-030 ES-03-TK-031	A-line 1st Stage to 4th Stage BS Washers A-line 1st Stage to 4th Stage Filtrate Tanks A-line Foam Tower	NA	NA *No control is required for the A-Line BS Washing System per the Equivalency by Permit option under 40 CFR §63.94.*
ES-03-PU-011 to ES-03-PU-013 ES-03-PU-022 to ES-03-PU-024	B-line 1st Stage to 3rd Stage BS Washers C-line 1st Stage to 3rd Stage BS Washers	ES-11-CU-001 or Flare	No. 1 Power Boiler via closed HVLC collection system. or Temporary enclosed flare via closed HVLC collection system.
ES-03-TK-032 to ES-03-TK-034 ES-03-TK-035 ES-03-TK-038 to ES-03-TK-040 ES-03-TK-041	B-line 1st Stage to 3rd Stage Filtrate Tanks B-line Foam Tower C-line 1st Stage to 3rd Stage Filtrate Tanks C-line Foam Tower	NA	NA *No control is required for the B- and C-Line Filtrate Tanks and Foam Towers per the Equivalency by Permit option under 40 CFR §63.94.*

1. This source group is not subject to the HVLC control requirements under 63.443(c) and (d) as total HAP emissions from the screen system (measured as methanol) are less than 0.2 lbs per ton of oven dry pulp.

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	• Limit the pulp throughput of A-Line Brownstock Washing System (1st to 4th Stage Washers, 1st to 4th Stage Filtrate Tanks, and Foam Tower) to **30,000 ODTP per consecutive 12-month period (33,333 ADTP per consecutive 12-month period)**; • Route B- and C-Lines 1st Stage to 3rd Stage Brownstock Washer Drum vents to the **No. 1 Power Boiler**; and • Limit the combined pulp throughput of A-, B-, and C-Line Brownstock Washing Systems to **454,500 ODTP per consecutive 12-month period (505,000 ADTP per consecutive 12-month period).**	15 A NCAC 02D .1111 (40 CFR 63 Subpart S) and Equivalency by Permit, 40 CFR 63.94

1. 15A NCAC 02D .1111: MACT 40 CFR 63 SUBPART S AND 40 CFR 63.94, EQUIVALENCY BY PERMIT

a. Unless otherwise indicated below, 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 .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63 Subpart S, including Subpart A "General Provisions" as defined per 63.440(g) and indicated per Table 1 of Subpart S. These emission standards shall apply at all times except as specified in 40

CFR Part 63.443(e) and 63.446(g). Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.441. Units and abbreviations are defined in 40 CFR 63.3 [15A NCAC 02D .1111]. The authority for the alternate control requirements for Equivalency by Permit (EBP) is given in 40 CFR parts 63.91 63.94, and 63.99 as promulgated in "Approval of Section 112(l) Authority for Hazardous Air Pollutants; Equivalency by Permit Provisions; National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry; State of North Carolina", Federal Register, Vol. 69, No. 70/Monday, April 12, 2004, pp. 19106-19109. §63.99 "Delegated Federal Authorities" of Subpart E "Approval of State Programs and Delegation of Federal Authorities" was also amended at FR Vol. 69, No. 70/Monday, April 12, 2004, p. 19110 to add §63.99(a)(33)(ii) North Carolina.

Emission Limitations [15A NCAC 02D .1111 and 40 CFR 63.94, Equivalency by Permit]

Standards for the HVLC pulping systems at Kraft processes [40 CFR 63.94, 63.443(a) and 40 CFR 63.94, Equivalency by Permit].

b. The Permittee shall meet the following control requirements for the total HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443 and 40 CFR 63.94, Equivalency by Permit]
   i. The B- and C-Lines Washer Drum vents (ES-03-PU-011 to ES-03-PU-013, ES-03-PU-022 to ES-03-PU-024) shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450 and routed to the No. 1 Power Boiler by introducing the HAP emission stream with the combustion air/primary fuel/into the flame zone.
   ii. No control shall be required for the emissions from the A-line brownstock washers, A-line filtrate tanks, A-line foam tank, or B-line and C-line filtrate tanks and foam towers.
   iii. Use only non-process, reclaimed hot water (non-contact cooling water) or fresh water on the first shower stage of the A-, B-, and C-Line Brownstock Washers.
   iv. Limit the pulp throughput of A-Line brownstock washing system to 30,000 ODTP per consecutive 12-month period (33,333 ADTP per consecutive 12-month period).
   v. Limit the pulp throughput of A-, B-, and C-Line brownstock washing systems to 454,500 ODTP per consecutive 12-month period (505,000 ADTP per consecutive 12-month period).

