ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

Enter Calendar Date

Mr. Matt Hamburg
Plant Manager
American Chrome and Chemicals
5408 Holly Shelter Road
Castle Hayne, North Carolina 28429

SUBJECT: Air Quality Permit No. 02937T41
Facility ID: 6500055
American Chrome and Chemicals
Castle Hayne
New Hanover County
Fee Class: Title V
PSD Class: Major

Dear Mr. Hamburg:

In accordance with your completed Air Quality Permit Application for renewal of your Title V permit, we are forwarding herewith Air Quality Permit No. 02937T41 authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been identified as such in the permit. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 4. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

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

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

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

143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

New Hanover County has triggered increment tracking under PSD for PM, SO_2, and NOx. However, this permitting action does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from ***(Enter Permit Issuance Date)*** until ***(Enter Permit Expiration Date)***, is nontransferable to future 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 Eric L. Crump, P.E. at (919) 707-8470 or eric.crump@ncdenr.gov.

Sincerely yours,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Laserfiche (Facility ID 6500055)
Connie Horne (cover letter only)

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

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

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

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

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

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

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

* * *

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

Summary of Changes to Permit

The following changes were made to Air Permit No. 02937T40:*

Page No.	Section	Description of Changes
Cover and throughout	---	• Updated all dates and permit revision numbers • Changed name of facility from "Elementis Chromium" to "American Chrome and Chemicals"
Insignificant Activities List	Attachment	Moved to Section 3 of permit
--	Table of Contents	• Changed Section 3 from "General Conditions" to "Insignificant Activities per 15A NCAC 02Q .0503(8)" • Added new Section 4, "General Conditions"
3	List of Acronyms	Relocated here (formerly last page of permit)
4-10	1	Changed "BACT" designations in table to "PSD BACT"
13	2.1 A.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
14	2.1 A.3.a 2.1 A.3.c	Changed "or" in first sentence to "and" Renumbered section; changed reference to Section 2.1 A.3.a to 2.1 A.3.c.i
15	2.1 A.3.d, f 2.1 A.4 2.1 A.4.a.i	Updated section to reflect the most current stipulations for 15A NCAC 02D .0516 Updated section to reflect the most current stipulations for 15A NCAC 02D .0521 Added Group J (as already listed in the limit/standards summary table for Section 2.1 A)
16	2.1 A.5, 6 2.1 A.5.b 2.1 A.6	Updated sections to reflect the most current stipulations for 15A NCAC 02D .0524 and 40 CFR Part 60 Subpart Y Changed citation of 40 CFR 60.252(c) (referring to thermal dryers) to 40 CFR 60.254(a) (referring to coal processing and conveying equipment, coal storage systems, transfer and loading systems) • Updated section to reflect the most current stipulations for 15A NCAC 02D. 0530(u) • Combined paragraphs b and c into paragraph b, and added requirement to determine emission factors for PM and PM_{10} • Relettered paragraphs d and e as paragraphs c and d • Deleted phrase "testing is not completed and/or" from paragraph c; Inserted "conditions for" between the words "incorporate" and "proper operation" in the first sentence • Added requirement to calculate SO_2 emissions to paragraph d • Adeed new paragraph e requiring calculation of emissions for NO_X, PM, and PM_{10}, with noncompliance statement

Page No.	Section	Description of Changes
18	2.1 A.7	Updated section to reflect the most current stipulations for 15A NCAC 02Q .0317 (for 02D .0530, PSD Avoidance)
	2.1 A.8	Updated section to reflect the most current stipulations for 15A NCAC 02Q .0317 (for 02D .0530, PSD Avoidance)
20	2.1 B.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
21	2.1 B.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
23	2.1 C	Corrected ID No. of fines bin (changed from ES-11 to ES-16)
	2.1 C.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
24	2.1 C.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
27	2.1 D.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
28	2.1 D.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
29	2.1 E.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
30	2.1 E.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
32	2.1 F.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
33	2.1 F.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
34	2.1 G.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
35	2.1 G.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
37	2.1 H.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
38	2.1 H.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521
39	2.1 I.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0515 (including inspections and maintenance as recommended by the manufacturer)
40	2.1 I.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0521

Page No.	Section	Description of Changes
41	2.2 A 2.2 A.1.a	Corrected "#3 Kiln surge feed bin (ID No. ES-5-K3)" in list of sources to "#3 kiln feed surge bin (ID No. ES515-9)" • Moved emission sources and control devices to table; deleted subparagraphs a through i • Removed "and #3 kiln feed surge bin" from emission source description of ES-5-K3 • Added separate line in table for #3 kiln feed surge bin (ID No. ES515-9)
44	2.2 B.1	• Updated section to reflect the most current stipulations for 15A NCAC 02D .1111 (40 CFR Part 63, Subpart NNNNNN) • Moved startup/shutdown/malfunction good air pollution control practices requirement (formerly paragraph f) under "Monitoring" subheading (now paragraph g). Other paragraphs renumbered accordingly. • Changed numbering of subparagraphs in paragraph h • Replaced all instances of "§" with "40 CFR"
46	2.2 C	Updated section to reflect the most current stipulations for 15A NCAC 02D .1111 (40 CFR Part 63, Subpart JJJJJJ)
48	2.2 D.1	Updated section to reflect the most current stipulations for 15A NCAC 02Q .0317 (for 02Q .0700, Toxic Air Pollutant Procedures)
49	2.2 D.1.e 2.2 D.2.b	Removed reporting requirements for 15A NCAC 02Q. 0317 (for 02Q .0700, Toxic Air Pollutant Procedures) Changed due date for RMP update to no later than June 2024
50	2.2 E.1 2.2 E.1.c.i	Updated section to reflect the most current stipulations for 15A NCAC 02D .0614 Changed monitoring approach for baghouses/fabric filters from monitoring pressure drop to visible emission observation
54	3	Section 3 is now "Insignificant Activities per 15A NCAC 02Q .0503(8)"
58-66	4	Updated General Conditions to Version 6.0 dated January 7, 2022

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

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

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
02937T41	NA	XXXX	XXXX

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

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

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

Permittee:	**American Chrome and Chemicals**
Facility ID:	**6500055**
Primary SIC Code:	**2819**
NAICS Code:	**325188**
Facility Site Location:	**5408 Holly Shelter Road**
City, County, State, Zip:	**Castle Hayne, New Hanover County, North Carolina 28429**
Mailing Address:	**5408 Holly Shelter Road**
City, State, Zip:	**Castle Hayne, North Carolina 28429**
Application Number(s):	**6500055.22A and 6500055.23A**
Complete Application Date(s):	**August 4, 2022 and April 18, 2023, respectively**
Division of Air Quality, Regional Office Address:	**Wilmington Regional Office** **127 Cardinal Drive Extension** **Wilmington, North Carolina, 28405-3485**

Permit issued this the XX day of XXXXX, 2023.

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

Table of Contents

List of Acronyms

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

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Main Plant Stack, GACT Subpart NNNNNN			
ES-4-1	#1 ball mill with classifier and product cyclone (9.25 tons per hour process weight input)	CD510-1	Fabric filter (3,366 square feet of filter area)
ES-4-5	Ore silo [This source vents to either CD510-1 or CD510-2]	CD510-2	Fabric filter (3,366 square feet of filter area)
ES-4-2	#2 ball mill with classifier and product cyclone (9.25 tons per hour process weight input)		
ES-4-3	#3 ball mill with classifier and product cyclone (9.25 tons per hour process weight input)	CD510-3*	Fabric filter (3,366 square feet of filter area)
ES-4-4* **PSD BACT**	#4 ball mill with classifier and product cyclone (9.25 tons per hour process weight input)	CD510-4*	Fabric filter (3,366 square feet of filter area)
ES-8-1, and ES-8-2	Two soda ash storage silos	CD510-9	Fabric filter (490 square feet of filter area)
ES-9	Soda ash truck/railcar unloading	CD510-10	Fabric filter (65 square feet of filter area)
ES-27* **PSD BACT**	Lime truck and rail car unloading	CD510-11*	Fabric filter (640 square feet of filter area)
Main Plant Stack continued, GACT Subpart JJJJJJ			
ES-1	Natural gas/No. 6/No. 2 fuel oil/on-specification used oil-fired boiler (122 million Btu per hour heat input)	NA	NA
ES-2	Natural gas/No. 6/No. 2 fuel oil/on-specification used oil-fired boiler (122 million Btu per hour heat input)	NA	NA
Main Plant Stack continued, GACT Subpart NNNNNN			
F-CRSG **NSPS, Y**	Coal receiving, conveyors, storage, and grinding equipment	NA	NA
ES-5-K1	Natural gas, Coal, No. 6, No. 2 fuel oil, and on-specification used oil-fired #1 rotary kiln (150 million Btu per hour heat input, 32.5 tons per hour process weight input)	CD-K1-SNCR†	one selective non-catalytic reduction
		CD515-1	#1 electrostatic precipitator (48,775 square feet of collection plate area)
ES-5-K2	Natural gas, Coal, No. 6, No. 2 fuel oil, and on-specification used oil-fired #2 rotary kiln (150 million Btu per hour heat input, 32.5 tons per hour process weight input)	CD-K2-SNCR†	one selective non-catalytic reduction
		CD515-2	#2 electrostatic precipitator (48,775 square feet of collection plate area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-5-K3* **PSD BACT**	Natural gas, Coal, No. 6, No. 2 fuel oil, and on-specification used oil-fired #3 rotary kiln (150 million Btu per hour heat input, 32.5 tons per hour process weight input)	CD-K3-SNCR†	one selective non-catalytic reduction
		CD515-3*	#3 electrostatic precipitator (52,992 square feet of collection plate area)
ES515-9* **PSD BACT**	#3 kiln feed surge bin (32.5 tons per hour process weight input)		
ES-5-1	#1 kiln feed surge bin (32.5 tons per hour process weight input)		
ES-5-2	#2 kiln feed surge bin (32.5 tons per hour process weight input)		
ES-5-4	mix area dust system	CD515-3*	#3 electrostatic precipitator (52,992 square feet of collection plate area)
ES-5-5	mix area drag conveyor		
ES-6-3	#1 recycle drag conveyor		
ES-6-4	#1 dry residue bucket elevator		
ES-7-OD-1	Natural gas/No. 6/No. 2 fuel oil/on-specification used oil-fired rotary ore dryer (20 million Btu per hour heat input and 71.5 tons per hour process weight input)	CD510-12	Dual cyclones (56 inches in diameter each)
ES-7-5	Dry ore bucket elevator	CD515-1	#1 electrostatic precipitator (48,775 square feet of collection plate area)
ES-7-1	Dry ore surge bin		
ES-7-2	Dry ore surge bin	CD515-2	#2 electrostatic precipitator (48,775 square feet of collection plate area)
ES510-11a	Dry ore surge bin		
ES-7-3	Dry ore surge bin	CD515-3	#3 electrostatic precipitator (52,992 square feet of collection plate area)
ES-7-4	Dry ore surge bin		
ES-6-RD1	Natural gas/No. 6/No. 2 fuel oil/on-specification used oil-fired #1 recycle residue dryer (30.0 million Btu per hour heat input, and 32 tons per hour process weight input)	CD510-14	Dual cyclones (66 inches in diameter each)
		CD515-1	#1 electrostatic precipitator (48,775 square feet of collection plate area)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
		CD515-2	#2 electrostatic precipitator (48,775 square feet of collection plate area)
		CD515-3	#3 electrostatic precipitator (52,992 square feet of collection plate area)
ES-6-RD2* **PSD BACT**	Natural gas/No. 6/No. 2 fuel oil/on-specification used oil-fired #2 recycle residue dryer (30.0 million Btu per hour heat input, and 32 tons per hour process weight input)	CD510-13*	Dual cyclones (66 inches in diameter each)
ES-6-2	#2 dry residue bucket elevator	CD515-1	#1 electrostatic precipitator (48,775 square feet of collection plate area)
ES-6-1	dry residue storage silo	CD515-2	#2 electrostatic precipitator (48,775 square feet of collection plate area)
		CD515-3	#3 electrostatic precipitator (52,992 square feet of collection plate area)
Quench Area, GACT Subpart NNNNNN			
ES-26-1	#1 quench tank	CD515-5	#1 quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection)
ES-26-3	#1 scrubber recirculation tank		
ES-26-5	#1 wet electrostatic precipitator recirculation tank [these sources may also vent to quench tank scrubbers #1A-2A and #2 (ID Nos. CD515-7 and CD515-8)]	CD515-6	#1 wet electrostatic precipitator (8,682 square feet of collection plate area, 225 gallons per minute maximum water injection)
ES-26-2	#1A quench tank	CD515-7	#1A-2A quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection)
ES-26-10	#2A quench tank		
ES-26-4 ES-26-6	#1A-#2A scrubber recirculation tank Area repump tank	CD515-6 and CD515-9	#1 and/or #2 wet electrostatic precipitator