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements set forth in Section 2.2.B.1.b i-v are not met.

c. If the temporary enclosed flare (Flare) is controlling total HAP emissions from the HVLC emissions sources, then, in lieu of the requirements in Section 2.2 B.1. b.i. above, the Permittee shall meet the following control requirements for the total HAP emissions from the HVLC system [40 CFR 63, Subpart 63.443].
   i. The B- and C-Lines Washer Drum vents (ES-03-PU-011 to ES-03-PU-013, ES-03-PU-022 to ES-03-PU-024) shall be enclosed and vented into a closed vent system meeting the requirements of 40 CFR 63.450 and routed to the temporary enclosed flare (Flare), designed and operated at a minimum temperature of 871 °C (1600 °F) and a minimum residence time of 0.75 seconds.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements set forth in Section 2.2.B.1.c. i. are not met.

d. Periods of excess emissions reported under §63.455 shall not be a violation of §63.443 (c) and (d) provided that: [40 CFR 63.455 and 40 CFR 63.94, Equivalency by Permit]
   i. the time of excess emissions divided by the total process operating time in any successive 12 calendar month reporting period does not exceed four percent for control devices used to reduce the total HAP emissions from the HVLC system; and
   ii. the time of excess emissions divided by the total process operating time in any successive 12 calendar month reporting period does not exceed four percent for control devices used to reduce the total HAP emissions from both the LVHC and HVLC systems.

   When excess emissions exceed the level set forth in Section 2.2.B.1.c above, the facility shall be deemed in non-compliance with 15A NCAC 02D .1111 via 40 CFR 63.94.

e. The Permittee must operate and maintain the emission source(s) in accordance with the procedures specified in the facility's start-up, shut-down, and malfunction (SSM) plan. At all times, including periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the emission source(s), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan.

f. **Testing** [15A NCAC 02Q .0508(f)]
If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If emissions testing to demonstrate continued parity is required, testing of the methanol emissions from the A - Line washers, A – Line BSW No. 1 Filtrate tank, A – Line BSW Foam Tank, B- and C-Line foam tower vents shall be performed. If the combined methanol emissions from the A - Line washers, A – Line BSW No. 1 Filtrate tank, A – Line BSW Foam Tank, and B- and C-Line foam tower vents based on the previous 12 months of pulp production are greater than 34.2 tons, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 via 40 CFR 63.94.

Monitoring for the HVLC pulping systems Control Device

g. No control device parameter monitoring is required for HVLC emission sources routed to the No. 1 Power Boiler. [40 CFR 63.94, 63.453]

h. If the temporary enclosed flare (Flare) is controlling total HAP emissions from the HVLC emissions sources, the Permittee shall operate a continuous monitoring system (CMS) to measure the temperature in the firebox or in the ductwork immediately downstream of the firebox and before any substantial heat exchange occurs for the temporary enclosed flare (Flare), used to comply with the requirements of §63.443(d)(1) through (d)(3). [40 CFR 63.94, 63.453(b)]

Monitoring for Enclosures and Closed Vent Systems [40 CFR 63.94, 63.453]

i. Each enclosure and closed vent system shall meet the monitoring requirements of 40 CFR 63.453. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring is not performed.

Recordkeeping/Reporting [40 CFR 63.94, 63.454; 63.455]

j. The results of the Enclosure System monitoring and Closed-Vent System monitoring shall be maintained (in written or electronic format) per the requirements of 40 CFR 63.454 and 63.455. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

k. When actions taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) are not consistent with the procedures specified in the facility's Startup Shutdown Malfunction (SSM) Plan, the Permittee shall record the actions taken for that event for inclusion in the semiannual SSM report. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

l. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the facility's SSM plan, the Permittee shall keep records for that event that demonstrate that the procedures specified in the SSM plan were followed. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these records are not maintained.

m. The Permittee shall keep and maintain monthly records in a logbook (written or electronic) of the pulp throughput on A-Line and the total pulp throughput on A-, B-, and C-Lines.

Reporting [40 CFR 63.94, 63.454; 63.455, and 15A NCAC 02Q .0508(f)]

n. Beginning on July 30, 2007, the Permittee shall submit semiannual summary reports of excess emissions under the equivalency by permit approach. Each semiannual report must be 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 must include the total time of excess emissions (excluding periods of startup, shutdown, or malfunction) for each 12-month period ending on each month during the semi-annual reporting period divided by the total process operating time for each 12-month period ending on each month during the semi-annual reporting period using rolling 12-month totals. All instances of deviations from the requirements of this permit must be clearly identified. When no exceedances have occurred, such information shall be included in the report. Additionally, each semi-annual report shall specify the pulp throughput on A-Line and the total pulp throughput on A-, B-, and C-Lines for each of the 17 previous calendar months and the rolling 12-month pulp throughputs on A-Line and the combination of A-, B-, and C-Lines for each 12-month period.

o. The Permittee shall comply with the reporting requirements of 40 CFR 63, Subpart A as specified in Table 1 of 40 CFR 63.440.

p. As required in §63.455(b), the Permittee shall submit, with the initial notification report and update every two years thereafter, a non-binding control strategy report containing, at a minimum, the information specified in §63.455(b)(1)-(3) in addition to the information required in §63.9(b)(2) of 40 CFR 63 Subpart A.

q. The Permittee shall notify the Regional Office in writing within 15 days of both commencement and shut-down of operation of temporary enclosed flare (Flare).

C. 40 CFR 63, Subpart MM Affected Sources:

Source ID No.	Source Description	Control ID No	Control Description
ES-08-PU-012	No. 7 Recovery Furnace	08-CD-012-001	single stage, cold-side dry bottom electrostatic precipitator (140,000 square feet of plate area)
ES-08-PU-013	No. 7 Smelt Dissolving Tank	08-CD-013-001	orifice-type wet scrubber
ES-09-PU-004	Lime Kiln	09-CD-004-001	variable throat venturi-type wet scrubber

Table 2.2 C: The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	**Lime Kiln** • Particulate matter emissions shall be no greater than 0.14 gr/dscf, corrected to 10% oxygen. • Scrubber liquid flow shall be no less than 650 gpm (3-hour average). • Scrubber pressure drop shall be no less than 20 inches of H2O (3-hour average). **No. 7 Recovery Furnace** • Particulate matter emissions shall be no greater than 0.021 gr/dscf corrected to 8% oxygen. • Opacity shall not be greater than 35 percent for more than 6 percent of the operating time within any quarterly period. **No. 7 Smelt Dissolving Tank** • Particulate matter emissions shall be no greater than 0.094 gr/dscf • Scrubber liquid flow shall be no less than 17 gpm (3-hour average). • Scrubber differential pressure shall be no less than 8.2 inches of H2O (3-hour average).[1] **Overall Chemical Recovery System PM Limit** Total Particulate matter emissions from the Lime Kiln, No. 7 Recovery Furnace, and No. 7 Smelt Dissolving Tank shall be no greater than 1.379 lb/TBLS.	15 A NCAC 02D .1111 (40 CFR 63 Subpart MM)

1. 15A NCAC 02D .1111: MACT 40 CFR 63 SUBPART MM

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart MM, including Subpart A "General Provisions" as defined per 40 CFR 63.440(g) and indicated per Table 1 of 40 CFR 63 Subpart MM. Terms used throughout this section are defined in the Clean Air Act as amended in 1990 and in 40 CFR 63.2 and 63.861. Units and abbreviations are defined in 40 CFR 63.3. [15A NCAC 02D .1111]

Emission Limitations [15A NCAC 02D .1111 and 40 CFR 63.865(a)]

b. Visible emissions from the No. 7 Recovery Furnace shall not exceed **35 percent opacity** for more than six percent of the operating time within any quarterly period.

c. The total particulate matter emissions from the Chemical Recovery System shall not exceed **1.379 pounds per ton BLS** and particulate matter emissions from the individual chemical recovery sources shall not exceed the following limits:

i. **0.14 gr/dscf**, corrected to 10% oxygen, from the Lime Kiln;
ii. **0.021 gr/dscf** corrected to 8% oxygen, from the No. 7 Recovery Furnace; and
iii. **0.094 gr/dscf** from the No. 7 Smelt Dissolving Tank.