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
	[these sources may also vent to quench tank scrubber #1 (ID No. CD515-1)]		(8,682 square feet of collection plate area, 225 gallons per minute maximum water injection, each)
ES-26-9 ES-26-11 ES-26-12	#2 quench tank #2 scrubber recirculation tank #2 Wet electrostatic precipitator recirculation tank [these sources may also vent to quench tank scrubber #1A-2A (ID No. CD515-7)]	CD515-8 CD515-9	#2 quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection) #2 wet electrostatic precipitator (8,682 square feet of collection plate area, 225 gallons per minute maximum water injection)
ES-26-13* **PSD BACT** ES-26-15* **PSD BACT**	#3 quench tank #3 scrubber recirculation tank	CD515-10* CD515-11* CD515-12*	#3 quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection) #3A quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection) #3 wet electrostatic precipitator (8,682 square feet of collection plate are, 225 gallons per minute maximum water injection)
ES-26-17* **PSD BACT** ES-26-14* **PSD BACT** ES-26-16* **PSD BACT**	#3 Wet electrostatic precipitator recirculation tank [This source may also vent to #3A scrubber (ID No. CD515-11)] #3A quench tank #3A scrubber recirculation tank	CD515-11* CD515-12*	#3A quench tank wet cyclonic scrubber (140 gallons per minute maximum liquor injection) #3 wet electrostatic precipitator (8,682 square feet of collection plate are, 225 gallons per minute maximum water injection)
Crystallization Area, GACT Subpart NNNNNN			
ES-16-3	Crystal centrifuge	CD555-1	Crystal impingement plate scrubber with demister (100 gallons per minute maximum water injection rate)
ES-16-17	Crystal dissolving tank		
ES-16-9	Wet conveyor		
ES-16-2	Fluid bed dryer		
ES-16-1	Fluid bed cooler		
ES-16-10	Crystal feed tank		
ES-16-11	Culls bin		
ES-16-16	Fines bin		
ES-16-5	Crystal storage bin		
ES-16-4	Crystal screen		
ES-16-6	Crystal bucket elevator		
ES-16-15	Bag dump hopper		
ES-16-14	Red liquor sump		
ES-16-12	Bag slitter		
ES-16-13	Above ground sump		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-16-8	Super sack filling machine		
ES-16-7	Crystal bagging machine		
Chromic Acid Area, GACT Subpart NNNNNN			
ES-21-28 and ES-21-29	#1 & #2 filtrate receivers	CD590-3 CD590-4 CD-590-2	Filter exhaust mist eliminator Main chromic acid packed bed scrubber (200 gallons per minute maximum water injection) Brownian diffusion mist eliminator
ES-21-33	Tote bin screw conveyor	CD590-1	Chromic acid packing impingement scrubber (15 gallons per minute maximum water injection)
ES-21-36	Sparger car loading hose		
ES-21-34	Sparger car chromic acid bulk conveyor		
ES-21-35	Main packing bin		
ES-21-30	Drum filling machine		
ES-21-31	Chromic acid tote bin filling machine		
ES-21-32	Tote bin transloading vent		
ES-21-38	Hydration conveyor		
ES-21-44	#3 hydration conveyor		
ES-21-39	Drying conveyor	CD-590-2	Brownian diffusion mist eliminator
ES-21-41	Fines bin		
ES-21-43	Fines conveyor		
ES-21-42	Lumps bin		
ES-21-40	Dust free chromic acid packing bin		
ES-21-15 and ES-21-16	#1 & #2 crude crystal rotary filters	CD590-4	Main chromic acid packed bed scrubber (200 gallons per minute maximum water injection)
ES-21-27	Vacuum engines seal water		
ES-21-37	Vacuum engine separators		
ES-21-13 and ES-21-14	#1 & #2 chromic acid reactors		
ES-21-21, ES-21-22, and ES-21-23	#1, #2, & #3 crude crystal bins		
ES-21-1, ES-21-2, and ES-21-3	#1, #2, & #3 melters		
ES-21-4, ES-21-5, and ES-21-6	#1, #2, & #3 bisulfate urinals		
ES-21-26	Bisulfate surge tank		
ES-21-7, ES-21-8, and ES-21-9	#1, #2, &#3 chromic acid flakers		
ES-21-24	Lump tank		
ES-21-10, ES-21-11, and ES-21-12	#1, #2, & #3 chromic acid flaker conveyors	CD-590-2	Brownian diffusion mist eliminator
ES-21-18	85% liquor storage tank		
ES-21-17	Chromic acid filtrate storage tank		
ES-21-19	Chromic acid filtrate surge tank		
ES-21-25	Packing scrubber tank		
ES-21-20	Main chromic acid scrubber tank		

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Recycle Area, GACT Subpart NNNNNN			
ES-3-5	#2 repulp tank	CD510-15	#1 and #2 recycle filter systems mist eliminator
ES-3-3	#1 recycle vacuum filter		
ES-3-1	#1 hydroclone overflow receiver		
ES-3-4	#2 recycle vacuum filter		
ES-3-2	#2 hydroclone overflow receiver		
ES-39-3* **PSD BACT**	#3 separator tank [this source may also vent to I-CD510-17)]	CD510-18*	#3 recycle filter system mist eliminator
ES-39-5* **PSD BACT**	#3 belt wash tank		
ES-39-9* **PSD BACT**	#3 belt wash overflow tank		
ES-39-4* **PSD BACT**	#3 recycle vacuum filter		
ES-39-6* **PSD BACT**	#3 hydroclone overflow receiver		
ES-39-7* **PSD BACT**	#3 filtrate receiver tank		
ES-39-10* **PSD BACT**	#3 reversible conveyor		
ES-39-8	#1 repulp tank		
ES510-25* **PSD BACT**	#3 recycle belt conveyor	CD510-16*	Recycle conveyors and repump tank mist eliminator
Neutralization Area, GACT Subpart NNNNNN			
ES-12-4	#1 and #2 probe bowls	CD535-1	#1, #2, and #3 reject filter hood system and tanks mist eliminator
ES-12-1	#1 reject filter hood		
ES-12-2	#2 reject filter hood		
ES-12-3	#3 reject filter hood		
ES-28-1* **PSD BACT**	#4 reject filter hood	CD535-4*	#4 reject filter hood system mist eliminator
ES-28-3* **PSD BACT**	#4 filtrate receiver tank		
ES-28-4* **PSD BACT**	#4 repulp tank		
ES-28-2* **PSD BACT**	#4 wash receiver tank		
ES-28-5	#2 quench light slurry tank		
ES-29-7* **PSD BACT**	#4 filtrate separator tank [this source may also vent to CD535-1 below]	CD535-5*	#4 system mist eliminator
ES-29-8* **PSD BACT**	#4 wash separator tank	CD535-1	#1, #2, and #3 reject filter hood system and tanks mist eliminator
Waste Treatment Area, GACT Subpart NNNNNN			
ES-36-2	Lime silo	CD914-2	Lime/crushed limestone silo baghouse (900 square feet of filter area)
ES-36-1	Lime slurry tank		
ES-36-3	#1 lime/crushed limestone silo		
ES-36-4	#2 lime/crushed limestone silo		
ES-36-5	Sludge hold tank		
Evaporation Area, GACT Subpart NNNNNN			
ES-38-5* **PSD BACT**	#3 salt cake centrifuge	CD550-8	Wet salt cake system mist eliminator

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
US Filter Site, GACT Subpart NNNNNN			
ES2USF	Steam heated fluid bed dryer (18.6 tons per hour process weight input)	CDCY1 CDVS1	Cyclone (44 inches in diameter) packed bed scrubber (54 gallons per minute water injection)
ES4USF	Product storage silo	CD-BH1	Fabric filter (427 square feet of filter area)
ES5USF	Product storage silo	CD-BH2	Fabric filter (427 square feet of filter area)

*Denotes sources subject to PSD review of 1980

†The selective non-catalytic reduction (SNCR) systems (ID Nos. CD-K1, K2, and K3-SNCR) installed on the kilns (ID Nos. ES-5-K1, K2, and K3) need only be operated when firing coal.