d. The chemical recovery system emission limit(s) in Section 2.2 C.1.c above must be reestablished if either:
   i. The air pollution control system for the Lime Kiln, the No. 7 Recovery Furnace, or the No. 7 Smelt Dissolving Tank is modified (as defined in 40 CFR 63.861) or replaced, or
   ii. The Lime Kiln, No. 7 Recovery Furnace, or No. 7 Smelt Dissolving Tank is shut down for more than 60 consecutive days. [40 CFR 63.862(a)(1)(ii)(D)]

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

e. If emissions testing is required to reestablish the chemical recovery system emission limits, the testing shall be performed according to the procedures in 40 CFR 63.7, 63.865, and General Condition JJ. If the test results exceed an emission limit in Section 2.2 C.1.c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. [40 CFR 63.865(a)]

Monitoring [15A NCAC 02D .1111]

f. The Permittee must install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) at the outlet of No. 7 Recovery Furnace that can be used to determine opacity at least once every successive 10-second period and calculate and record each successive 6-minute average opacity using the procedures in 40 CFR 63.6(h) and 63.8. The COMS data must be reduced as specified in 40 CFR 63.8(g)(2). If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111. [40 CFR 63.864(d)(10)]

g. The Permittee must install, calibrate, maintain, and operate a continuous monitoring system that can be used to determine and record the pressure drop and the scrubbing liquid flow rate on the Lime Kiln Scrubber and the No. 7 Smelt Dissolving Tank scrubber. Pressure drop and scrubbing liquid flow rate for the Lime Kiln Scrubber and the No. 7 Smelt Dissolving Tank scrubber must be monitored at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c), as well as the following procedures [40 CFR 63.864(e)(10) and (13)]:
   i. The monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to the accurate to within a gauge pressure of ±500 pascals (±2 inches of water gauge pressure); and
   ii. The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

   If these monitoring procedures are not followed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

h. The Permittee may base operating ranges on values recorded during the initial performance tests or conduct additional performance tests for the specific purpose of establishing operating ranges, provided that test data used to establish the operating ranges are or have been obtained using the test methods required in Subpart MM. The Permittee must certify that all control devices and processes have not been modified subsequent to the testing upon which the data used to establish the operating parameter ranges were obtained. The Permittee may establish expanded or replacement operating ranges during subsequent performance tests using the test methods in 40 CFR 63.865. The Permittee must continuously monitor each parameter and determine the arithmetic average value of each parameter during each performance test. Multiple performance tests may be conducted to establish a range of parameter values. [40 CFR 63.864(j)]

i. The Permittee shall implement corrective action, as specified in the startup, shutdown, and malfunction (SSM) plan prepared under 40 CFR 63.866(a) if the following occurs [40 CFR 63.864(k)(1)]:
   i. For No. 7 Recovery Furnace: The average of ten consecutive 6-minute COMS readings is greater than 20 percent opacity.
   ii. For the Lime Kiln or No. 7 Smelt Dissolving Tank: The 3-hour average scrubber pressure drop or scrubbing liquid flow rate is less than its minimum value listed in Table 2.2 C above.

j. The Permittee is in violation of 40 CFR 63.862 if the any of the following monitoring exceedances occur [63.864(k)(2)]:
   i. For No. 7 Recovery Furnace: The opacity, as measured by the COMS, is greater than 35 percent for 6 percent or more of the operating time within any quarterly period.
   ii. For the Lime Kiln or No. 7 Smelt Dissolving Tank: Six or more 3-hour average scrubber pressure drops or scrubbing liquid flow rates within any 6-month reporting period are less than its minimum value listed in Table 2.2 C above.

k. For purposes of determining the number of non-opacity monitoring exceedances, no more than one exceedance will be attributed in any given 24-hour period. [63.864(k)(3)]

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

l. The Permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures for operating and maintaining the Lime Kiln, the No. 7 Recovery Furnace, and the No. 7 Smelt Dissolving Tank during periods of startup, shutdown, and malfunction, and for performing corrective action for malfunctioning process and control systems used to comply with 40 CFR 63 Subpart MM. In addition to the information required in 40 CFR 63.6(e), the plan must include the requirements given in 40 CFR 63.866(a)(1) and (2). [40 CFR 63.866(a)]

m. The Permittee shall maintain records of each occurrence when corrective action is required under Section 2.2 C.1.i. and when a violation is noted under Section 2.2 C.1.j. [40 CFR 63.866(b)]

n. In addition to the general records required by 40 CFR 63.10(b)(2), the Permittee shall maintain records of the following information [40 CFR 63.864 (c)]:
   i. Records of black liquor solids firing rates in units of tons per day for No. 7 Recovery Furnace;
   ii. Records of CaO production rates in units of tons per day for the Lime Kiln;
   iii. Records of parameter monitoring data required under Section 2.2 C.1.f-l, including any period when the operating parameter levels were inconsistent with the levels established during the initial performance test or subsequent testing, with a brief explanation of the cause of the deviation, the time the deviation occurred, the time corrective action was initiated and completed, and the corrective action taken;
   iv. Records and documentation of supporting calculations for the chemical recovery system emissions limit; and
   v. Records of monitoring parameter ranges established under Section 2.2 C.1.h.

o. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111, if the records required in Section 2.2 C. l-n are not maintained.

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

p. The Permittee shall notify the Director before any of the following actions are taken [40 CFR 63.867(b)]:
   i. The air pollution control system for any process unit subject to 40 CFR 63 Subpart MM is modified or replaced;
   ii. The Lime Kiln, No. 7 Recovery Furnace, or No. 7 Smelt Dissolving Tank is shut down for more than 60 consecutive days;
   iii. A continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit subject to 40 CFR 63 Subpart MM is changed; or
   iv. The black liquor solids firing rate for No. 7 Recovery Furnace during any 24-hour averaging period is increased by more than 10 percent above the level measured during the most recent performance test.

q. If the Permittee (1) modifies the air pollution control device for the Lime Kiln, No. 7 Recovery Furnace, or No. 7 Smelt Dissolving Tank or (2) shuts down the Lime Kiln, No. 7 Recovery Furnace, or No. 7 Smelt Dissolving Tank for more than 60 consecutive days, or (3) increases the black liquor solids firing rate for the No. 7 Recovery Furnace during any 24-hour averaging period by more than 10 percent above the level measured during the most recent performance test, the Permittee must recalculate the overall PM emissions limit for the Lime Kiln, No. 7 Recovery Furnace, and No. 7 Smelt Dissolving Tank and resubmit the documentation required in 40 CFR 63.865 to the Director. All modified PM emissions limits are subject to approval by the Director. [40 CFR 63.867(b)]

r. The Permittee must report quarterly if measured parameters meet any of the conditions specified in Section 2.2 C.1.k. This report must contain the information specified in 40 CFR 63.10(c) as well as the number and duration of occurrences when the source met or exceeded the conditions in Section 2.2 C.1.j and the number and duration of occurrences when the source met or exceeded the conditions in Section 2.2 C.1.k.. All instances of deviations from the requirements of this permit must be clearly identified in the report. Reporting excess emissions below the violation thresholds of Section 2.2 C.1.j-k does not constitute a violation of the applicable standard. [40 CFR 63.867(c)]
   i. When no exceedances of parameters have occurred, the Permittee must submit a semiannual report stating that no excess emissions occurred during the reporting period.
   ii. The Permittee may combine excess emissions and/or summary reports for the facility for 40 CFR 63 Subparts MM and S.

2. 15A NCAC 02D .1109 CAA 112(j); CASE-BY-CASE MACT FOR START-UP, SHUTDOWN, OR MALFUNCTION (SSM) CONDITIONS IN 40 CFR PART 63, SUBPART MM REQUIREMENTS

a. Excess emissions occurring during the startup, shutdown, or malfunction of the Lime Kiln **(ID No. ES-09-PU-004)** or during the malfunction of the Lime Kiln scrubber shall not be considered excess emissions under 40 CFR 63 Subpart MM or 15A NCAC 02D .1111 throughout the period when the Permittee follows the applicable work

practice standard in Section 2.2 C.2.b-d below.

Lime Kiln Startup, Shutdown, and Malfunction Work Practice Standard [15A NCAC 02D .1109]

b. Startup begins when oil is first fired in the kiln and ends once the lime mud pump and feed-end screw are both operating. Shutdown starts when lime mud feed into the kiln is stopped for the purpose of shutting down the kiln and ends when fuel combustion in the kiln ceases. During startup, shutdown, and malfunction of the Lime Kiln, the Permittee shall operate the Lime Kiln scrubber at or above a 650 gallons per minute scrubbing liquid flowrate (3-hour average) and a 20 inches of H_2O (3-hour average) pressure drop.

c. The Permittee shall implement the following work practices during a Lime Kiln malfunction contributing to emissions exceeding the limit in Section 2.2 C.1.c:
   i. Upon knowledge of the malfunction, the Permittee must take immediate steps to identify the root cause of the elevated emissions.
   ii. If the root cause of the elevated emissions cannot be determined within four operating hours from initial knowledge of the Lime Kiln malfunction or if the projected time to return to acceptable emissions levels exceeds four hours, the Permittee must initiate an orderly shutdown of the Chemical Recovery Process.
   iii. The Lime Kiln malfunction shall be corrected as soon as practical.