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. MAIN PLANT STACK

Group A:

#1 ball mill with classifier and product cyclone (ID No. ES-4-1), ore silo (ID No. ES-4-5), and #2 ball mill with classifier and product cyclone (ID No. ES-4-2), each venting to two fabric filters (ID Nos. CD510-1 and 2) operating in parallel;

#3 ball mill with classifier and product cyclone (ID No. ES-4-3) with fabric filter (ID No. CD510-3); and

two soda ash storage silos (ID Nos. ES-8-1 and 2), each venting to fabric filter (ID No. CD510-9)

Group B:

#4 ball mill with classifier and product cyclone (ID No. ES-4-4) with fabric filter (ID No. CD510-4);

soda ash railcar unloading (ID No. ES-9) with fabric filter (ID No. CD510-10);

lime truck and railcar unloading (ID No. ES-27) with fabric filter (ID No. CD510-11);

product silo (ID No. ES4USF) with fabric filter (ID No. CD-BH1) [US Filter Site]; and

product silo (ID No. ES5USF) with fabric filter (ID No. CD-BH2) [US Filter Site]

Group C:

#2 recycle residue dryer (ID No. ES-6-RD2) venting to dual cyclone (ID No. CD510-13) in series with one of three electrostatic precipitators (ID Nos. CD515-1, 2, and 3)

Group D:

#3 rotary kiln (ID No. ES-5-K3) equipped with optional selective non-catalytic reduction (SNCR) (ID No. CD-K3-SNCR) and venting to electrostatic precipitator (ID No. CD515-3)

Group E:

#1 recycle residue dryer (ID No. ES-6-RD1) venting to dual cyclone (ID No. CD510-14) in series with one of three electrostatic precipitators (ID Nos. CD515-1, 2, and 3)

Group F:

dry ore bucket elevator (ID No. ES-7-5) and four dry ore surge bins (#1 through 4; ID Nos. ES-7-1 through 4), each venting to dual cyclone (ID No. CD510-12) in series with one of three electrostatic precipitators (ID Nos. CD515-1, 2, and 3);

two kiln feed surge bins (#1 and 2; ID No. ES-5-1 and 2), mix area dust system (ID No. ES-5-4), mix drag conveyor (ID No. ES-5-5), #1 recycle drag conveyor (ID No. ES-6-3), and #1 dry residue bucket elevator (ID No. ES-6-4), each venting to electrostatic precipitator (ID No. CD515-3); and

#2 dry residue bucket elevator (ID No. ES-6-2) and dry residue storage silo (ID No. ES-6-1), each venting to dual cyclone (ID No. CD510-13) in series with one of three electrostatic precipitators (ID Nos. CD515-1, 2, and 3)

Group G:
two boilers (ID Nos. ES-1 and ES-2)

Group H:
#1 rotary kiln (ID No. ES-5-K1) equipped with optional SNCR (ID No. CD-K1-SNCR) and venting to electrostatic precipitator (ID No. CD515-1);
#2 rotary kiln (ID No. ES-5-K2) equipped with optional SNCR (ID No. CD-K2-SNCR) and venting to electrostatic precipitator (ID No. CD515-2); and
rotary ore dryer (ID No. ES-7-OD-1) venting to dual cyclones (ID No. CD510-12) in series with one of three electrostatic precipitators (ID Nos. CD515-1, 2, and 3)

Group I:
#3 kiln feed surge bin (ID No. ES515-9) venting to electrostatic precipitator (ID No. CD515-3)

Group J:
Coal receiving, storage, and grinding equipment (ID No. F-CRSG)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	***Group G:*** 0.26 pounds per million Btu heat input	15A NCAC 02D .0503
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Sulfur Dioxide	***Groups C, D, E, G, and H:*** 2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	***Groups B, D, E, and I:*** 20 percent opacity ***Groups A, C, F, G, and H:*** 40 percent opacity	15A NCAC 02D .0521
Visible Emissions	***Group J:*** 20 percent opacity	15A NCAC 02D .0524 40 CFR Part 60 Subpart Y
Particulate Matter	***Groups B, D, and C:*** **See Section 2.2 A.1**	15A NCAC 02D .0530 PSD
Sulfur Dioxide and Nitrogen Oxides	***Groups D and H:*** **See Section 2.1 A.9** Recordkeeping and comparison to projected actual emissions	15A NCAC 02D .0530(u)
Particulate Matter	**See Section 2.2 E.1** Follow approved CAM plan	15A NCAC 02D .0614
Hazardous Air Pollutants	***Group G:*** **See Section 2.2. C.1** 40 CFR Part 63, Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers	15A NCAC 02D .1111

Pollutant	Limits/Standards	Applicable Regulation
PM, PM_{10}, Sulfur Dioxide, and Nitrogen Oxides	***Group G:*** **See Section 2.1 A.8** 12-month emission limits for PM, PM_{10}, SO_2, and NOx.	15A NCAC 02Q .0317 PSD Avoidance
N/A	**See Section 2.2. D.1** Burn only on-specification fuel oil	15A NCAC 02Q .0317 (Recycled Fuel Oil)

Group G

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

a. Emissions of particulate matter from the combustion of natural gas, No. 6 and No. 2 fuel oil that are discharged from the boilers (**ID Nos. ES-1 and ES-2**) into the atmosphere shall not exceed 0.26 pounds per million Btu heat input.

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

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

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

c. No monitoring, recordkeeping, or reporting is required for particulate emissions from the firing of natural gas, No. 2 and No. 6 fuel oils, and on-specification used oil in these boilers **(ID Nos. ES-1 and ES-2)**.

Groups A, B, C, D, E, F, H, and I

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

a. Emissions of particulate matter from each source in groups A, B, C, D, E, F, H, and I (listed in Section 2.1 A) shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

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

d. *Groups C, D, E, F, H, and I:*
Particulate matter emissions from each source in groups C, D, E, F, H, and I shall be controlled by dual cyclones (where listed) followed by an electrostatic precipitator. To ensure compliance, the Permittee shall perform inspections and maintenance. Inspection and maintenance requirements shall include:
   i. daily verification that electronic controls for corona power and rapper operation are functioning, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold,
   ii. a monthly visual inspection of the system ductwork, cyclones (where applicable), the electrostatic precipitator housing unit and hopper for leaks; and
   iii. every other year (for each 24 month period following the initial inspection) internal inspection of the electrostatic precipitator to determine the condition and integrity of corona wires, collections plates, plate rappers, hopper, and air diffuser plates.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork, fabric filters, cyclones, and/or electrostatic precipitators are not inspected and maintained.

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

e. 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 any control device; and
   iv: any variance from manufacturers' recommendations, if any, and corrections made.

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

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

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

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

Groups C, D, E, G, and H

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

a. Emissions of sulfur dioxide from each source in Groups C, D, E, G, and H (listed in Section 2.1 A) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

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

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

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

c. The following requirements apply for No. 6 fuel oil fired in each source in Groups C, D, E, G, and H.
   i. The maximum sulfur content of any No. 6 fuel oil received and burned shall not exceed 2.1 percent by weight.
   ii. To ensure compliance, the Permittee shall monitor the sulfur content of the No. 6 fuel oil by using fuel oil supplier certification per shipment received. 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:
      (A) the name of the fuel oil supplier;
      (B) the maximum sulfur content of the fuel oil received during the quarter;
      (C) the method used to determine the maximum sulfur content of the fuel oil; and
      (D) a certified statement signed by the responsible official that the records of fuel oil supplier certification submitted represent all of the No. 6 fuel oil fired 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 and/or exceeds the given limit in Section 2.1 A.3.c.i.

d. To ensure compliance, the Permittee shall monitor the sulfur and heat content of all the coal burned during the period by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
   i. the name of the coal supplier; and
   ii. a statement verifying that the methods used to determine the maximum sulfur content of the coal were 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 5865;
      (D) moisture content - ASTM Method D 3173; and
      (E) sulfur content - ASTM Method D 3177 or ASTM Method D 4239.
   iii. The Permittee shall calculate and record in a logbook (written or electronic format) the pounds of sulfur dioxide per million Btu heat content of the coal per total shipment taking into account any controls operated during the same period. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516 if these records are not kept or if the results show an exceedance of the limit in Section 2.1 A.3.a above.

e. No monitoring/recordkeeping is required for sulfur dioxide emissions from the combustion of natural gas in these sources.

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

f. The Permittee shall submit a summary report of the monitoring activities given in Sections 2.1 A.3.c and d 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 report shall contain, at a minimum:
   i. fuel oil supplier certifications;
   ii. coal supplier certifications; and
   iii. sulfur dioxide emission calculations per coal shipment.

Groups A through J

4. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. The following visible emissions limits apply to the sources listed in Section 2.1 A above:
   i. Visible emissions from the emission sources listed in Groups B, D, E, I, and J 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.
   ii. Visible emissions from the emission sources listed in Groups A, C, F, G, and H 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.

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

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

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

c. To ensure compliance, at least once per week the Permittee shall observe the emission points of each emission source listed in Section 2.1 A above during source operation for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.4. a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required weekly

observations are not conducted as required, if the above-normal emissions are not corrected within the monitoring period, or the percent opacity demonstration cannot be made.

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

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

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

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.4.c and d abovepostmarked 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.

Group J

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

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

Emission Limitations

b. Pursuant to 40 CFR 60.254(a) on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

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

c. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures specified in 40 CFR 60.255, except as provided in 40 CFR 60.8(b). The Permittee shall determine compliance with the opacity standard in 40 CFR 60.254(a) using Method 9 and the procedures in 40 CFR 60.11.

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

d. The monitoring, recordkeeping, and reporting requirements found in Section 2.1 A.4. above shall be used to demonstrate compliance with the opacity standard. If the Permittee does not demonstrate compliance with the monitoring and recordkeeping requirements in Section 2.1 A.4., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Groups D and H

6. 15A NCAC 02D .0530(u): USE OF PROJECTED ACTUAL EMISSIONS TO AVOID APPLICABILITY OF PREVENTION OF SIGNIFICANT DETERIORATION REQUIREMENTS

a. The Permittee has used projected actual emissions to demonstrate that firing coal in the three (3) rotary kilns (**ID Nos. ES-5-K1 through ES-5-K3**) would not result in a significant emissions increase, as described in Permit Application No. 6500055.08B. To verify the assumptions used in the projected actual emissions calculations, the Permittee shall maintain records of PM, PM_{10}, NO_X, and SO_2 emissions on a per month basis, calculated and recorded at the end of each month for five years beginning on the date coal is used in the rotary kilns.

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

b. Under the provisions of NCGS 143-215.108, the Permittee shall verify the vendor supplied NOx emission factor (0.40 pounds per million Btu) and determine emission factors for PM and PM_{10}, by testing one of the three rotary

kilns (**ID Nos. ES-5-K1 through ES-5-K3**) while burning coal in accordance with General Condition JJ. Testing shall be completed and the results submitted within one year of commencement of burning coal unless an alternate date is approved by the DAQ. If the testing is not completed or if the results are not submitted when required, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

c. Upon approval of testing results, the Permittee shall submit a permit application to incorporate conditions for proper operation and maintenance of the SNCR system to control NO_X emissions to the 0.40 pounds per million Btu rate when burning coal. If the permit application is not submitted, 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 monitor the sulfur content of the coal by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) made available to DAQ personnel upon request per total shipment and include the following information:
   i. the name of the coal supplier;
   ii. the maximum sulfur content of the coal received per total shipment;
   iii. 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-5865
      (D) moisture content --ASTM Method D 3173; and
      (E) sulfur content -- ASTM Method D 3177 or ASTM Method D 4239;

   The Permittee shall calculate SO_2 emissions based on coal sulfur content, as determined in Section 2.1 A.6.c, assuming 66 percent of the SO_2 is absorbed in the kilns, and record the emissions in a logbook (written or electronic format). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the sulfur content of the coal or the SO_2 emissions are not monitored and recorded.

e. The Permittee shall use the NO_X emission factor (0.40 pounds per million Btu) and the emission factors for PM and PM_{10} determined in Section 2.1 A.6.b above to calculate monthly and annual emissions for NO_X, PM, and PM_{10}. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these calculations are not performed or the emissions are not recorded.

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

f. The Permittee shall submit a report to the Director within 60 days after the end of each calendar year during which the records in Section 2.1 A.6.a must be kept. The report shall contain the items listed in 40 CFR 51.166(r)(6)(v)(a) through (c). The Permittee may combine this report with the report required by Section 2.1 B.5.c.

The reported actual emissions (post-construction emissions, including any demand growth) for each of the five calendar years will be compared to the following projected actual emissions (pre-construction projection, including any demand growth) as included in permit application 6500055.08B:

Pollutant	Projected Actual Emissions* (rotary kilns firing coal) (tons per year)
SO_2	491.12
NOx	358.66
PM	94.94
PM_{10}	94.04
VOC	1.95
CO	18.08
Lead	0.02

* These projections are not enforceable limitations. If projected emissions are exceeded, consistent with 15A NCAC 02D .0530, the Permittee shall include in its annual report an explanation as to why the actual emissions exceeded the projected emissions.

Group G

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), the use of fuel oil in the boilers **(ID Nos. ES-1 and ES-2)** shall be limited such that actual emissions per consecutive 12-month period are less than:
   i. Sulfur dioxide: 474.4 tons;
   ii. Nitrogen oxides: 106.4 tons;
   iii. Particulate matter: 62.4 tons; and
   iv. PM_{10}: 46.9 tons

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

b. For boilers **(ID Nos. ES-1 and ES-2)**, the Permittee shall measure and record monthly the quantity of both No. 2, No. 6, and on-specification used fuel oil combusted and the percent by weight sulfur content by using fuel oil supplier certifications per shipment received. On a monthly basis, the Permittee shall calculate and record the actual emissions of each pollutant by applying the following emissions factors, where "S" equals the % weight of sulfur in the fuel:

Pollutant	No. 6 fuel Oil [AP-42, Section 1.3, published 9/98] (pounds /1,000 gallons)	On-specification used oil [as No. 4 fuel oil; AP-42, Section 1.3 published 9/98] pounds /1,000 gallons	No. 2 fuel Oil [AP-42, Section 1.3, published 9/98] (pounds /1,000 gallons)
Sulfur dioxide	157(S)	150(S)	142(S)
Nitrogen oxides	47	47	24
Particulate matter	9.19(S) + 3.22 + 1.5	8.5	3.3
PM_{10}	6.6(S) + 2.18	4.96	1

If the Permittee does not keep the required records and/or the records indicate an exceedance of the limits in Section 2.1 A.7.a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of the monitoring and recordkeeping activities in Section 2.1 A.7.b postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly sulfur dioxide, nitrogen oxide, particulate matter, and PM_{10} emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

Groups C and E

8. 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, dryers **(ID Nos. ES-6-RD1 and ES-6-RD2**) combined shall emit less than 58.5 tons of NOx per year a result of burning No. 6 fuel oil. In order to demonstrate compliance with this limit, dryers **(ID Nos. ES-6-RD1 and ES-6-RD2**) shall:
   i. be limited to 36.4 million Btu per hour heat input, combined, when burning No. 6 fuel oil, and
   ii. not burn more than 2,125,176 gallons per year of No. 6 fuel oil combined.

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

b. The Permittee shall keep monthly records of the amount of No. 6 fuel oil used in a logbook (written or in electronic format). Records shall be kept on site and made available to DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the No. 6 fuel oil usage is not monitored or exceeds the limit in Section 2.1 A.8.a.

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

c. The Permittee shall submit a semi-annual summary reportof the monitoring and recordkeeping activities in Section 2.1 A.8.b postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly quantity of No. 6 fuel oil consumed for the previous 17 months, and
   ii. The rolling 12-month total of No. 6 oil consumed for each of those months.

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

B. QUENCH AREA

Group A:

#1 quench tank (ID No. ES-26-1), #1 scrubber recirculation tank (ID No. ES-26-3), and #1 wet electrostatic precipitator recirculation tank (ID No. ES-26-5), each venting to #1 quench tank wet cyclonic scrubber (ID No. CD515-5) in series with #1 wet electrostatic precipitator (ID No. CD515-6).[1]

#1A quench tank (ID No. ES-26-2), #2A quench tank (ID No. ES-26-10), #1A-2A scrubber recirculation tank (ID No. ES-26-4), and area repump tank (ID No. ES-26-6), each venting to #1A-2A quench tank wet cyclonic scrubber (ID No. CD515-7) in series with #1 and/or #2 wet electrostatic precipitator (ID Nos. CD515-6 and -9).[2]

#2 quench tank (ID No. ES-26-9), #2 scrubber recirculation tank (ID No. ES-26-11), and #2 Wet electrostatic precipitator recirculation tank (ID No. ES-26-12), each venting to #2 quench tank wet cyclonic scrubber (ID No. CD515-8) in series with #2 wet electrostatic precipitator (ID No. CD515-9).[3]

Group B:

#3 quench tank (ID No. ES-26-13) and #3 scrubber recirculation tank (ID No. ES26-15), each venting to either #3 or #3A quench tank wet cyclonic scrubber (ID No. CD515-10 or 11), in series with #3 wet electrostatic precipitator (ID No. CD515-12).

#3 Wet electrostatic precipitator recirculation tank[4] (ID No. ES-26-17), #3A quench tank (ID No. ES-26-14), and #3A scrubber recirculation tank (ID No. ES-26-16), each venting to #3A quench tank wet cyclonic scrubber (ID No. CD515-11) in series with #3 wet electrostatic precipitator (ID No. CD515-12).

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

Pollutant	Limits/Standards	Applicable Regulation
PM	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D. 0515
Visible emissions	***Group A:*** Visible emissions shall not exceed 40 percent opacity ***Group B:*** Visible emissions shall not exceed 20 percent opacity	15A NCAC 02D. 0521
Particulate Matter	**See Section 2.2 A.1**	15A NCAC 02D. 0530

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

a. Emissions of particulate matter from the sources in Groups A and B (listed in Section 2.1 B) shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ for process rates $\leq$ 30 tons per hour, OR
$E = 55 \times P^{0.11} - 40$ for process rates > 30 tons per hour

Where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour
Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

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1 These sources may also vent to quench tank scrubbers #1A 2A and #2

2 These sources may also vent to quench tank scrubber #1

3 These sources may also vent to quench tank scrubber #1A-2A

4 This source may also vent to #3A scrubber

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

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

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

c. Particulate matter emissions from the emission sources in Groups A and B (listed in Section 2.1 B) shall be controlled by wet cyclonic scrubbers and/or quench scrubbers followed by wet electrostatic precipitators as indicated in Section 1. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following::
   i. daily verification that electronic controls for corona power operation are functioning and that the corona wires are energized,
   ii. daily verification of water flow to wet cyclonic scrubbers and wet electrostatic precipitators (water flow to the electrostatic precipitator may be discontinued for up to 24 hours),
   iii. a monthly visual inspection of the system ductwork, wet cyclonic scrubbers, the wet electrostatic precipitator housing unit and hopper for leaks; and
   iv. internal inspection of the wet electrostatic precipitators every other year (for each 24 month period following the initial inspection) to determine the condition and integrity of corona wires, collections plates, plate wash spray heads, hopper, and air diffuser plates.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following for ductwork, each scrubber and each electrostatic precipitator:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the scrubbers and wet electrostatic precipitators. and
   iv. any variance from manufacturer's recommendations, if any, and corrections made

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

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

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

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.1.c and d 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. The following visible emission limits apply to the sources listed in Section 2.1 B. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission sources in Group B 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 limits given in Section 2.1 B.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 the sources listed in Section 2.1 B during source operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.

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

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

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

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

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

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Section 2.1 B.2.c and d 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.

C. CRYSTALLIZATION AREA

Group A: - the following sources:

- **crystal centrifuge (ID No. ES-16-3),**
- **crystal dissolving tank (ID No. ES-16-17),**
- **wet conveyor (ID No. ES-16-9),**
- **fluid bed dryer (ID No. ES-16-2),**
- **fluid bed cooler (ID No. ES-16-1),**
- **crystal feed tank (ID No. ES-16-10),**
- **culls bin (ID No. ES-16-11),**
- **fines bin (ID No. ES-16-16),**
- **crystal storage bin (ID No. ES-16-5),**
- **crystal screen (ID No. ES-16-4),**
- **crystal bucket elevator (ID No. ES-16-6),**
- **bag dump hopper (ID No. ES-16-15),**
- **red liquor sump (ID No. ES-16-14),**
- **bag slitter (ID No. ES-16-12),**
- **above ground sump (ID No. ES-16-13), and**
- **crystal bagging machine (ID No. ES-16-7).**

Each venting to crystal impingement plate scrubber with demister (ID No. CD555-1)

Group B

super sack filling machine (ID No. ES-16-8) venting to crystal impingement plate scrubber with demister (ID No. CD555-1)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D. 0515
Visible Emissions	***Group A:*** 40 percent opacity ***Group B:*** 20 percent opacity	15A NCAC 02D. 0521

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

a. Emissions of particulate matter from the sources denoted in Groups A and B (listed in Section 2.1 C) shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the

results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from the sources denoted in Groups A and B (listed in Section 2.1 C) shall be controlled by a scrubber with a demister as indicated above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following::
   i. daily verification of water flow to the scrubber,
   ii. a monthly visual inspection of the system ductwork and scrubber unit for leaks, and
   iii. an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber unit for structural integrity and demister and spray nozzle condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following for the scrubber and demister:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the scrubber; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

e. The Permittee shall submit the results of any maintenance performed on the scrubber within 30 days of a written request by the DAQ.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 C.1.c and d 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. The following visible emission limits apply to the sources listed in Section 2.1 C. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission source in Group B 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 limits given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of each source during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or

ii. demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limits given in Section 2.1 C.2.a above.

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

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

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

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

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

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

D. CHROMIC ACID AREA

Group A:

#1 and #2 filtrate receivers (ID Nos. ES-21-28 and ES-21-29) venting to filter exhaust mist eliminator (ID No. CD590-3) in series with main chromic acid packed bed scrubber (ID No. CD590-4) in series with Brownian diffusion mist eliminator (ID No. CD590-2)

And the following sources:

- **#2 crude crystal rotary filter (ID No. ES-21-16),**
- **vacuum engines seal water (ID No. ES-21-27),**
- **vacuum engine separators (ID No. ES-21-37),**
- **#1, #2, & #3 crude crystal bins (ID Nos. ES-21-21 through 23),**
- **#1, #2, &#3 melters (ID Nos. ES-21-1 through 3),**
- **#1, #2, &#3 bisulfate urinals (ID Nos. ES-21-4 through 6),**
- **#1 and #3 chromic acid flakers (ID No. ES-21-7 and 9),**
- **lump tank (ID No. ES-21-24),**
- **#1, #2, &#3 chromic acid flaker conveyors (ID Nos. ES-21-10 through 12),**
- **85% liquor storage tank (ID No. ES-21-18),**
- **packing scrubber tank (ID No. ES-21-25), and**
- **chromic acid main plant scrubber tank (ID No. ES-21-20)**

each venting to main chromic acid packed bed scrubber (ID No. CD590-4) in series with Brownian diffusion mist eliminator (ID No. CD590-2)

Group B:

The following sources:

- **#1 crude crystal rotary filter (ID No. ES-21-15),**
- **#1&#2 chromic acid reactors (ID Nos. ES-21-13 and 14),**
- **bisulfate surge tank (ID No. ES-21-26),**
- **#2 chromic acid flaker (ID No. ES-21-8),**
- **chromic acid filtrate storage tank (ID No. ES-21-17), and**
- **chromic acid filtrate surge tank (ID No. ES-21-19)**

each venting to main chromic acid packed bed scrubber (ID No. CD590-4) in series with Brownian diffusion mist eliminator (ID No. CD590-2)

And the following sources:

- **tote bin screw conveyor (ID No. ES-21-33),**
- **sparger car loading hose (ID No. ES-21-36),**
- **sparger cars chromic acid bulk conveyor (ID No. ES-21-34),**
- **main packing bin (ID No. ES-21-35),**
- **drum filling machine (ID No. ES-21-30),**
- **chromic acid tote bin filling machine (ID No. ES-21-31),**
- **tote bin transloading vent (ID No. ES-21-32),**
- **hydration conveyor (ID No. ES-21-38),**
- **#3 hydration conveyor (ID No. ES-21-44),**
- **drying conveyor (ID No. ES-21-39),**
- **fines bin (ID No. ES-21-41),**
- **fines conveyor (ID No. ES-21-43),**
- **lumps bin (ID No. ES-21-42), and**

- **dust free chromic acid packing bin (ID No. ES-21-40)**

each venting to chromic acid packing impingement scrubber (ID No. CD590-1) in series with Brownian diffusion mist eliminator (ID No. CD590-2).

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	***Group A:*** 40 percent opacity ***Group B:*** 20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from each source listed in Section 2.1 D above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions shall be controlled by a mist eliminator and scrubber as described in Section 2.1 D above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. daily verification of water flow to the scrubbers,
   ii. a monthly visual inspection of the system ductwork and scrubber units for leaks, and
   iii. an annual (for each 12-month period following the initial inspection) internal inspection of the scrubber units for structural integrity and demister and spray nozzle condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following for the scrubbers and mist eliminators:
   i. the date and time of each recorded action;
   ii. the results of each inspection; and
   iii. the results of any maintenance performed on the scrubbers and mist eliminators; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

e. The Permittee shall submit the results of any maintenance performed on the scrubbers or mist eliminators within 30 days of a written request by the DAQ.

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

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

a. The following visible emission limits apply to the sources listed in Section 2.1 D. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission source in Group B 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 limits given in Section 2.1 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of each source listed in Section 2.1 D above during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 D.2.a above.

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

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

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

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

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

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

E. RECYCLE AREA

Group A:

#1 recycle vacuum filter (ID No. ES-3-3), #1 and 2 hydroclone overflow receivers (ID Nos. ES-3-1 and 2), #1 and 2 recycle vacuum filters (ID Nos. ES-3-3 and 4) each venting to #1 and #2 recycle filter systems mist eliminator (ID No. CD510-15),

#1 repulp tank (ID No. ES-39-8) venting to #3 recycle filter system mist eliminator (ID No. CD510-18)

Group B:

#3 recycle belt conveyor (ID No. ES510-25) venting to recycle conveyors and repump tank mist eliminator (ID No. CD510-16),

#2 repulp tank (ID No. ES-3-5) venting to #1 and #2 recycle filter systems mist eliminator (ID No. CD510-15),

#3 separator tank (ID No. ES-39-3)[5], #3 belt wash tank (ID No. ES-39-5), #3 belt wash overflow tank (ID No. ES-39-9), #3 recycle vacuum filter (ID No. ES-39-4), #3 hydroclone overflow receiver (ID No. ES-39-6), #3 filtrate receiver tank (ID No. ES-39-7), and #3 reversible conveyor (ID No. ES-39-10) each venting to #3 recycle filter system mist eliminator (ID No. CD510-18).

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	**Group A:** 40 percent opacity **Group B:** 20 percent opacity	15A NCAC 02D .0521
Particulate Matter	**Group B:** **See Section 2.2 A.1.**	15A NCAC 02D .0530

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

a. Emissions of particulate matter from each source listed in Section 2.1 E above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

[5] This source may also vent to I-CD510-17.

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

c. Particulate matter emissions from each source listed in Section 2.1 E above shall be controlled by a mist eliminator. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and mist eliminator units for leaks, and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the mist eliminator units for structural integrity and demister condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection; and
   iii. the results of any maintenance performed on the mist eliminators; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

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

a. The following visible emission limits apply to the sources listed in Section 2.1 E. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission source in Group B shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.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 each source listed in Section 2.1 E above during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions these sources are observed to be above normal, the Permittee shall either:

i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or

ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 D.2.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly/weekly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring

period or the percent opacity demonstration cannot be made.

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

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

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

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

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

F. NEUTRALIZATION AREA

Group A:

#1 and 2 probe bowls (ID No. ES-12-4), and #1 through 3 reject filter hoods (ID No. ES12-1 through 3), each venting to #1, #2, and #3 reject filter hood system and tanks mist eliminator (ID No. CD535-1), and

#2 quench light slurry tank (ID No. ES-28-5) venting to #4 reject filter hood system mist eliminator (ID No. CD535-4).

Group B:

#4 reject filter hood (ID No. ES-28-1), #4 filtrate receiver tank (ID No. ES-28-3), #4 repulp tank (ID No. ES-28-4), and #4 wash receiver tank (ID No. ES-28-2) each venting to #4 reject filter hood system mist eliminator (ID No. CD535-4), and

#4 filtrate separator tank (ID No. ES-29-7) and #4 wash separator tank (ID No. ES-29-8) each venting to #4 system mist eliminator (ID No. CD535-5) in series with #1, #2, and #3 reject filter hood system and tanks mist eliminator (ID No. CD535-1)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	**Group A**: 40 percent opacity **Group B:** 20 percent opacity	15A NCAC 02D .0521
Particulate Matter	**Group B:** **See Section 2.2 A.1.**	15A NCAC 02D .0530

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

a. Emissions of particulate matter from each source listed in Section 2.1 F above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from each source listed in Section 2.1 F above shall be controlled by a mist eliminator. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no

manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. a monthly visual inspection of the system ductwork and mist eliminator units for leaks, and
ii. an annual (for each 12-month period following the initial inspection) internal inspection of the mist eliminator units for structural integrity and demister condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection; and
   iii. the results of any maintenance performed on the mist eliminators; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

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

a. The following visible emission limits apply to the sources listed in Section 2.1 F. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission sources in Group B shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of each source listed in Section 2.1 F above during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limits given in Section 2.1 F.2.a above.

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

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

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

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

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

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

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

G. WASTE TREATMENT AREA

Group A:
lime slurry tank (ID No. ES-36-1) and sludge hold tank (ID No. ES-36-5), each venting to lime/crushed limestone silo baghouse (ID No. CD914-2)

Group B:
lime silo (ID No. ES-36-2) and #1 and 2 lime/crushed limestone silos (ID Nos. ES-36-3 and 4), each venting to lime/crushed limestone silo baghouse (ID No. CD914-2)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	**Group A:** 40 percent opacity **Group B:** 20 percent opacity	15A NCAC 02D .0521
Particulate Matter	**Group B:** **See Section 2.2 A.1.**	15A NCAC 02D .0530

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

a. Emissions of particulate matter from each source listed in Section 2.1 G above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions shall be controlled by a baghouse as described in Section 2.1 G above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and material collection unit for leaks, and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the bagfilters' structural integrity.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection; and
   iii. the results of any maintenance performed on the mist eliminator; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

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

a. The following visible emission limits apply to the sources listed in Section 2.1 G. above:
   i. Visible emissions from the emission sources in Group A 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.
   ii. Visible emissions from the emission source in Group B 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 G.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 each source above during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 G.2.a above.

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

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

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

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

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

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

H. US FILTER SITE

Steam heated fluid bed dryer (ID No. ES2USF) venting to cyclone (ID No. CDCY1) in series with packed bed scrubber (ID No. CDVS1).

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521

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

a. Emissions of particulate matter from this source **(ID No. ES2USF)** above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from the steam heated fluid bed dryer **(ID No. ES2USF)** shall be controlled by a scrubber, as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork for leaks, and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the cyclone and scrubber unit for structural integrity and demister condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection; and
   iii. the results of any maintenance performed on the cyclone and scrubber; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

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

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

a. Visible emissions from the steam heated fluid bed dryer **(ID No. ES2USF)** 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 H.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 week the Permittee shall observe the emission points of this source during source operation for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 H.2.a above.

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

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

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

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

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

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

I. Evaporation Area

#3 salt cake centrifuge (ID No. ES-38-5) venting to wet salt cake demister (ID No. CD550-8)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR $E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Particulate Matter	**See Section 2.2 A.1.**	15A NCAC 02D .0530

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

a. Emissions of particulate matter from this source **(ID No. ES-38-5)** above shall not exceed an allowable emission rate as calculated by the following equation:

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

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

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

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

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

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

c. Particulate matter emissions from this source **(ID No. ES-38-5)** shall be controlled by a demister, as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   i. a monthly visual inspection of the system ductwork and mist eliminator unit for leaks, and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of the mist eliminator unit for structural integrity and demister condition.

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

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the mist eliminator; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

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

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

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

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

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

a. Visible emissions from the emission source **(ID No. ES-38-5)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

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

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

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of the above listed source during operation for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .0501(c)(8) (Method 9) for 12 minutes is below the limit given in Section 2.1 I.2. a. above.

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

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

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

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

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

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

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

A. Emissions Sources Subject to BACT (1980):

- **#4 Ball Mill (ID No. ES4-4);**
- **Lime truck and rail car unloading (ID No. ES-27);**
- **#3 Rotary kiln (ID No. ES-5-K3);**
- **#3 kiln feed surge bin (ID No. ES515-9);**
- **#2 recycle residue dryer (ID No. ES-6-RD2);**
- **#3 and #3A Quench and recirculation tanks (ID No. ES26-13 through 17);**
- **#3 tanks and receivers (ID No. ES-39-3 through 10);**
- **#3 belt conveyor (ID No. ES510-25);**
- **#4 tanks and hood (ID No. ES-28-1 through 5);**
- **#4 tanks (ES-29-7 and 8); and**
- **#3 centrifuge (ES38-5)**

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	**See Section 2.2 A.1.a** Operate and maintain control devices, comply with emission limits	15A NCAC 02D .0530
Sulfur dioxide	**See Section 2.2 A.1.a** Comply with emission limits, limit sulfur content of all fuel oil	
Nitrogen oxides	**See Section 2.2 A.1.a** Comply with emission limits	

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

a. To ensure compliance with the 1980 BACT emission limits listed in Sections 2.2 A.1.a.ii, iii, and v below, the Permittee shall:

i. use the listed PM/PM_{10} control devices for the following sources:

Source ID No.	Emission Source	Control Device
ES4-4	#4 Ball Mill	Fabric filter
ES-27	Lime truck and rail car unloading	Fabric filter
ES-5-K3	#3 Rotary kiln	Electrostatic precipitator
ES515-9	#3 kiln feed surge bin	Electrostatic precipitator
ES-6-RD2	#2 recycle residue dryer	Dual cyclones and electrostatic precipitator
ES26-13 through 17	#3 and #3A Quench and recirculation tanks	Cyclonic scrubbers and electrostatic precipitator
ES-39-3 through 10	#3 tanks and receivers	Mist eliminator
ES-28-1 through 5	#4 tanks and hood	Mist eliminator
ES-29-7 and 8	#4 tanks	Mist eliminator
ES38-5	#3 centrifuge	Mist eliminator

ii. ensure emissions of PM/PM_{10} do not exceed the following limits:

Emission Source	PM/PM_{10} Emission Limit (pounds per hour)	Control Technology
#4 Ball Mill **(ID No. ES-4-4)**	0.94	Fabric filter
Lime truck and rail car unloading **(ID No. ES-27)**	1.3	Fabric filter
#3 Rotary Kiln **(ID No. ES-5-K3)**	24.0	Electrostatic precipitator
#2 Recycle Residue Dryer **(ID No. ES-6-RD2)**	1.5	Dual cyclones and electrostatic precipitator
#3 quench tank, #3A quench tank, #3 scrubber recirculation tank, #3A scrubber recirculation tank, and #3 wet electrostatic precipitator recirculation tank (combined) **(ID Nos. ES-26-13 through 17)**	1.4	Cyclonic scrubbers and wet electrostatic precipitator

iii. ensure emissions of SO_2 do not exceed the following limits:

Emission Source	SO_2 Emission limit (pounds per hour)	Control Technology
#3 Rotary Kiln **(ID No. ES-5-K3)**	109	Fuel sulfur limit
#2 Recycle Residue Dryer **(ID No. ES-6-RD2)**	40	Fuel sulfur limit

iv. ensure the sulfur content of fuel oil or any used oil fired in any combustion device does not exceed 2.1 percent by weight.

v. ensure emissions of NOx do not exceed the following limits:

Emission Source	NOx Emission limit (pounds per hour)
#3 Rotary Kiln **(ID No. ES-5-K3)**	82.9
#2 Recycle Residue Dryer **(ID No. ES-6-RD2)**	14.55

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

b. For emission sources subject to PM/PM_{10} and/or SO_2 emission limits, the Permittee shall demonstrate compliance with 15A NCAC 02D .0530 by complying with the monitoring requirements referenced in the table below for the same sources.

Source ID No.	Emission Source	PM/PM_{10} Requirements Listed in Permit Section	SO_2 Requirements Listed in Permit Section
ES4-4	#4 Ball Mill	2.1 A.2	NA
ES-27	Lime truck and rail car unloading	2.1 A.2	NA
ES-5-K3	#3 Rotary kiln	2.1 A.2	2.1 A.3
ES515-9	#3 kiln feed surge bin	2.1 A.2	NA
ES-6-RD2	#2 recycle residue dryer	2.1 A.2	2.1 A.3
ES26-13 through 17	#3 and #3A Quench and recirculation tanks	NA	NA
ES-39-3 through 10	#3 tanks and receivers	2.1 E.1	NA
ES-510-25	#3 belt conveyor	2.1 E.1	NA

Source ID No.	Emission Source	PM/PM_{10} Requirements Listed in Permit Section	SO_2 Requirements Listed in Permit Section
ES-28-1 through 5	#4 tanks and hood	2.1 F.1	NA
ES-29-7 and 8	#4 tanks	2.1 F.1	NA
ES38-5	#3 centrifuge	NA	NA

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above monitoring requirements are not followed.

c. No monitoring is required to demonstrate compliance with 15A NCAC 02D .0530 for NOx emissions.

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

d. For emission sources subject to PM/PM_{10} and/or SO_2 emission limits, the Permittee shall demonstrate compliance with 15A NCAC 02D .0530 by complying with the recordkeeping requirements referenced in the table in 2.2 A.1.b above for the same sources.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above recordkeeping requirements are not followed.

e. No recordkeeping is required to demonstrate compliance with 15A NCAC 02D .0530 for NOx emissions.

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

f. For emission sources subject to PM/PM_{10} and/or SO_2 emission limits, the Permittee shall comply with the reporting requirements referenced in the table in 2.2 A.1.b for the same sources.

e. No reporting is required to demonstrate compliance with 15A NCAC 02D .0530 for NOx emissions.

B. Emission Sources subject to 40 CFR Part 63, Subpart NNNNNN

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	40 CFR Part 63, Subpart NNNNNN, National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Chromium Compounds	15A NCAC 02D .1111

1. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63, Subpart NNNNNN)

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 Part 63, Subpart NNNNNN "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Chromium Compounds" and Subpart A "General Provisions" as indicated in Table 2 of Subpart NNNNNN. These emission standards apply at all times unless otherwise specified.

Applicability [40 CFR 63.11407]

b. This rule applies to chromium compounds manufacturing facilities that are area sources of hazardous air pollutant (HAP) emissions. [40 CFR 63.11407(a)]

c. Under this rule, an affected source is "existing" if the Permittee commenced construction or reconstruction on or before April 4, 2007. An affected source is "new" otherwise. [40 CFR 63.11407(b)]

Emission Standards [40 CFR 63.11409]

d. For each source listed in Table 1 to Subpart NNNNNN, the Permittee must operate a capture system that collects the gases and fumes released during the operation of that source and conveys the collected gas stream to a particulate matter (PM) control device. [40 CFR 63.11409(a)]

e. The Permittee shall not discharge to the atmosphere, through any combination of stacks or other vents, process gasses from a subject source that contain PM in excess of the emission limit as determined by the following equations:

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

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

If more than one process vents to a common stack, the applicable emissions limit for the stack is the sum of allowable emissions calculated for each process. [40 CFR 63.11409(b)]

Testing [15A NCAC 02Q .0508(f), 40 CFR 63.11410(i)]

f. The following testing requirements apply:
   i. The Permittee demonstrated initial compliance with emission testing performed on May 12-14 and June 3-4, 2008 (test reference number 2008-066ST). [40 CFR 63.11410(i)]
   ii. If additional emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 B.1.e, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Monitoring [15A NCA 02Q .0508(f), 40 CFR 63.11410(c)]

g During the periods of startup, shutdown, and malfunction, the Permittee shall operate and maintain the subject emission sources, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the Permittee reduce emissions from the above emission source to the greatest extent which is consistent with safety and good air pollution control

practices. [15A NCAC 2D .1109]

h. The Permittee shall conduct periodic inspections and maintenance of each PM control device per the following requirements:
   i. Baghouses/fabric filters: [40 CFR 63.11410(c)(1)]
      (A) Conduct monthly visual inspections of the system ductwork for leaks;
      (B) Conduct inspections of the interior of the baghouse for structural integrity and to determine the condition of the fabric filter every 12 months.
   ii. Dry electrostatic precipitators: [40 CFR 63.11410(c)(2)]
      (A) Conduct a daily inspection to verify the proper functioning of the electronic controls for corona power and rapper operation, that the corona wires are energized, and that adequate air pressure is present on the rapper manifold;
      (B) Conduct monthly visual inspections of the system ductwork, housing unit, and hopper for leaks;
      (C) Conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.
   iii. Wet electrostatic precipitators: [40 CFR 63.11410(c)(3)]
      (A) Conduct a daily inspection to verify the proper functioning of the electronic controls for corona power, that the corona wires are energized, and that water flow is present;
      (B) Conduct monthly visual inspections of the system ductwork, electrostatic precipitator housing unit, and hopper for leaks;
      (C) Conduct inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate wash spray heads, hopper, and air diffuser plates every 24 months.
   iv. Wet scrubbers: [40 CFR 63.11410(c)(4)]
      (A) Conduct a daily inspection to verify the presence of water flow to the scrubber;
      (B) Conduct monthly visual inspections of the system ductwork and scrubber unit for leaks;
      (C) Conduct inspections of the interior of the scrubber to determine the structural integrity and condition of the demister and spray nozzle every 12 months.

   If the Permittee does not perform the required monitoring actions, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Recordkeeping [15A NCA 02Q .0508(f), 40 CFR 63.11410(d)]

i. The Permittee shall keep the following records:
   i. The date and time of each recorded action for a PM control device (including associated ductwork), the results of each inspection, and the results of any maintenance performed;
   ii. Records of all required monitoring data and supporting information including all calibration and maintenance records, original strip-chart recordings for continuous monitoring information, and copies of all reports required by Subpart NNNNNN. Records of required monitoring data shall be recorded in a logbook (written or electronic format) and readily available for expeditious review. All records must be kept onsite and made available to an authorized representative for inspection upon request.

   [40 CFR 63.11410(d)(1)-(3)]

j. Records of all required monitoring data and supporting information shall be maintained for at least 5 years from the date of the monitoring sample, measurement, report, or application. [40 CFR 63.11410(d)(4)]
   If the Permittee does not keep the required records, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Reporting [15A NCAC 02Q .0508(f), 63.11410]

k. The following reporting requirements apply:
   i. The Permittee shall notify DAQ of each deviation (an action or condition not in accordance with the requirements of Subpart NNNNNN, including upset conditions but excluding excess emissions) on the next business day after becoming aware of the deviation. [40 CFR 63.11410(k)(1)]
   ii. The Permittee shall submit a written report within two business days thereafter which identifies the probable cause of the deviation and any corrective actions or preventative actions taken. [40 CFR 63.11410(e)(1)]
l. The Permittee shall submit the results of any maintenance performed on each PM control device within 30 days of a written request by the permitting authority. [40 CFR 63.11410(e)(3)]
m. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.2 B.1.g through j above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

C. Two natural gas/No. 6/ No. 2/used oil boilers (ID Nos. ES-1 and 2)

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

Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers	15A NCAC 02D .1111

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

Applicability [40 CFR 63.11193, 63.11194(a)(1), (b), 63.11200(c)]

a. For these boilers **(ID Nos. ES-1 and 2)**, the Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart JJJJJJ, "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers", including Subpart A "General Provisions".

Definitions and Nomenclature [40 CFR 63.11237]

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

General Provisions [40 CFR 63.11235]

c. The Permittee shall comply with the General Provisions as applicable pursuant to Table 8 of 40 CFR 63 Subpart JJJJJJ.

Compliance Dates [40 CFR 63.11196(a)(1), (a)(3), 63.11210(c)]

d. The Permittee completed the initial tune-up and energy assessment in February 2014.

Notification of Compliance Status [40 CFR 63.11225)]

e. The Permittee submitted the Notification of Compliance Status on July 11, 2014.

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

f. At all times the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met. [40 CFR 63.11205(a)]

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

g. The following work practice requirements apply:
    i. The Permittee shall conduct a tune-up every two years while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up, as specified below: (A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.
    (B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
    (C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (The Permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.
    (D) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.

(E) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
(F) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.
(G) Each tune-up shall be conducted no more than 25 months after the previous tune-up.
[40 CFR 63.11201(b), 63.11223(a) and (b)]

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

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

h. The Permittee shall conduct a one-time energy assessment performed by a qualified energy assessor. [40 CFR 63.11201(b), Table 2] *This requirement has been met.*

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

i. The Permittee shall :
   i. as required in 40 CFR 63.10(b)(2)(xiv), keep a copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Notification of Compliance Status that was submitted. [40 CFR 63.11225(c)(1)]
   ii. keep records to document conformance with the performance tune-ups. The records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned. [40 CFR 63.11225(c)(2)(i)]
   iii. keep a copy of the energy assessment report. [40 CFR 63.11225(c)(2)(iii)]
   iv. keep records of the occurrence and duration of each malfunction of the boiler or of the associated air pollution control and monitoring equipment. [40 CFR 63.11225(c)(4)]
   v. keep records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in Section 2.2 C.1.f, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation. [40 CFR 63.11225(c)(5)]
   vi. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:
      (A) the concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler;
      (B) a description of any corrective actions taken as a part of the tune-up of the boiler; and
      (C) the type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
      [40 CFR 63.11223(b)(6)]
   vii. keep:
      (A) records in a form suitable and readily available for expeditious review;
      (B) each record for 5 years following the date of each recorded action; and
      (C) each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The Permittee may keep the records off site for the remaining 3 years.
      [40 CFR 63.11225(d)]

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

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

j. The annual compliance certification reporting requirements of 40 CFR 63.11225(b) shall be met by complying with General Condition P of Section 4 of this permit.

D. Facility wide

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

Pollutant	Limits/Standards	Applicable Regulation
N/A	Only burn used oil that is equivalent to unadulterated oil.	15A NCAC 02Q .0317 Avoidance of 02Q .0700
N/A	Submit and maintain a Risk Management Plan as specified in 40 CFR 68.150.	15A NCAC 02Q .0508(h)

STATE-ENFORCEABLE ONLY

1. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES

a. In accordance with 15A NCAC 02Q .0317, the Permittee is avoiding the applicability of 15A NCAC 02Q .0700 by using recycled fuels which are equivalent to their virgin counterparts. The recycled fuel oil(s) shall be equivalent to unadulterated fossil fuel by meeting the following criteria:

Constituent/Property	Allowable Level
Arsenic	1.0 ppm maximum
Cadmium	2.0 ppm maximum
Chromium	5.0 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum
Flash Point	
No. 2	100°F minimum
No. 4	130°F minimum
No. 6	175°F minimum
Sulfur	
No. 2	0.5% maximum (by weight)
No. 4	2.0% maximum (by weight)
No. 6	2.0% maximum (by weight)
Ash	1.0% maximum

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

b. The DAQ reserves the right to require additional testing and/or monitoring of the recycled fuel oil(s) on an annual basis or without notice.

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

c. The Permittee is responsible for ensuring that the recycled fuel oil(s), as received at the site, meet(s) the approved criteria for unadulterated fuel. The Permittee is held responsible for any discrepancies discovered by DAQ as a result of any sampling and analysis of the fuel oil(s).

d. The Permittee shall maintain at the facility for a minimum of three years, and shall make available to representatives of the DAQ upon request, accurate records of the following:
   i. The actual amount of recycled fuel oil(s) delivered to, and combusted at the facility on an annual basis.
   ii. Each load of recycled fuel oil received shall include the following:
      (A) A delivery manifest document clearly showing the shipment content and amount, its place and date of loading, and place and date of destination;
      (B) A batch specific analytical report that contains an analysis for all constituents/properties listed above. Analytical results of the recycled oil shipment shall be no more than one year old when received;
      (C) Batch signature information consisting of the following: a batch number, tank identification with batch volume of recycled oil, date and time the batch completed treatment, and volume(s) delivered; and
      (D) A certification indicating that the recycled fuel oil does not contain detectable polychlorinated biphenyls

(PCBs) (< 2 ppm).

Reporting [15A NCAC 2D .0605]

e. No reporting is required for the monitoring/recordkeeping requirements given in Section 2.2 D.1.c and d above.

2. 15A NCAC 02Q .0508(h): FACILITIES COVERED UNDER 15A NCAC 02D .2100 "RISK MANAGEMENT PROGRAM" (SECTION 112(r) OF THE CLEAN AIR ACT)

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

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

b. The Permittee shall submit an update to the Risk Management Plan (RMP) to EPA pursuant to 40 CFR 68.150 no later than June10, 2024, or as specified in 40 CFR 68.10. The Permittee shall revise and update the RMP submitted under 40 CFR 68.150 at least every five years after that date or most recent update as required by 40 CFR 68.190(b)(2) through (b)(7), whichever is later.

c. When the Permittee submits the annual Compliance Certification required by General Condition P, the Permittee shall include a statement that the facility is in compliance with all requirements of 15A NCAC 02D .2100.

E. Sources subject to CAM requirements:

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

a. Per 40 CFR 64 and 15A NCAC 02D .0614, the Permittee shall comply with the following compliance assurance monitoring (CAM) requirements.

b. **Background**

i. Emission Units and Control Technology:

Emission Source		Control Technology	
ID No.	**Description**	**ID No.**	**Description**
ES-4-1	Ball mill	CD510-1 and CD510-2	Fabric filter
ES-4-2	Ball mill		
ES-4-3	Ball mill	CD510-3	Fabric filter
ES-4-4	Ball mill	CD510-4	Fabric filter
ES-8-1, ES-8-2	Ash storage bin	CD510-9	Fabric filter
ES-9	Ash unloading	CD510-10	Fabric filter
ES-27	Lime unloading	CD510-11	Fabric filter
ES-36-1, ES-36-2, ES-36-3, ES-36-4, ES-36-5	Waste treatment area	CD914-2	Baghouse
ES4USF	Product storage silo	CD-BH1	Fabric filter
ES5USF	Product storage silo	CD-BH2	Fabric filter
ES-5-K1	Rotary kiln	CD515-1	Electrostatic precipitator (ESP)
ES-5-K2	Rotary kiln	CD515-2	ESP
ES-5-K3	Rotary kiln	CD515-3	ESP
ES-6-RD1, ES-6-RD2	Residue dryers	CD515-1, CD515-2, CD515-3	ESP
ES-7-OD-1	Ore dryer		
ES-26-1	Quench tank	CD515-6	Wet ESP
ES-26-2, ES-26-10	Quench tanks	CD515-6, CD515-9	Wet ESPs
ES-26-9	Quench tank	CD515-9	Wet ESP
ES-26-13, ES-26-14	Quench tanks	CD515-12	Wet ESP
ES-16-2	Fluid bed dryer	CD555-1	Scrubber

ii. Applicable Regulation: 15A NCAC 02D .0515

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

c. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criteria are presented in the following tables i through iv:

i. *Sources controlled with fabric filters/baghouses:*

Emission Sources:	**ES-4-1, ES-4-2, ES-4-3, ES-4-4, ES-8-1, ES-8-2, ES-9, ES-27, ES-36-1, ES-36-2, ES-36-3, ES-36-4, ES-36-5, ES4USF, ES5USF**
A. Indicators Measurement Approach	Visible emissions (VE) VE from each control device exhaust will be observed daily.
B. Indicator Range	An excursion is defined as the presence of above normal VE. If visible emissions from this source are observed to be above normal, the Permittee shall demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limits given in Section 2.1 A.4.a. An excursion triggers an inspection, corrective action, and a reporting requirement.
C. Quality Improvement Plan Threshold	Five excursions occurring in a six-month reporting period.
D. Performance Criteria	
1. Data Representativeness	VE shall be observed at the emissions point (control device exhaust).
2. Quality Assurance/Quality Control (QA/QC) Practices	Method 9 observations shall be conducted by a certified Reference Method 9 observer.
3. Monitoring Frequency	The VE observation shall be performed daily.
4. Data Collection Procedures **Averaging Period**	The VE observation shall be recorded once daily by the observer. NA

ii. *Sources controlled with electrostatic precipitators:*

Emission Sources:	**ES-5-K1, ES-5-K2, ES-5-K3, ES-6-RD1, ES-6-RD2, ES-7-OD-1**
A. Indicators Measurement Approach	Electrical power Electrical power is measured using voltage and current meters.
B. Indicator Range	An excursion is defined as electric power outside the following indicator range. An excursion triggers an inspection, corrective action, and a reporting requirement. For each electrostatic precipitator: Stage 1a power less than 0.5 kilowatts, and/or Stages 1, 2, and 3 power less than 1.0 kilowatts (per stage)
C. Quality Improvement Plan Threshold	Six excursions per six-month reporting period.

D. Performance Criteria	
1. Data Representativeness	Use voltage and current meters as installed by the manufacturer.
2. QA/QC Practices	Confirm meters read zero when unit is not operating.
3. Monitoring Frequency	Electric power is monitored continuously.
4. Data Collection Procedures **Averaging Period**	Electric power is recorded once daily in logbook (written or electronic format). None

iii. *Sources controlled with wet electrostatic precipitators:*

Emission Sources:	**ES-26-1, ES-26-2, ES-26-10, ES-26-9, ES-26-13, ES-26-14**
A. Indicators Measurement Approach	Electrical power Voltage and current meters
B. Indicator Range	An excursion is defined as electric power outside the following indicator range An excursion triggers an inspection, corrective action, and a reporting requirement. For each wet electrostatic precipitator: Power less than 0.2 kilowatts
C. Quality Improvement Plan Threshold	Six excursions per six-month reporting period.
D. Performance Criteria	
1. Data Representativeness	Use voltage and current meters as installed by the manufacturer.
2. QA/QC Practices and Criteria	Confirm meters read zero when unit is not operating.
3. Monitoring Frequency	Electric power is monitored continuously.
4. Data Collection Procedures **Averaging Time**	Electric power is recorded once daily in logbook (written or electronic format). None

iv. *Sources controlled with scrubbers:*

Emission Source:	**ES-16-2**
A. Indicators Measurement Approach	Differential pressure across scrubber Pressure drop across the scrubber is measured with a differential pressure transducer.
B. Indicator Range	An excursion is defined as a pressure drop outside the indicator range of $0.25 \leq p \leq 13$ inches of water. An excursion triggers an inspection, corrective action, and a reporting requirement.
C. Quality Improvement Plan Threshold	Six excursions per six-month reporting period.
D. Performance Criteria	
1. Data Representativeness	Inputs to the transducer are located in the duct immediately upstream of the water spray.
2. QA/QC Practices	Pressure transducer is calibrated annually and as per manufacturer's recommendation.
3. Monitoring Frequency	Pressure drop is monitored continously.
4. Data Collection Procedures **Averaging Time**	Pressure drop is recorded once daily in logbook (written or electronic format). None

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614 if the above monitoring/recordkeeping requirements are not followed.

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

d. The Permittee shall shall comply with the recordkeeping requirements of 40 CFR 64.9(b) and submit a summary report of all monitoring and recordkeeping activities given in Section 2.2 E.1.c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The reports shall comply with the recordkeeping requirements of 40 CFR 64.9(b) and include the following information, as applicable:

i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

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

Emission Source ID No.	Emission Source Description[1,2]
Recycle Area	
Each of the following sources vent to recycle conveyors and repump tank mist eliminator (ID No. I-CD510-16)	
ID No. IS-30-4	repump tank
ID No. IS-30-6	soda ash solution tank
ID No. IS-30-1	#1 recycle belt conveyor
ID No. IS-30-2	#2 recycle belt conveyor
ID No. IS-30-5	quench light slurry receiver tank
Each of the following sources vent to #1 and # 2 vacuum pump / #3 recycle filter system mist eliminator (ID No. I-CD510-17)	
ID No. IS-10-1	#1 separator tank for vacuum filter
ID No. IS-10-2	#2 separator tank for vacuum filter
Neutralization Area	
Each of the following sources vent to #1, #2, and #3 systems mist eliminator (ID No. I-CD535-2), via #1, #2, and #3 vacuum pump or #4 mist eliminator (ID No. I-CD535-5)	
ID No. IS-13-1	#1 filtrate separator tank
ID No. IS-13-2	#1 wash separator tank
ID No. IS-13-3	#2 filtrate separator tank
ID No. IS-13-4	#2 wash separator tank
ID No. IS-13-5	#3 filtrate separator tank
ID No. IS-13-6	#3 wash separator tank
Each of the following sources vent to neutralization area process tanks mist eliminator (ID No. I-CD535-3)	
ID No. IS-11-4	#1 filtrate receiver tank
ID No. IS-11-1	#1 repulp tank
ID No. IS-11-7	#1 wash receiver tank
ID No. IS-11-5	#2 filtrate receiver tank
ID No. IS-11-2	#2 repulp tank
ID No. IS-11-8	#2 wash receiver tank
ID No. IS-11-6	#3 filtrate receiver tank
ID No. IS-11-3	#3 repulp tank
ID No. IS-11-9	#3 wash receiver tank
ID No. IS-11-19	calcium sulfate precipitator tank
ID No. IS-11-21	acid wash tank
ID No. IS-11-18	wash slurry surge tank
ID No. IS-11-12	neutral liquor precoat tank
ID No. IS-11-11	#2 neutralizing tank
ID No. IS-11-10	#1 neutralizing tank
ID No. IS-11-22	filter tub dump tank
ID No. IS-11-20	#1 quench light slurry tank

Emission Source ID No.	Emission Source Description[1,2]
ID No. IS-11-16	return liquor tank
ID No. IS-11-14	yellow liquor storage tank
ID No. IS-11-17	weak liquor tank
ID No. IS-11-15	neutral liquor tank
ID No. IS-11-13	neutralization feed tank
Evaporation Area	
ID No. IS-14-8	laboratory vacuum hood
Each of the following sources vent to acidifier and tanks demister (ID No. I-CD550-2), OR area process and storage tanks demister (ID No. I-CD550-1) and wet salt cake system demister (ID No. I-CD550-8)	
ID No. IS-15-5	#1 acidifier tank
ID No. IS-15-1	#2 acidifier tank
ID No. IS-15-2	#2 neutral liquor tank
ID No. IS-15-3	condensate tank
ID No. IS-15-4	acidifier feed tank
Each of the following sources vent to area process and storage tanks demister (ID No. I-CD550-1) OR acidifier and tanks demister (ID No. I-CD550 2) and wet salt cake system demister (ID No. I-CD550-8)	
ID No. IS-14-3	#1 neutral liquor hold tank
ID No. IS-14-12	85% hot well
ID No. IS-14-6	#1 precoat tank
ID No. IS-14-9	#2 precoat tank
ID No. IS-14-7	persulfate tank
ID No. IS-14-1	process water tank
ID No. IS-14-11	82.5% liquid storage tank
ID No. I-ES550-10	crystallizer dump tank
ID No. IS-14-4	third effect feed tank
ID No. IS-14-2	hot process water tank
ID No. IS-14-5	70% feed tank
ID No. IS-14-10	filter surge tank
Each of the following sources vent to wet salt cake system demister (ID No. I-CD550-8) OR area process and storage tanks demister (ID No. I-CD550-1) and acidifier and tanks demister (ID No. I-CD550-2)	
ID No. IS-38-7	#2 salt cake splitter boxes
ID No. IS-38-10	#2 salt cake concentrate tank
ID No. IS-38-2	#2 wet salt cake conveyor
ID No. IS-38-11	slurry concentrator
ID No. IS-38-12	concentrator overflow tank
ID No. IS-38-9	#1 salt cake concentrator tank
ID No. IS-38-1	#1 wet salt cake conveyor
ID No. IS-38-3	#1 salt cake centrifuge
ID No. IS-38-4	#2 salt cake centrifuge
ID No. IS-38-6	#1 salt cake splitter boxes
ID No. IS-38-8	salt cake reslurry tank

Emission Source ID No.	Emission Source Description[1,2]
Tank Farm Area	
Each of the following sources vent to tank farm mist eliminator (ID No. I-CD595-1)	
ID No. IS-23-10	chromium liquid weigh tank
ID No. IS-23-1	chromium liquid storage tank #1
ID No. IS-23-2	chromium liquid storage tank #2
ID No. IS-23-3	chromium liquid storage tank #3
ID No. IS-23-4	chromium liquid storage tank #4
ID No. IS-23-5	chromium liquid storage tank #5
ID No. IS-23-6	chromium liquid storage tank #6
ID No. IS-23-7	chromium liquid storage tank #7
ID No. IS-23-8	chromium liquid storage tank #8
ID No. IS-23-9	chromium liquid storage tank #9
Waste Treatment Area	
Each of the following sources vent to waste treatment area mist eliminator (ID No. I-CD914-1)	
ID No. IS-24-1	#1 waste treatment reactor
ID No. IS-24-2	#2 waste treatment reactor
ID No. IS-24-3	#3 waste treatment reactor
ID No. IS-24-5	#5 waste treatment reactor
ID No. IS-24-6	#6 waste treatment reactor
ID No. IS-24-7	repulp water tank
ID No. IS-24-8	process waste collection tank
Miscellaneous	
I-ES801-3	No. 6 fuel oil above ground storage tank (600,000 gallon capacity)
I-ES929-2	diesel fuel above ground storage tank (1,034-gallon capacity)
I-ES929-1	gasoline above ground storage tank (1,034-gallon capacity)
I-ES914-14 **GACT ZZZZ**	sanitary plant 30 kilowatt emergency generator
I-ES550-37 **GACT ZZZZ**	process water 75 kilowatt emergency generator
I-ES801-5 **GACT ZZZZ**	potable water 30 kilowatt emergency generator
I-ES515-27 **GACT ZZZZ**	#1 kiln diesel-fired emergency engine (206 horsepower)
I-ES515-30	#1 kiln diesel-fired emergency engine diesel above ground storage tank
I-ES515-28 **GACT ZZZZ**	#2 kiln diesel-fired emergency engine (206 horsepower)
I-ES515-31	#2 kiln diesel-fired emergency engine diesel above ground storage tank
I-ES515-29 **GACT ZZZZ**	#3 kiln diesel-fired emergency engine (206 horsepower)
I-ES515-32	#3 kiln diesel-fired emergency engine diesel above ground storage tank
I-ES801-6 **GACT ZZZZ**	river water diesel fired fire pump engine (115 horsepower)
I-ES801-7 **GACT ZZZZ**	river water fire pump engine diesel above ground storage tank No. 1

Emission Source ID No.	Emission Source Description[1,2]
I-ES801-8	river water fire pump engine diesel above ground storage tank No. 2
I-ES6USF **GACT ZZZZ, NSPS IIII**	SSA lighting diesel-fired emergency generator (15 kilowatts)
I-ES801-4	15,000-gallon capacity No. 2 fuel oil above ground storage tank
I-ES1 **GACT ZZZZ**	kiln auxiliary cooling fan diesel-fired 40 kilowatt emergency generator
Each of the following sources vent to crystal impingement plate scrubber with demister (ID No. CD555-1)	
IS-CT1	chromic acid solution tank (2,000 gallons maximum capacity)
IS-CT2	chromic acid solution tank (1,300 gallons maximum capacity)
IS-CT3	chromic acid solution tank (3,300 gallons maximum capacity)
IS-CT4	chromic acid solution tank (4,200 gallons maximum capacity)
IS-TBS	tote bin solution bin
US Filter Site	
I-1USF	salt cake purification system consisting of reactors, micro filtration tank, and crystallizer
I-PW	two cold parts washers

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.

4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

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

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

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

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

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

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

5. each deviation and take it into account in the compliance certification; and
6. as possible exceptions to compliance, any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred.

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

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

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

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

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

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

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Any test conducted by the Division of Air Quality using the appropriate testing procedures described in 15A NCAC 02D .2600 has precedence over all other tests.

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

1. A permit shall be reopened and revised under the following circumstances:
   a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
   b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
   c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
   d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540]

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

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

NN. **Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (Air Permitting Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303 or through the EPA CEDRI) in writing at least seven days before the change is made.
   a. The written notification shall include:
      i. a description of the change at the facility;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.

b. In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

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