Lime Kiln Scrubber Malfunction Work Practice Standard [15A NCAC 02D .1109]

d. The Permittee shall implement the following work practices during a Lime Kiln scrubber malfunction:
   i. Upon knowledge of a 3-hour pressure drop less than 20 inches of water or a 3-hour scrubbing liquid flow rate below 650 gallons per minute, the Permittee must take immediate steps to identify the root cause of the parameter excursion.
   ii. If the root cause of the parameter excursion cannot be determined within four operating hours from initial knowledge of scrubber malfunction or if the projected time to correct the parameter excursion exceeds four hours, the Permittee must initiate an orderly shutdown of the Chemical Recovery Process.
   iii. The parameter excursion shall be corrected as soon as practical.

D. Facility Wide Sources, except those subject to 15A NCAC 02D .1109 (Case-by-Case MACT) or 15A NCAC 02D .1111 (40 CFR 63)

STATE-ONLY REQUIRMENT

1. 15A NCAC 02D .1100: TOXIC AIR POLLUTANT EMISSIONS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the modeling demonstrating compliance with facility wide air toxic emissions, submitted with application No. 4200007.11B and approved by the NC Division of Air Quality Analysis Branch on December 1, 2011 and excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions , those sources subject to 15A NCAC 02D .1109 (Case-by-Case MACT), and those sources subject to 15A NCAC 02D .1111 (40 CFR 63)), the following permit limits shall not be exceeded:

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)
Log Chipper (ES-01-PU-014) or Bark Grinder (ES-01-PU-015)	Acrolein	3.59E-04 pounds per hour
	Benzene	1.81E+01 pounds per year
	Formaldehyde	9.79E-03 pounds per hour
Lime Kiln Precoat Filter (ES-09-PU-010)	Acrolein	7.95E-03 pounds per hour
	Benzene	2.97E+00 pounds per year
	Formaldehyde	7.11E-02 pounds per hour
Lime Kiln Vacuum Pump (ES-09-PU-016)	Benzene	9.41E+00 pounds per year
Green Liquor Clarifier (ES-10-PU-001 and ES-10-PU-002)	Benzene	7.01E+00 pounds per year
	Methyl Mercaptan	1.53E-02 pounds per hour
Primary Causticizer (ES-10-PU-023)	Ammonia	5.85E+01 pounds per hour
Primary Clarifier (ES-10-PU-WLC)	Formaldehyde	1.42E-01 pounds per hour
	Phenol	8.52E-01 pounds per hour
No.3 and No. 4 Paper Machine (ES-12-PU-002 and ES-12-PU-003)	Acrolein	2.20E-00 pounds per hour
	Benzene	1.40E+03 pounds per year
	Formaldehyde	4.06E+00 pounds per hour
	Methyl Mercaptan	1.34+00 pounds per hour
HD Storage (ES-12-TK-001 to ES-12-TK-003)	Acrolein	1.97E-02 pounds per hour
	Benzene	1.73E+00 pounds per year
	Methyl Mercaptan	3.35E-02 pounds per hour
	Phenol	5.07E+00 pounds per hour
Tall Oil Plant (ES-21)	Acrolein	3.67E-01 pounds per hour
	Benzene	4.68+01 pounds per year
	Hydrogen Sulfide	4.30E+02 pounds per day
	Methyl Mercaptan	1.37E+00 pounds per hour
	Phenol	7.02E+01 pounds per hour

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)
No. 1 to No. 4 Temporary Boilers (ES-11-CU-044 to 047)	Acrolein	3.13E-01 pounds per hour
	Arsenic	9.46E+01 pounds per year
	Benzene	9.21E+02 pounds per year
	Beryllium	9.72E+02 pounds per year
	Cadmium	3.26E+02 pounds per year
	Chlorine 24-Hour	2.49E+03 pounds per day
	Chlorine 1-Hour	1.14E+03 pounds per hour
	Fluorides 24-Hour	6.92E+02 pounds per day
	Fluorides 1-Hour	1.61E+02 pounds per hour
	Formaldehyde	3.05E+00 pounds per hour
	Hydrogen Chloride	3.76E+02 pounds per hour
	Hydrogen Fluoride 24-Hour	1.30E+03 pounds per hour
	Hydrogen Fluoride 1-Hour	1.61E+02 pounds per hour
	Manganese	1.03E+03 pounds per day
	Mercury	3.85E+01 pounds per day
	Methyl Mercaptan	8.04E-03 pounds per hour
	Nickel	2.57E+02 pounds per day
	Phenol	4.82E-01 pounds per hour
	Soluble chromate compounds	2.28E+01 pounds per day
	Sulfuric Acid 24-Hour	6.05E+02 pounds per day
	Sulfuric Acid 1-Hour	6.03E+01 pounds per hour

b. The time of operation for the Portable Log Chipper **(ID No. ES-01-PU-014)** added to the time of operation of the Portable Bark Grinder **(ID No. ES-01-PU-015)** shall not exceed a total of 8,760 hours during any consecutive 12 month period.

c. Temporary boilers **(ID Nos. ES-11-CU-044 to ES-11-CU-047)** shall only operate when the No. 1 Power Boiler **(ID No. ES-11-CU-001)** is shut down.

STATE-ONLY REQUIRMENT

2. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENTS

a. Pursuant to 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit,” for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that actual emissions from the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions, those sources subject to 15A NCAC 02D .1109 (Case-by-Case MACT) and those sources subject to 15A NCAC 02D .1111 (40 CFR 63)) do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 02Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions, those sources subject to 15A NCAC 02D .1109 (Case-by-Case MACT) and those sources subject to 15A NCAC 02D .1111 (40 CFR 63) including fugitive emissions, will not exceed TPERs listed in 15A NCAC 02Q .0711.

i. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.

ii. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D.1100 "Control of Toxic Air Pollutants."

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

TPERs Limitations				
Pollutant (CAS Number)	**Carcinogens (lb/yr)**	**Chronic Toxicants (lb/day)**	**Acute Systemic Toxicants (lb/hr)**	**Acute Irritants (lb/hr)**
Acetaldehyde (108-31-6)				6.8
Carbon disulfide (75-152-0)		3.9		
Carbon tetrachloride (56-23-5)	460			
Chlorobenzene (141-78-6)		46		
Chloroform (67-66-3)	290			
Cresol (1319-77-3)			0.56	
n-Hexane (110-54-3)		23		
Methyl ethyl ketone (78-93-3)		78		22.4
Methyl isobutyl ketone (108-10-1)		52		7.6
Styrene (100-42-5)			2.7	
Toluene (108-88-3)		98		14.4
Xylene (1330-20-7)		57		16.4

2.3 - Permit Shield for Nonapplicable Requirements

The Permittee is shielded from the following nonapplicable requirements [15A NCAC 02Q .0512(a)(1)(B)].

A. The Clean Air Interstate Rule (CAIR) permit requirements and 15A NCAC 02D .2400 are not applicable to the No. 1 Power Boiler (ID No. ES 11-CU-001) due to the following:
   1. As stated in 15A NCAC 02D .2401(a), the purpose of the 02D .2400 section is to implement the federal CAIR.
   2. As of January 1, 2015, the CAIR provisions will no longer be applicable [40 CFR 52.35(f)] and will be replaced with provisions for the Cross - State Air Pollution Rule (CSAPR) as of January 1, 2015.
   3. The CSAPR provisions only apply to large electric generating units (EGUs) stationary, fossil - fuel-fired boilers serving a generator with a nameplate capacity of more than 25MW and produce electricity for sale under a firm contract to the electrical grid. [40 CFR 52.34(a)(2)(i)].
   4. No. 1 Power Boiler (ID No. ES 11-CU-001) is not a large EGU because it does not sell electricity to the grid.

SECTION 3 - GENERAL CONDITIONS (version 4.0 12/17/15)

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 and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

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

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

certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

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

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

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

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

G. **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
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 and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 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.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 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.
2. 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).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
   a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

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

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

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

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

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

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

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

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine 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 and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 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)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work

practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.

2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 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. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** – FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 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, .0912, .1110, .1111, or .1415 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, 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 this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 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. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540] - STATE ENFORCEABLE ONLY

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(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound