ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL A. ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

TBD

Mr. Mike Hess
Vice President and General Manager
Nucor Corporation
PO Box 687
Lexington, NC 27293

SUBJECT: Air Permit No. 10754R00
Nucor Steel Lexington
Lexington, Davidson County, North Carolina
Permit Class: Title V
PSD Class: Major
Facility ID: 2900394

Dear Mr. Hess:

In accordance with your completed application received July 15, 2022, and determined to be technically complete October 11, 2022, we are forwarding herewith Permit No. 10754R00 to Nucor Steel Lexington, Lexington, Davidson County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Additionally, any emissions activities determined from your air permit application as meeting the exemption requirements contained in 15A NCAC 2Q .0102 have been listed for information purposes in Section 3 of the enclosed air permit.

If any parts, requirements, or limitations contained in this 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."

Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

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Davidson County has triggered increment tracking under PSD for NOx, PM_{10}, and $PM_{2.5}$. Additionally, this new major stationary source will trigger minor source baseline date for SO_2. This greenfield facility will result in the following increment increases:

Pollutant	PSD Increment Tracking Increase (lb/hr)
PM_{10}	22.26
$PM_{2.5}$	19.03
NOx	89.45
SO_2	40.16

This permit shall be effective from TBD until TBD+8 years, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. 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.

Should you have any questions concerning this matter, please contact Russell Braswell at russell.braswell@ncdenr.gov or 919-707-8731.

Sincerely,

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

Enclosure

c: Brad Akers, EPA Region 4 (Permit and Review)
Laserfiche (2900394)
Connie Horne (cover letter only)

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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.

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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
10754R00	NA	TBD	TBD+8 years

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: **Nucor Steel Lexington**
Facility ID: **2900394**
Primary SIC Code: **3312**
NAICS Code: **331110**

Facility Site Location: **6776 E US Hwy 64**
City, County, State, Zip: **Lexington, Davidson County, North Carolina, 27292**
Mailing Address: **PO Box 687**
City, State, Zip: **Lexington, NC 27293**

Application Number(s): **2900394.22A**
Complete Application Date(s): **October 11, 2022**

Division of Air Quality, Regional Office Address: **Winston-Salem Regional Office**
450 West Hanes Mill Road, Suite 300
Winston-Salem, NC 27105

Permit issued this the TBD.

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

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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

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Melt Shop (ES-1)			
ES-1-1 **NSPS AAa, GACT YYYYY, PSD BACT**	Electric arc furnace (EAF) equipped with direct evacuation control (DEC), oxy-fuel burners, and natural gas-fired EAF modules and service cutting torches (46.74 million Btu per hour maximum combined heat input)	CD-7	Melt Shop Baghouse
ES-1-2 **GACT YYYYY, PSD BACT**	Ladle metallurgy furnace (LMF)		
ES-1-3 **GACT YYYYY, PSD BACT**	EAF refractory dumping and repair		
ES-1-4 **GACT YYYYY, PSD BACT**	Slag dumping and slag pit		
ES-1-5 **GACT YYYYY, PSD BACT**	Melt shop material transfers		
ES-1-6 **GACT YYYYY, PSD BACT**	Natural gas-fired nozzle preheater, equipped with a low NOx burner (0.05 million Btu per hour maximum heat input)		
ES-1-FUG **NSPS AAa, GACT YYYYY, PSD BACT**	Melt shop fugitives	NA	NA
Casting Operations (ES-2)			
ES-2-1 **PSD BACT**	Caster	NA	NA
ES-2-2 **PSD BACT**	Ladle and tundish refractory dumping and repair	NA	NA
ES-2-3 **PSD BACT**	Natural gas-fired burners for ladle/tundish drying and ladle/tundish preheaters, each equipped with low-NOx burners (61.89 million Btu per hour maximum total heat input)	NA	NA
ES-2-4 **PSD BACT**	Natural gas-fired service cutting torches (0.8 million Btu per hour total heat input)	NA	NA

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Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Water spray chamber below caster and caster spray stack (ES-3)			
ES-3 **PSD BACT**	Water spray chamber below caster and caster spray stack	NA	NA
Rolling Operations (ES-4)			
ES-4-1 **PSD BACT**	Rolling Mill	NA	NA
ES-4-2 **PSD BACT**	Natural gas-fired service cutting torches in the Rolling Mill (0.8 million Btu per hour maximum total heat input)	NA	NA
Torches for scrap cutting and skull cutting (ES-5)			
ES-5 **PSD BACT**	Natural gas-fired torches for scrap cutting and skull cutting (0.5 million Btu per hour maximum total heat input)	NA	NA
Cooling Towers (ES-6)			
ES-6-1 **PSD BACT**	Cooling tower (non-contact)	CD-12	Drift eliminators
ES-6-2 **PSD BACT**	Cooling tower (contact)	CD-13	Drift eliminators
Silos (ES-7)			
ES-7-1 **PSD BACT**	Two silos (carbon storage)	CD-3	Bin vent filter
ES-7-2 **PSD BACT**	Two silos (flux storage)	CD-4	Bin vent filter
ES-7-3 **NSPS AAa,** **PSD BACT**	Baghouse dust silo and enclosed dust loadout	CD-5	Bin vent filter (silo)
Material handling (ES-8)			
ES-8-1 **PSD BACT**	Scrap handling and storage in an open pile and a pile covered and enclosed on two sides	NA	NA
ES-8-2 **PSD BACT**	Alloy handling and storage pile area covered and enclosed on three sides	NA	NA
ES-8-3 **PSD BACT**	Slag and mill scale handling, pile area, and processing	NA	NA
Haul roads (ES-9)			
ES-9 **PSD BACT**	Haul roads (paved and unpaved)	NA	NA
Engines (ES-10)			
ES-10-1 **NSPS JJJJ,** **GACT ZZZZ,** **PSD BACT**	Natural gas-fired fire water pump (500 horsepower)	NA	NA
ES-10-2 **NSPS IIII,** **NSPS JJJJ,** **GACT ZZZZ,** **PSD BACT**	Natural gas-fired emergency generator (2,000 kilowatt) -or- Diesel-fired emergency generator (2,000 kilowatt)	NA	NA

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Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-10-3 **NSPS IIII,** **NSPS JJJJ,** **GACT ZZZZ,** **PSD BACT**	Natural gas-fired emergency generator (2,000 kilowatt) -or- Diesel-fired emergency generator (2,000 kilowatt)	NA	NA
Storage tanks (ES-11)			
ES-11-1 **PSD BACT**	Diesel storage tanks	NA	NA
ES-11-2 **GACT CCCCCC,** **PSD BACT**	Gasoline storage tank	NA	NA

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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. The following emission sources:

Electric arc furnace (EAF) equipped with direct evacuation control (DEC), oxy-fuel burners, and natural gas-fired EAF modules and service cutting torches (ID No. ES-1-1),

Ladle metallurgy furnace (LMF) (ID No. ES-1-2),

Refractory dumping and repair (ID No. ES-1-3),

Slag dumping and slag pit (ID No. ES-1-4),

Melt shop material transfers (ID No. ES-1-5), and

Natural gas-fired nozzle preheater equipped with a low NOx burner (ID No. ES-1-6)

All venting to Melt Shop Baghouse (ID No. CD-7)

And

Melt Shop Fugitives (ID No. ES-1-FUG)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Particulate Matter PM_{10} $PM_{2.5}$ Carbon Monoxide Nitrogen Oxides Sulfur Dioxide Volatile Organic Compounds GHGs	BACT for Melt Shop Activities BACT for natural gas-fired preheaters with low-NOx burners	15A NCAC 02D .0530 and 15A NCAC 02D .0544
Particulate Matter	Comply with CAM plan	15A NCAC 02D .0614
Particulate Matter, Hazardous Air Pollutants	Pollution Prevention Plan Operate a baghouse Reduce fugitive emissions **See Section 2.1 A.4**	15A NCAC 02D .1111
Particulate Matter	**See Section 2.2 A.1**	15A NCAC 02D .0524
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. Emissions of sulfur dioxide from the EAF, cutting torches, and preheaters **(ID Nos. ES-1-1 and ES-1-6)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The SO_2 CEMS required by Section 2.1 A.2.c, below, shall be sufficient to demonstrate compliance for SO_2 emissions from these sources (**ID Nos. ID Nos. ES-1-1 and ES-1-6)**. No additional monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the combustion of natural gas in the oxy-fuel burners, cutting torches, and preheaters (**ID Nos. ID Nos. ES-1-1 and ES-1-6**).

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The "Best Available Control Technology" (BACT) requirements shall apply as follows during all periods of operation (normal, startup, shutdown, and malfunction):

i. Melt Shop (excluding nozzle preheater **(ID No. ES-1-6)** and fugitives **(ID No. ES-1-FUG)**), measured at the Melt Shop Baghouse **(ID No. CD-7)**:

Regulated NSR Pollutant	BACT		Control Description
	Emission Limit	Averaging Period	
PM (filterable and condensable)	0.0052 gr/dscf	Average of three 4-hour test runs (using emission testing)	Baghouse
PM (filterable only)	0.0015 gr/dscf		
PM_{10} (filterable and condensable)	0.0024 gr/dscf		
$PM_{2.5}$ (filterable and condensable)	0.0024 gr/dscf		
CO	3.5 pounds per ton steel produced (lb/ton)	30-day rolling average (using continuous emissions monitoring system (CEMS))	Direct evacuation control (DEC) and scrap management
NOx	0.3 lb/ton	30-day rolling average (using CEMS)	Oxy-fired burners and DEC
VOC	0.3 lb/ton	Average of three 1-hour test runs (using emission testing)	Scrap management plan and good work practices
SO_2	0.5 lb/ton	30-day rolling average (using CEMS)	Low-sulfur carbon-based feed and charge material

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Regulated NSR Pollutant	BACT		Control Description
	Emission Limit	Averaging Period	
GHGs	438.2 lb/ton	30-day rolling average (using CEMS)	Good work practices and furnace design: • Adjustable speed drives • Transformer efficiency-ultra-high-power transformers • Bottom stirring/stirring gas injection • Foamy slag practice • Oxy-fuel burners • Post combustion of the flue gases • Engineered refractories • Eccentric bottom tapping on furnace • Energy monitoring and management system

ii. Nozzle preheater **(ID No. ES-1-6)**: Low-NOx burners, good operating practices, and natural gas as fuel.

Testing [15A NCAC 02Q .0308(a)]

b. i. The Permittee shall conduct an initial performance test of the Melt Shop Baghouse (**ID No. CD-7**) within 180 days of the commencement of operations of the Melt Shop (**ID No. ES-1**) unless another date is approved by DAQ.

ii. The Permittee shall conduct an initial emission test and subsequent emission testing for the following pollutants:
(A) Particulate matter (PM)
(B) PM_{10},
(C) $PM_{2.5}$, and
(D) VOC

iii. When conducting emission testing for PM, the Permittee shall use the test methods specified in 15A NCAC 02D .2609(a).

iv. When conducting emission testing for PM_{10} and/or $PM_{2.5}$, the Permittee shall use the test methods specified in 15A NCAC 02D .2609(f).

v. The Permittee shall conduct subsequent emission testing for each of the above pollutants annually (i.e., less than 13 months from the previous test) unless another date is approved by DAQ.

vi. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. In order to demonstrate compliance with the emission limits in Section 2.1 A.2.a, above, for each of the following pollutants, the Permittee shall continuously monitor emissions from the Melt Shop Baghouse (**ID No. CD-7**) during all periods of operation using a CEMS:
i. CO,
ii. SO_2,
iii. NOx, and
iv. CO_2

d. For each CEMS required above:
i. Each CEMS shall be installed and operating according to the requirements of 15A NCAC 02D .0613 "Quality Assurance Program," the relevant Performance Specification in Appendix B to 40 CFR Part 60, and the relevant quality assurance procedures in Appendix F to 40 CFR Part 60.
ii. Monitor downtime shall not exceed 5.0 percent of the operating time in a calendar quarter. Monitor downtime shall be calculated using the following equation:

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

Where:
"Total Monitor Downtime" is the number of hours in a calendar quarter where an emission source was operating but data from the associated CEMS are invalid or not available; and
"Total Source Operating Time" is the number of hours in a calendar quarter where the emission source associated with the CEMS was operating.

e. i. The total steel production shall not exceed 515,000 tons per rolling 12-month period.
ii. The total steel production shall not exceed 80 tons per hour when averaged over any block 24-hour period (a block 24-hour period begins at 7AM each calendar day). Hours when the facility was not operating are not to be included when determining the hourly average steel production for each 24-hour period.

f. The Permittee shall comply with the pollution prevention plan required by 40 CFR Part 63, Subpart YYYYY (see Section 2.1 A.4.c).

g. The Permittee shall limit fugitive emissions from the Melt Shop by complying with the monitoring requirements under by 40 CFR Part 60, Subpart AAa (see Section 2.2 A.1).

h. The Permittee shall ensure the exhaust from the EAF is routed through the DEC or canopy hood to the Melt Shop Baghouse **(ID No. CD-7)**. The Permittee shall perform inspections and maintenance of the Melt Shop and Melt Shop Baghouse ventilation systems according to 40 CFR Part 60, Subpart AAa (see Section 2.2 A.1), 40 CFR Part 63, Subpart YYYYY (see Section 2.1 A.4), and the site-specific CAM plan (see Section 2.1 A.3).

i. The Permittee shall ensure the GHG work practices and furnace design practices specified in Section 2.1 A.2.a, above, are implemented.

j. The Permittee shall operate, inspect, and maintain the nozzle preheater **(ID No. ES-1-6)** and associated low-NOx burner according to the manufacturer's recommendations. The Permittee shall keep records of the manufacturer's certification for the low-NOx burner.

Recordkeeping [15A NCAC 02Q .0308(a)]

k. The Permittee shall maintain the following records in a logbook (written or electronic format):
i. Records of steel production to show that the annual and hourly steel production limits are not exceeded.
ii. Records of monitoring, maintenance, and inspections required by Sections 2.1 A.2.c through 2.1 A.2.j, above.
iii. Records of activities associated with the pollution prevention plan required by Section 2.1 A.2.f, above.
iv. Records of CEMS data, including periods of monitor downtime and QA/QC activities.
v. Records demonstrating the use of the GHG work practices required by Section 2.1 A.2.j, above.
vi. Records of oxy-fuel usage in the EAF and estimates of natural gas usage in the nozzle preheater based on facility hours of operation and maximum rated heated input.

Reporting [15A NCAC 02Q .0308(a)]

l. The Permittee shall submit a summary report of all monitoring activities given in Section 2.1 A.2.c through Section 2.1 A.2.j, above and the recordkeeping activities given in Section 2.1 A.2.k, 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.

3. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

a. For the baghouse **(ID No. CD-7)**, the Permittee shall comply with 40 CFR Part 64 pursuant to 15A NCAC 02D .0614 and 40 CFR 63.10686(e) to ensure that the Melt Shop **(ID No. ES-1)** complies with the emission limits of NSPS Subpart AAa, GACT Subpart YYYYY, and PSD.

Background

b. Emission Unit: Melt Shop **(ID No. ES-1)**

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c. Applicable Regulations, Emission Limits, and Monitoring Requirements

i. (A) Regulation: 15A NCAC 02D .0524 (NSPS Subpart AAa)
(B) Emission limits: VE less than 3% from the Melt Shop Baghouse, and
PM (filterable) less than 0.0052 gr/dscf from the Melt Shop Baghouse

ii. (A) Regulation: 15A NCAC 02D .1111 (GACT Subpart YYYYY)
(B) Emission limits: VE less than 6%, and
PM (filterable) less than 0.0052 gr/dscf from the Melt Shop Baghouse

iii. (A) Regulation: 15A NCAC 02D .0530 (Prevention of Significant Deterioration)
(B) Emission limits: PM (filterable and condensable): 0.0052 gr/dscf from the Melt Shop Baghouse
PM (filterable only): 0.0015 gr/dscf
PM_{10} (filterable and condensable): 0.0024 gr/dscf
$PM_{2.5}$ (filterable and condensable): 0.0024 gr/dscf

iv. Control Technology: Baghouse **(ID No. CD-7)**

Monitoring Approach

d. The key elements of the monitoring approach for PM and VE, including parameters to be monitored, parameter ranges, and performance criteria are present in the following table:

Measure	Indicator
I. Indicator	Triboelectric Signal
Approach	A triboelectric monitor is installed at the baghouse exhaust. An alarm will sound when the signal remains over a preset limit for 1 minute triggering a response action. The alarm setting may require adjustments due to seasonal variations.
II. Indicator Range	An excursion is defined as a triboelectric signal greater than 50 percent of scale for 1 minutes. Excursions trigger an inspection and corrective action to address the identified problem. A non-certified observation may be conducted to observe for the presence or absence of visible emissions. If visible emissions are observed, a Method 9 observation will be completed by a certified inspector at the earliest time practical to confirm if an exceedance has occurred and reporting will be required *A triboelectric signal of zero during process operation will trigger an investigation.*
III. Performance Criteria	
A. Data Representativeness	The data are collected at the emission point - the probe is located inside the baghouse exhaust duct. The triboelectric signal is directly proportional to the amount of particulate in the exhaust if factors such as velocity and particle size remain relatively constant.
B. Verification of Operational Status	NA
C. QA/QC Practices and Criteria	The triboelectric probe is inspected periodically (at least annually) for dust buildup. The bag leak detection system shall be installed, calibrated, operated and maintained as per manufacturer's specification.
D. Monitoring Frequency	The triboelectric signal is monitored continuously.

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Measure	Indicator
E. Data Collection Procedures	The data are continuously recorded electronically. When an alarm occurs (signal over 50 percent of the scale for 1 minute), it is logged electronically.
F. Averaging Period	None (continuous monitoring for the triboelectric sensor) Six-minute averages (for historical data archiving) Six-minute average (for Method 9 observation)

Recordkeeping/Reporting [40 CFR 64.9; 15A NCAC 02Q .0308(a)]

e. The permittee shall comply with the recordkeeping requirements of 40 CFR 64.9(b) and submit a summary report of the monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The reports shall comply with the reporting requirements of 40 CFR 64.9(a) and include, at a minimum, 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 Quality Improvement Plan (QIP) during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the Permittee 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.

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

a. The electric arc furnace (EAF) operations shall comply with all requirements of 15A NCAC 02D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63 Subpart YYYYY "National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities" including the portions of Subpart A "General Provisions" as specifically stated in 40 CFR 63.10690(a).

Testing [40 CFR 63.10686(d)]

b. i. The Permittee shall demonstrate initial compliance with the PM limit in Section 2.1 A.4.d.ii below according to 40 CFR 63.10686(d)(1).
   ii. The Permittee shall demonstrate initial compliance with the VE limit in Section 2.1 A.4.d.iii below according to 40 CFR 63.10686(d)(2).
   iii. When conducting compliance demonstrations, the Permittee shall monitor and record the information specified in 40 CFR 60.274a(h). [40 CFR 63.10686(d)(3)]
   iv. If emissions testing is required, the testing shall be performed in accordance with General Condition 17 and 40 CFR 63.10686(d).

Requirements for the Control of Contaminants from Scrap [40 CFR 63.10685]

c. i. The Permittee shall prepare and implement a pollution prevention plan (PPP) for metallic scrap selection and inspection to minimize the amount of chlorinated plastics, lead, and free organic liquids that are is charged to the furnace. The plan must include the information in 40 CFR 63.10685(a)(1)(i) through (iii). [40 CFR 63.10685(a)(1)]
   ii. For scrap containing motor vehicle scrap, the Permittee shall procure that scrap following one of the following options. The Permittee may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision. [40 CFR 63.10685(b)]
      (A) The Permittee may develop a site-specific plan for mercury switches that meets the requirements of 40 CFR 63.10685(b)(1)(i) through (v). [40 CFR 63.10685(b)(1)]
      - or -
      (B) For scrap containing motor vehicle scrap, the Permittee shall only obtain motor vehicle scrap from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in 40 CFR 63.10685(b)(2)(i) through (iii). [40 CFR 63.10685(b)(2)]
      - or -

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(C) For the scrap for which the Permittee has opted to comply with the requirements of the "Option for specialty metal scrap," the Permittee shall certify that the only materials recovered from motor vehicles in the scrap are materials recovered for their specialty alloy content which, based on the nature of the scrap and purchase specifications, are not reasonably expected to contain mercury switches. [40 CFR 63.10685(b)(3)]

iii. For scrap that does not contain motor vehicle scrap, the Permittee shall maintain records of documentation that such scrap does not contain motor vehicle scrap [40 CFR 63.10685(b)(4)]

Requirements for Electric Arc Furnaces [40 CFR 63.10686]

d. The Permittee shall:
   i. Install, operate, and maintain a capture system that collects emissions from the EAF (**ID No. ES-1-1**) and conveys the collected emissions to the Melt Shop baghouse (**ID No. CD-7**). [40 CFR 63.10686(a)]
   ii. Limit emissions of particulate matter (PM) from the Melt shop baghouse (**ID No. CD-7**) to less than 0.0052 grains per dry standard cubic foot. [40 CFR 63.10686(b)(1)]
   iii. Limit visible emissions (VE) from the Melt shop (**ID No. ES-1**) to less than 6 percent opacity. [40 CFR 63.10686(b)(2)]

Monitoring [40 CFR 63.10686(e)]

e. The Permittee shall monitor the Melt Shop Baghouse (**ID No. CD-7**) and associated capture systems according to the Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64. See Section 2.1 A.3 for the site-specific CAM requirements.

Recordkeeping [40 CFR 63.10685(c) and 40 CFR 63.10686(e)]

f. The Permittee shall maintain the following records:
   i. Records such that compliance with the PPP can be demonstrated.
   ii. For scrap not containing motor vehicle scrap, records such that the non-inclusion of vehicle scrap can be verified.
   iii. Records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. For motor vehicle scrap purchased from a broker, The Permittee shall also maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.
   iv. Records required by the CAM plan for the Melt Shop Baghouse.

Reporting [40 CFR 63.10685(c)(3) and 40 CFR 63.10686(e)]

g. The Permittee shall submit a semiannual compliance report for the control of contaminants from scrap according to the requirements of 40 CFR 63.10(e) and compliance with the CAM plan for the Melt Shop Baghouse. The report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

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B. Casting Operations (venting to the Caster Vent; ID No. ES-2):

Caster (ID No. ES-2-1)

Ladle and tundish refractory dumping and repair (ID No. ES-2-2)

Natural gas-fired burners for ladle/tundish drying, and ladle/tundish preheaters, each equipped with low-NOx burners (ID No. ES-2-3)

Natural gas-fired service cutting torches (ID No. ES-2-4)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20% opacity	15A NCAC 02D .0521
Particulate Matter PM_{10} $PM_{2.5}$ Carbon Monoxide Nitrogen Oxides Sulfur Dioxide Volatile Organic Compounds GHGs	BACT for Casting Operations BACT for natural gas-fired torches BACT for natural gas-fired preheaters with low-NOx burners	15A NCAC 02D .0530 and 15A NCAC 02D .0544
Toxic air pollutants	Modeled emission rates **See Section 2.2 B.1**	15A NCAC 02D .1100
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. Emissions of sulfur dioxide from the natural gas-fired burners **(ID Nos. ES-2-3 and ES-2-4)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the combustion of natural gas in these sources (**ID Nos. ID Nos. ES-2-3 and ES-2-4**).

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

a. Visible emissions from the Caster Vent **(ID No. ES-2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

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Monitoring [15A NCAC 02Q .0308(a)]

c. To ensure compliance, once a week the Permittee shall observe the Caster Vent **(ID No. ES-2)** 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. The Permittee shall establish "normal" for these sources in the first 30 days following the date the facility commences operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.2.a above.

Recordkeeping [15A NCAC 02Q .0308(a)]

d. The results of the monitoring activities required by Section 2.1 B.2.c, above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The log 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.

Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Section 2.1 B.2.c and d, above, on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

3. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The BACT requirement for the Casting Operations **(ID No. ES-2-1 and ES-2-2)** is to utilize best management practices and comply with the scrap management plan required by 40 CFR Part 63, Subpart YYYYY during all periods of operation (normal, startup, shutdown, and malfunction).
b. The BACT requirement for the ladle/tundish drying burners and ladle/tundish preheaters **(ID No. ES-2-3)** is to operate with low-NOx burners, good operating practices, and natural gas as fuel during all periods of operation (normal, startup, shutdown, and malfunction).
c. The BACT requirement for the service cutting torches **(ID No. ES-2-4)** is to operate with good operating practices and natural gas as fuel during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

d. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall demonstrate compliance with the BACT limit for the Casting Operations **(ID No. ES-2-1 and ES-2-2)** by complying with the monitoring, recordkeeping, and reporting requirements under 40 CFR Part 63, Subpart YYYYY (see Section 2.1 A.4, above).
f. The Permittee shall operate, inspect, and maintain the ladle/tundish drying burners and ladle/tundish preheaters **(ID No. ES-2-3)** and associated low-NOx burners according to the manufacturer's recommendations. The Permittee shall keep records of the manufacturer's certification for the low-NOx burners.
g. The Permittee shall operate, inspect, and maintain the service cutting torches (**ID No. ES-2-4)** according to the manufacturer's recommendations.
h. The Permittee shall keep records of burner and heater inspections, maintenance, and estimates of natural gas fuel usage based on facility hours of operation and maximum rated heated input. Records shall be kept in a logbook (written or electronic format) maintained on-site.

Reporting [15A NCAC 02Q .0308(a)]

i. The Permittee shall submit a summary report of all monitoring and recordkeeping activities given in Section 2.1 B.3.c through Section 2.1 B.3.f, above, postmarked on or before January 30 of each calendar year for the preceding

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six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

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C. Water spray chamber below caster and caster spray stack (ID No. ES-3):

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

Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	20% opacity	15A NCAC 02D .0521
Particulate Matter PM_{10}, $PM_{2.5}$ Volatile Organic Compounds	BACT for Caster Spray Stack	15A NCAC 02D .0530
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the Caster Spray Stack **(ID No. ES-3)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. To ensure compliance, once a week the Permittee shall observe the Caster Spray Stack **(ID No. ES-3)** 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. The Permittee shall establish "normal" for these sources in the first 30 days following the date the facility commences operation. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.1.a above.

Recordkeeping [15A NCAC 02Q .0308(a)]

d. The results of the monitoring activities required by Section 2.1 C.1.c, above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The log 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.

Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Section 2.1 C.1.c and d, above, on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The BACT requirement for the Caster Spray Stack **(ID No. ES-3)** is to utilize best management practices and comply with the scrap management plan required by 40 CFR Part 63, Subpart YYYYY during all periods of operation (normal, startup, shutdown, and malfunction).

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Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The Permittee shall demonstrate compliance with the BACT limit for the Caster Spray Stack **(ID No. ES-3)** by complying with the monitoring, recordkeeping, and reporting requirements under 40 CFR Part 63, Subpart YYYYY (see Section 2.1 A.4, above).

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D. Rolling Mill (venting to Rolling Mill Vent; ID No. ES-4):

Rolling mill (ID No. ES-4-1)

Natural gas-fired service cutting torches in the rolling mill (ID No. ES-4-2)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	**(ID No. ES-4-2 only)** 2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20% opacity	15A NCAC 02D .0521
Particulate Matter PM_{10} $PM_{2.5}$ Carbon Monoxide Nitrogen Oxides Sulfur Dioxide Volatile Organic Compounds GHGs	BACT for Rolling Mill BACT for natural gas-fired torches	15A NCAC 02D .0530 and 15A NCAC 02D .0544
Toxic air pollutants	Modeled emission rates **See Section 2.2 B.1**	15A NCAC 02D .1100
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. Emissions of sulfur dioxide from the natural gas-fired torches **(ID No. ES-4-2)** 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 .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the combustion of natural gas in the natural gas-fired torches **(ID No. ES-4-2).**

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

a. Visible emissions from the rolling mill vent **(ID No. ES-4)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. To ensure compliance, once a week the Permittee shall observe the emission points of the rolling mill **(ID No. ES-4)** 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. The Permittee shall establish "normal" for these sources in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either:

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

Recordkeeping [15A NCAC 02Q .0308(a)]

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 log 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.

Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Section 2.1 D.2.c and d, above, on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

3. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The BACT requirement for rolling mill operations (**ID No. ES-4-1**) is to utilize best management practices to minimize the amount of oil and grease used during all periods of operation (normal, startup, shutdown, and malfunction).
b. The BACT requirement for the service cutting torches **(ID No. ES-4-2)** is to operate with good operating practices and natural gas as fuel during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The Permittee shall demonstrate compliance with the BACT requirement for the rolling mill operations (**ID No. ES-4-1**) by keeping record of oil and grease usage in the rolling mill operations (**ID No. ES-4-1**).
d. The Permittee shall operate, inspect, and maintain the service cutting torches (**ID No. ES-4-2)** according to the manufacturer's recommendations.
e. The Permittee shall keep records of torch and burner inspections, maintenance, and estimates of natural gas fuel usage based on facility hours of operation and maximum rated heated input. Records shall be kept in a logbook (written or electronic format) maintained on-site.

Reporting [15A NCAC 02Q .0308(a)]

f. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Section 2.1 D.3.c through e, above, on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

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E. Cooling towers (ID Nos. ES-6-1 and ES-6-2)

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

Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Particulate matter ($PM/PM_{10}/PM_{2.5}$)	Best Available Control Technology	15A NCAC 02D .0530
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these cooling towers **(ID Nos. ES-6-1 and ES-6-2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. To ensure compliance, once a month the Permittee shall observe the emission points of the cooling towers **(ID Nos. ES-6-1 and ES-6-2)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for these sources in the first 30 days following the beginning of operations. If visible emissions from the cooling towers 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 E.1.a (or b) above.

Recordkeeping [15A NCAC 02Q .0308(a)]

d. The results of the monitoring activities required by Section 2.1 E.1.c, above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each 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.

Reporting [15A NCAC 02Q .0308(a)]

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

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The BACT for the cooling towers **(ID Nos. ES-6-1 and ES-6-2)** is as follows: operation of the associated drift eliminators **(ID Nos. CD-12 and CD-13)** with a 0.001 percent drift loss using cooling water with less than 1,500 ppm total dissolved solids during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

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Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)]

c. The Permittee shall perform maintenance and inspections of the cooling towers and associated drift eliminators as recommended by the manufacturer. At a minimum, once each calendar year, the Permittee shall perform an inspection of the condition of the drift eliminators **(ID Nos. CD-12 and CD-13)**. The date of the inspection and a summary of any actions taken noted in a logbook (written or electronic format). The logbook shall be made available to an authorized DAQ representative upon request.

d. The Permittee shall maintain records of the manufacturer's specifications of the cooling towers and associated drift eliminators demonstrating compliance with the BACT limit in Section 2.1 E.2.a, above.

Reporting [15A NCAC 02Q .0308(a)]

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.

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F.

Two silos (carbon storage; ID No. ES-7-1) with bin vent filter (ID No. CD-3)

Two silos (flux storage; ID No. ES-7-2) with bin vent filter (ID No. CD-4)

Baghouse dust silo and enclosed dust loadout (ID No. ES-7-3) with bin vent filter on the silo (ID No. CD-5)

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

Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	**(ID Nos. ES-7-1 and ES-7-2 only)** 20% opacity	15A NCAC 02D .0521
Particulate Matter	Bin vent filters with outlet loading of 0.005 gr/dscf	15A NCAC 02D .0530
Particulate Matter	**(ID No. ES-7-3 only)** See Section 2.2 A.1	15A NCAC 02D .0524 (NSPS Subpart AAa)
Toxic air pollutants	**(ID No. ES-7-3 only)** Modeled emission rates **See Section 2.2 B.1**	15A NCAC 02D .1100
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from the carbon storage silos **(ID No. ES-7-1)** and flux storage silos **(ID No. ES-7-2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition 17.

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)]

c. To assure compliance, once a month the Permittee shall observe the emission points of these silos **(ID Nos. ES-7-1 and ES-7-2)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for these sources in the first 30 days following the beginning of operations. 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 F.1.a above.

Recordkeeping [15A NCAC 02Q .0308(a)]

d. The results of the monitoring activities required by Section 2.1 F.1.c, above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. The date and time of each recorded action;
   ii. The results of each 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.

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Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities required by 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.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. Particulate matter emissions from these silos **(ID Nos. ES-7-1, ES-7-2, and ES-7-3)** and associated bin vent filters **(ID Nos. CD-3, CD-4, and CD-5)** shall not exceed the BACT permitted emission limit of 0.005 grains per dry standard cubic foot during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. The baghouse dust silo (**ID No. ES-7-3**) loadout shall be enclosed. Drop heights for the loadout shall be minimized.
d. The Permittee shall maintain the bin vent filters by performing inspections and maintenance according to the manufacturer's recommendations. 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 plan must include:
   i. a monthly visual inspection of the system ductwork, material collection units, and loadout enclosure for leaks; and
   ii. an annual (for each 12-month period following the initial inspection) internal inspection of each bin vent filters' structural integrity.

Recordkeeping [15A NCAC 02Q .0308(a)]

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 manufacturer's recommendations, if any, and corrections made.
f. The Permittee shall maintain records of the bin vent filters' manufacturer certification demonstrating compliance with the BACT limit in Section 2.1 F.2.a, above.

Reporting [15A NCAC 02Q .0308(a)]

g. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 F.2.c through f, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

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G. Material handling processes:

Scrap handling and storage in an open pile and a pile covered and enclosed on two sides (ID No. ES-8-1)

Alloy handling and storage pile area covered and enclosed on three sides (ID No. ES-8-2)

Slag and mill scale handling, pile area, and processing (ID No. ES-8-3)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Best Available Control Technology	15A NCAC 02D .0530
Particulate matter	Fugitive dust control	15A NCAC 02D .0540
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. The BACT requirements for the material handling processes are to utilize the following work practices during all periods of operation (normal, startup, shutdown, and malfunction):
   i. Scrap handling and storage in an open pile (**ID No. ES-8-1**): minimize drop heights
   ii. Scrap handling and storage in a pile enclosed on two sides (**ID No. ES-8-1**): minimize drop heights, covered, and a partial enclosure
   iii. Alloy handling and storage pile area enclosed on three sides (**ID No. ES-8-2**): minimize drop heights, covered, and a partial enclosure
   iv. Slag and mill scale handling, pile, and processing area (**ID No. ES-8-3**): wetting, minimize drop heights
   v. Conveyor transfer points (all material handling): partial enclosure, minimize drop heights

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)]

c. The Permittee shall develop and implement a site-specific plan for applying wetting agents to the slag and mill scale processes **(ID No. ES-8-3).**
d. The Permittee shall develop and implement a site-specific plan to minimize drop heights for all material handling processes **(ID No. ES-8-1, ES-8-2, and ES-8-3)**.
e. The Permittee shall develop and implement a site-specific plan to partially enclose the scrap handling and alloy handling piles **(ID Nos. ES-8-1 and ES-8-2).**
f. The Permittee shall perform a monthly visual inspection of each conveyor drop height and each enclosure. The Permittee shall perform maintenance as required to ensure the structural integrity of each enclosure and each conveyor.
g. The use of wetting agents and 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;
   iv. any variance from manufacturer's recommendations, if any, and corrections made; and
   v. records of wetting agent usage.

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Reporting [15A NCAC 02Q .0308(a)]

h. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 G.1.c through g, 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.

2. 15A NCAC 02D .0540: PARTICULATES FROM FUGITIVE DUST EMISSION SOURCES

a. The Permittee shall not cause or allow fugitive dust emissions from material handling **(ID Nos. ES-8-1, ES-8-2, and ES-8-3)** cause or contribute to substantive complaints (i.e., complaints that are verified by physical evidence) or visible emissions in excess of those allowed under 15A NCAC 02D .0540(e).

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

b. The Permittee shall demonstrate compliance with 15A NCAC 02D .0540 by complying with the requirements of Section 2.1 G.1, above, for fugitive dust emissions and visible emissions from the material handling **(ID Nos. ES-8-1, ES-8-2, and ES-8-3)**.

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H. Haul roads (paved and unpaved) (ID No. ES-9)

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

Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Best Available Control Technology	15A NCAC 02D .0530
Particulate matter	Fugitive dust control	15A NCAC 02D .0540
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. The BACT requirement for the haul roads **(ID No. ES-9)** is to implement a fugitive dust control plan (FDCP) that incorporates the following:
   i. road watering, sweeping, and vacuuming as required to minimize fugitive dust emissions, and
   ii. post speed limits of 10 miles per hour on all roads

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)]

b. The Permittee shall develop a FDCP that meets the requirements of Section 2.1 H.1.a, above.
c. The Permittee shall maintain a logbook (written or electronic format) on-site to record activities related to the FDCP. At a minimum, the logbook shall include a daily record of road watering, sweeping, and vacuuming activities.
d. The Permittee shall post speed limit signs at appropriate intervals on all unpaved haul roads and inspect and maintain those speed limit signs as necessary.

Reporting [15A NCAC 02Q .0308(a)]

e. The Permittee shall submit a summary report of monitoring and recordkeeping activities required by Sections 2.1 H.1.b through d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

2. 15A NCAC 02D .0540: PARTICULATES FROM FUGITIVE DUST EMISSION SOURCES

a. The Permittee shall not cause or allow fugitive dust emissions from the haul roads **(ID No. ES-9)** cause or contribute to substantive complaints (i.e., complaints that are verified by physical evidence) or visible emissions in excess of those allowed under 15A NCAC 02D .0540(e).

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

b. The Permittee shall demonstrate compliance with 15A NCAC 02D .0540 by complying with the requirements of Section 2.1 H.1, above, for fugitive dust emissions and visible emissions from the haul roads **(ID No. ES-9).**

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I. Emergency-use Engines:

Natural gas-fired fire water pump (ID No. ES-10-1)

Natural gas-fired OR diesel-fired emergency generator (ID No. ES-10-2)

Natural gas-fired OR diesel-fired emergency generator (ID No. ES-10-3)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible Emissions	20% opacity	15A NCAC 02D .0521
Nitrogen Oxides, Carbon Monoxide, Particulate Matter, Volatile Organic Compounds	NSPS standards for diesel-fired emergency engines NSPS standards for NG-fired emergency engines	15A NCAC 02D .0524 [40 CFR Part 60, Subparts IIII and JJJJ]
Particulate Matter PM_{10} $PM_{2.5}$ Carbon Monoxide Nitrogen Oxides Sulfur Dioxide Volatile Organic Compounds GHGs	BACT requirements: Good work practices, certified engines, and natural gas / ULS diesel as fuel.	15A NCAC 02D .0530 and 15A NCAC 02D .0544
Hazardous Air Pollutants	Comply with NSPS requirements	15A NCAC 02D .1111 [40 CFR Part 63, Subpart ZZZZ]
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. Emissions of sulfur dioxide from the emergency-use engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the combustion of diesel or natural gas in the emergency-use engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)**

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

a. Visible emissions from the emergency-use engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

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Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. No monitoring, recordkeeping, or reporting is required for visible emissions from the combustion of diesel or natural gas in the emergency-use engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)**

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

(If ES-10-2 and/or ES-10-3 are diesel-fired emergency generators)

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

a. For these diesel-fired emergency generators **(ID No. ES-10-2 and ES-10-3)**, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" including Subpart A "General Provisions."

Definitions and Nomenclature

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

General Provisions

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

Emission Standards

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

Fuel Requirements

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

   [40 CFR 60.4207(b)]

Testing

f. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring

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

Compliance Requirements

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

   [40 CFR 60.4206 and 60.4211(a)]

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

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j. In order for the engine to be considered an emergency stationary internal combustion engine (ICE) as defined in Section 2.1 I.3.b, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.
   i. There is no time limit on the use of emergency stationary ICE in emergency situations.
   ii. The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraph j.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph j.(iii) below counts as part of the 100 hours per calendar year allowed by this paragraph j.(ii).
      (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
   iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph j.(ii) above. Except as provided in paragraph j.iii.(A) below, the 50 hours per calendar year for non- emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
      (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
         (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
         (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
         (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
         (4) The power is provided only to the facility itself or to support the local transmission and distribution system.
         (5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

   [40 CFR 60.4211(f)]

Recordkeeping [15A NCAC 02Q .0308(a)]

k. The following records shall be maintained:
   i. The results of inspection and maintenance made pursuant to Section 2.1 I.3.h shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
      (A) the date and time of each recorded action;
      (B) the results of each inspection;
      (C) the results of any maintenance performed on the engine;
      (D) any variance from manufacturer's recommendations, if any, and corrections made;
      (E) the hours of operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time [40 CFR 60.4214(b)]; and
      (F) if a PM filter is used, records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached [40 CFR 60.4214(c)];
   ii. documentation from the manufacturer that the engine is certified to meet the emission standards in Section 2.1 I.3.d; and
   iii. records showing the fuel combusted meets the requirements in Section 2.1 I.3.e.

Reporting [15A NCAC 02Q .0308(a)]

l. The Permittee shall meet the following reporting requirements:

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

ii. If the Permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purposes specified in Section 2.1 I.3.j.iii(A), the Permittee shall submit an annual report according to the requirements at 40 CFR 60.4214(d). This report must be submitted to the Regional Supervisor and directly to the EPA pursuant to 40 CFR 60.4214(d)(3). [40 CFR 60.4214(d)]

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(If ES-10-2 and/or ES-10-3 are natural gas-fired emergency generators; always applies for ES-10-1)

Applicability [40 CFR 60.4230(a)(4)(iv)]

a. For the natural gas-fired emergency engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)**, the Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, recordkeeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart JJJJ "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines" including Subpart A "General Provisions."

Definitions and Nomenclature

b. For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 60.4248 shall apply.

General Provisions

c. The Permittee shall comply with the General Provisions of 40 CFR 60 Subpart A as presented in Table 3 of 40 CFR 60 Subpart JJJJ. [40 CFR 60.4246]

Emission Standards

d. The Permittee shall comply with the following emission standards: [40 CFR 60.4233(e), Table 1 of 40 CFR 60 Subpart JJJJ]

Engine type	Maximum engine power	Manufacture date *(after)*	Emission standards ppmvd @ 15% O_2		
			NO_x	CO	VOC
Emergency	HP>=130	1/1/2009	160	540	86

Testing

e. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring

f. The engine shall be equipped with a non-resettable hour meter if:
   i. greater than or equal to 500 HP and manufactured after July 1, 2010 [40 CFR 60.4237(a)]; or
   ii. greater than or equal to 130 HP and less than 500 HP that was manufactured on or after January 1, 2011. [40 CFR 60.4237(b)]

Compliance Requirements

g. The Permittee shall comply with the emission standards in Section 2.1 I.4.d by:
   i purchasing an engine certified according to the procedures in 40 CFR 60 Subpart JJJJ for its respective model year [40 CFR 60.4243(b)(1)]; and
   ii. operate and maintain the certified stationary spark ignition (SI) internal combustion engine (ICE) and control device according to the manufacturer's emission-related written instructions. The Permittee shall also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the Permittee. [40 CFR 60.4243(a)(1)]

h. The Permittee shall operate and maintain the stationary SI ICE that achieve the emission standards as required in Section 2.1 I.4.d over the entire life of the engine. [40 CFR 60.4234]

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i. If applicable, air-to-fuel ratio (AFR) controllers shall be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 CFR 60.4243(g)]

j. In order for the engine to be considered an emergency stationary ICE as defined in Section 2.1 I.4.b, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited.
   i. There is no time limit on the use of emergency stationary ICE in emergency situations.
   ii. The Permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraph j.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph j.iii below counts as part of the 100 hours per calendar year allowed by this paragraph j.ii.
      (A) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
   iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph j.ii above. Except as provided in paragraph j.iii.(A) below, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
      (A) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:
         (1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
         (2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
         (3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
         (4) The power is provided only to the facility itself or to support the local transmission and distribution system.
         (5) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

   [40 CFR 60.4243(d)]

Recordkeeping [15A NCAC 02Q .0308(a)]

k. The Permittee shall keep the following records:
   i. all notifications submitted to comply with 40 CFR 60 and all documentation supporting any notification. [40 CFR 60.4245(a)(1)]
   ii. maintenance conducted on the engine. [40 CFR 60.4245(a)(2)]
   iii. if the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable. [40 CFR 60.4245(a)(3)]
   iv. if the stationary SI internal combustion engine is not a certified engine, documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)]
   v. the hours of operation of the engine that is recorded through the non-resettable hour meter. [40 CFR 60.4245(b)]

Reporting [15A NCAC 02Q .0308(a)]

l. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of

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

5. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The BACT requirement for the emergency-use engines **(ID Nos. ES-10-1, ES-10-2, and ES-10-3)** is the following:
   i. pipeline-quality natural gas and/or ULS diesel fuel, as applicable,
   ii. good work practices required by NSPS Subpart IIII and/or JJJJ, as applicable, and
   iii. purchase engines certified to NSPS Subpart IIII and/or JJJJ, as applicable.
   The BACT requirements apply during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The Permittee shall demonstrate compliance with the BACT requirements in Section 2.1 I.5.a, above, by complying with the monitoring, recordkeeping, and reporting requirements of NSPS Subpart IIII and/or NSPS Subpart JJJJ as applicable (see Sections 2.1 I.3 and I.4, as applicable, above).

6. 15A NCAC 02D .1111 MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

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

a. For these sources (**ID Nos. ES-10-1, ES-10-2, and ES-10-3;** *new stationary RICE located at an area source of HAP emissions*) the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63 Subpart ZZZZ "National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines" and Subpart A "General Provisions."

Stationary RICE subject to Regulations under 40 CFR Part 60 [40 CFR 63.6590]

b. Pursuant to 40 CFR 63.6590(c)(1), these sources **(ID No. ES-10-1, ES-10-2, and ES-10-3)** shall meet the requirements of 40 CFR Part 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR Part 60 Subparts IIII and JJJJ, as applicable. No further requirements apply for these engines under 40 CFR Part 63 Subpart ZZZZ and Subpart A.

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J. Storage tanks:

Diesel storage tanks (ID No. ES-11-1)

Gasoline storage tank (ID No. ES-11-2)

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

Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Good work practices and good design practices.	15A NCAC 02D .0530
Hazardous Air Pollutants	**(ID No. ES-11-2 only)** Maximum Achievable Control Technology	15A NCAC 02D .1111 [40 CFR Part 63, Subpart CCCCCC]
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. The BACT for VOC emissions from the storage tanks **(ID Nos. ES-11-1 and ES-11-2)** is good design and work practices. For the gasoline storage tank **(ID No. ES-11-2)**, the Permittee shall also follow the requirements of 40 CFR Part 63, Subpart CCCCCC (see Section 2.1 J.2, below).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The Permittee shall demonstrate compliance for VOC emissions from the gasoline storage tank **(ID No. ES-11-2)** by complying with the monitoring, recordkeeping, and reporting requirements of 40 CFR Part 63, Subpart CCCCCC (see Section 2.1 J.2, below).

d. No monitoring, recordkeeping, or reporting is required for VOC emissions from the diesel storage tanks **(ID No. ES-11-1).**

2. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.11111]

a. The gasoline storage tank **(ID No. ES-11-2)** shall comply with all requirements of 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart CCCCCC "National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities," including Subpart A "General Provisions."

Operational Requirements [40 CFR 63.11115 and 63.11116]

b. The Permittee shall, at all times, operate and maintain the gasoline storage tank **(ID No. ES-11-2)** in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

c. The Permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. At a minimum, the Permittee shall take the following measures to minimize emissions from the gasoline storage tank **(ID No. ES-11-2)**:
   i. Minimize gasoline spills.
   ii. Clean up spills as expeditiously as practicable.

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iii. Cover all open gasoline containers and all tank fill-pipes on the gasoline storage tank **(ID No. ES-11-2)** with a gasketed seal when not in use. A portable gasoline container that meets the requirements of 40 CFR Part 59, Subpart F, is considered acceptable for compliance with this condition.
iv. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

Notifications/Reporting [40 CFR 63.11116(b)]

d. The Permittee is not required to submit notifications or reports for the gasoline storage tank **(ID No. ES-11-2).**

Recordkeeping [40 CFR 63.11111(e) and 63.11116(b)

e. The Permittee shall maintain records to document monthly throughput in the storage tank.
f. The Permittee shall have records documenting the monthly gasoline throughput available within 24 hours of a request from DAQ.

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K. Natural gas-fired torches for scrap cutting and skull cutting (ID No. ES-5)

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

Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Particulate Matter PM_{10} $PM_{2.5}$ Carbon Monoxide Nitrogen Oxides Sulfur Dioxide Volatile Organic Compounds GHGs	BACT for natural gas-fired torches	15A NCAC 02D .0530 and 15A NCAC 02D .0544
Toxic air pollutants	Modeled emission rates **See Section 2.2 B.1**	15A NCAC 02D .1100
Fluorides	Facility-wide PSD avoidance **See Section 2.2 B.3**	15A NCAC 02Q .0317
Hazardous air pollutants	Facility-wide major source avoidance **See Section 2.2 B.4**	15A NCAC 02Q .0317

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

a. Emissions of sulfur dioxide from the cutting torches **(ID No. ES-5)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the combustion of natural gas in these sources (**ID Nos. ID No. ES-5**).

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION and 15A NCAC 02D .0544: PREVENTION OF SIGNIFICANT DETERIORATION FOR GREENHOUSE GASES

a. The BACT requirement for the cutting torches **(ID No. ES-5)** is to operate the torches with good operating practices and natural gas as fuel during all periods of operation (normal, startup, shutdown, and malfunction).

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0308(a)]

c. The Permittee shall operate, inspect, and maintain the cutting torches (**ID No. ES-5)** according to the manufacturer's recommendations.

d. The Permittee shall maintain records of torch inspections, maintenance, and estimates of natural gas fuel usage in the cutting torches **(ID No. ES-5)** based on facility hours of operation and maximum rated heated input. Records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.

Reporting [15A NCAC 02Q .0308(a)]

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

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2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Sources subject to NSPS Subpart AAa:

Electric arc furnace (ID No. ES-1-1), Melt shop fugitives (ID No. ES-1-FUG), and Baghouse dust silo (ID No. ES-7-3)

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the notification, testing, monitoring, recordkeeping and reporting requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart AAa "Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983," including Subpart A "General Provisions."

Emission Limitations [40 CFR 60.272a]

b. The Permittee shall limit particulate matter emissions from the affected sources such that:
   i. From the Melt Shop baghouse (**ID No. CD-7**):
      (A) Visible emissions shall be less than 3 percent opacity
      (B) Particulate matter emissions shall be less than or equal to 0.0052 grains per dry standard cubic foot (gr/dscf)
   ii. From Melt shop fugitives (**ID No. ES-1-FUG**): Visible emissions due to fugitive emissions from the EAF (**ID No. ES-1-1**) shall be less than 6 percent opacity.
   iii. From the baghouse dust silo and loadout (**ID No. ES-7-3**): Visible emissions shall be less than 10 percent opacity

Testing [40 CFR 60.8, 40 CFR 60.275a]

c. i. The Permittee shall conduct all testing required by 40 CFR 60.8 and 60.275a.
   ii. The Permittee shall follow the procedures in 40 CFR 60.275a(b) as appropriate when determining compliance with the emission limits in Section 2.2 A.1.b.i.(B), above, when emissions from the EAF are combined with emissions from sources not subject to NSPS Subpart AAa.
   iii. When determining compliance with the particulate matter emission limit in Section 2.2 A.1.b.i.(B), above, the Permittee shall use Method 5 for negative-pressure fabric filters and other types of control devices and Method 5D for positive-pressure fabric filters. [40 CFR 60.275a(e)(1)]
   iv. When determining compliance with the visible emission limits in Section 2.2 A.1.b.i.(B), above, the Permittee shall use Method 9 and the procedures in 40 CFR 60.11. The Method 9 test runs shall be conducted concurrently with the particulate matter test runs, unless inclement weather interferes. [40 CFR 60.275a(e)(3),(4)]
   v. During any required performance test, the Permittee shall monitor the following information for all heats covered by the test: Charge weights and materials, and tap weights and materials; Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and the pressure inside an EAF when direct-shell evacuation control systems are used; Control device operation log; and Continuous opacity monitor or Method 9 data. [40 CFR 60.274a(h)]
   v. If emissions testing is required, the testing shall be performed in accordance with General Condition 17.

Monitoring [40 CFR 60.273a, 40 CFR 60.274a, 40 CFR 60.276a]

d. The Permittee shall monitor visible emissions from the Melt shop. The Permittee shall either:
   i. Install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) on the Melt shop baghouse (**ID No. CD-7**) according to 40 CFR 60.273a(a).
   - or -
   ii. (A) Conduct a visible emission test on the Melt shop baghouse once per day while the EAF is operating according to 40 CFR 60.273a(c), and
      (B) Install a bag leak detection system (BLDS) on the Melt shop baghouse (**ID No. CD-7**) according 40 CFR 60.273a(e). The BLDS must meet the specifications and requirements of 40 CFR 60.273a(e)(1)-(8). All BLDS shall be operated according to 40 CFR 60.273a(f) and (g).

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e. i. Unless the Permittee performs the shop opacity observations as allowed by 40 CFR 60.273a(d) (see Section 2.2 A.1.e.iv, below), the Permittee shall monitor the furnace static pressure using a static pressure monitor according to 40 CFR 60.274a(b). The Permittee shall check and record the furnace static pressure at least once per shift. In addition, the Permittee shall either:
(A) check and record the control system fan motor amperes and damper position on a once-per-shift basis;
- or -
(B) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood
- or -
(C) install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check and record damper positions on a once-per-shift basis.
The monitoring devices required by this Section may be installed in any appropriate location in the exhaust duct according to 40 CFR 60.274a(b).

ii. When using the monitoring devices required by Section 2.2 A.1.e.i, above, to demonstrate compliance with the VE limit in Section 2.2 A.1.b.ii, above, the Permittee shall determine at least one of the following parameters as specified by 40 CFR 60.274a(c):
(A) control system fan motor amperes and all damper positions;
- or -
(B) the volumetric flow rate through each separately ducted hood;
- or -
(C) the volumetric flow rate at the control device inlet and all damper positions.
The parameter shall be determined during all periods in which a hood is operated for the purpose of capturing emissions. The Permittee may petition for reestablishment of these parameters whenever the Permittee can demonstrate that the previously established factors are no longer applicable. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period.

iii. The Permittee shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored according to 40 CFR 60.274a(f). The pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) according to 40 CFR 60.274a(g).

iv. As an alternative to the static pressure monitor required above, the Permittee may perform observations of shop opacity using a certified visible emission observer according to 40 CFR 60.273a(d). When conducting shop opacity observations:
(A) Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period.
(B) Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9.
(C) Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

f. The following may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility: Operation at a furnace static pressure that exceeds the value established by Section 2.2 A.1.e, above, if applicable, and either:
i. control system fan motor amperes at values exceeding ±15 percent of the value established by Section 2.2 A.1.e.ii, above;
-or-
ii. flow rates lower than the values established by Section 2.2 A.1.e.ii, above
[40 CFR 60.276a(c)]

g. The Permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system. This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed. [40 CFR 60.274a(d)]

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h. Operation at a furnace static pressure that exceeds the value established under Section 2.2 A.1.e.ii, if applicable, and either operation of control system fan motor amperes at values exceeding ±15 percent of the established value or operation at flow rates lower than the established may be considered to be unacceptable operation and maintenance of the affected facility. [40 CFR 60.276a(c)]

Recordkeeping [40 CFR 60.276a]

i. The Permittee shall maintain the following records:
   i. Records of all shop opacity observations made in accordance with Section 2.2 A.1.e. All shop opacity observations in excess of the emission limit shall indicate a period of excess emission. [40 CFR 60.274a(a) and 60.276a(g)]
   ii. Records of operation at parameter values that may be considered unacceptable operation and maintenance as specified in Section 2.2 A.1.f. [40 CFR 60.276a(c)]
   iii. Records of the BLDS in 40 CFR 60.276a(h), as applicable [40 CFR 60.276a(h)]
   iv. Any deficiencies noted and maintenance performed as a result of monthly observational status inspections. [40 CFR 60.274a(d)]
   v. Records of COMS installation, calibration, maintenance, and output, if applicable.

Reporting [40 CFR 60.276a]

j. The Permittee shall submit a semiannual report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June that includes the following:
   i. Exceedances of the control device opacity limit. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater. [40 CFR 60.276a(b)]
   ii. As applicable, times of furnace static pressure, fan motor amperes, and/or flow rates outside the bounds allowed by Section 2.2 A.1.e and 2.2 A.1.f, above. [40 CFR 60.276a(c)]
   iii. Periods of excess emissions indicated by shop opacity observations required by Section 2.2 A.1.h. [40 CFR 60.276a(g)]
   iv. A summary report of the monthly observational status inspections required by Section 2.2 A.1.g.

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B. Facility-wide

State-enforceable only

1 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 02D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration (approved February 24, 2023), the following permit limits shall not be exceeded:

Emission source	Pollutant	Modeled Emission Rate
Baghouse dust silo **(ID No. ES-7-3)**	Arsenic	1.15 E-02 pounds per year
	Cadmium	5.04 E-01 pounds per year
	Manganese	9.46 E-02 pounds per 24-hour period
Natural gas-fired torches for scrap cutting and skull cutting **(ID No. ES-5)**	Arsenic	7.30 E-05 pounds per year
	Benzene	7.72 E-06 pounds per year
	Cadmium	1.46 E-02 pounds per year
	Manganese	1.29 E-05 pounds per 24-hour period
Casting Operations roof vent **(ID No. ES-2)**	Arsenic	1.16 E-01 pounds per year
	Benzene	7.72 E-06 pounds per year
	Cadmium	1.46 E-02 pounds per year
	Manganese	1.89 E+00 pounds per 24-hour period
Rolling Mill roof vent **(ID No. ES-4)**	Arsenic	1.37 E-03 pounds per year
	Benzene	7.72 E-06 pounds per year
	Cadmium	1.46 E-02 pounds per year
	Manganese	7.10 E-06 pounds per 24-hour period

State-enforceable only

2. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

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

3. 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 facility-wide emissions of fluorides shall be less than 3 tons per consecutive 12-month period.

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition 17.

Monitoring/Recordkeeping [15A NCAC 02Q .0308(a)]

c. The Permittee shall keep the following records in a logbook (written or electronic format):
   i. A record of the use of fluoride-containing materials within the Melt Shop during each calendar month.
   ii. A record of the amount of steel produced using fluoride-containing materials during each calendar month.
   iii. At the end of each calendar month, the Permittee shall calculate the emissions of fluoride from the Melt Shop for that month and the 12-month period ending on that month using the approved emission factor of 0.01 pounds of fluoride emitted per ton of steel produced.

Reporting [15A NCAC 02Q .0308(a)]

d. The Permittee shall submit a summary report of the monitoring and recordkeeping activities required by Section 2.2 B.3.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.

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4. 15A NCAC 02Q .0317 AVOIDANCE CONDITIONS for 15A NCAC 02D .1112: 112(G) CASE BY CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

a. To avoid the applicability of 15A NCAC 02D .1112, the Permittee shall limit the facility-wide emissions of any single HAP and aggregate HAPs to less than 10 tons per consecutive 12-months period and 25 tons per consecutive 12-months period, respectively.

Testing [15A NCAC 02Q .0308(a)]

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition 17.

Monitoring [15A NCAC 02Q .0308(a)]

c. The monitoring and maintenance requirements for GACT Subpart YYYYY (see Section 2.1 A.4) and NSPS Subpart AAa (see Section 2.2 A.1) shall be sufficient to demonstrate compliance with the HAP emission limit in Section 2.2 B.4.a, above.

Recordkeeping [15A NCAC 02Q .0308(a)]

d. The Permittee shall comply with the applicable recordkeeping requirements in 40 CFR 63.10(b)(3). The Permittee shall keep records for the applicability determination for non-applicability of 112(g) case-by-case standard (15A NCAC 02D .1112). The applicability determination must be kept on site until the source changes its operations to become an affected source subject to the relevant standard. The record of the applicability determination shall be signed by the person making the determination and include an emissions analysis (or other information) that demonstrates the Permittee's conclusion that the source is unaffected (*e.g.*, because the source is an area source). The analysis (or other information) shall be sufficiently detailed to allow the DAQ Director to make an applicability finding for the source with regard to the relevant standard or other requirement. If applicable, the analysis shall be performed in accordance with requirements established in the relevant Subpart of 40 CFR for this purpose. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112 of the Act, if any.

e. In addition to the above, the recordkeeping requirements for GACT Subpart YYYYY (see Section 2.1 A.4) and NSPS Subpart AAa (see Section 2.2 A.1) shall be sufficient to demonstrate compliance with the HAP emission limit in Section 2.2 B.4.a, above.

Reporting [15A NCAC 02Q .0308(a)]

f. The reporting requirements for GACT Subpart YYYYY (see Section 2.1 A.4) and NSPS Subpart AAa (see Section 2.2 A.1) shall be sufficient to demonstrate compliance with the HAP emission limit in Section 2.2 B.4, above.

g. In addition to any other required reporting activities, the Permittee shall comply with the notification requirements in 40 CFR 63.9(b)(1)(ii), (j) and (k), as applicable.

5. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

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

a. Pursuant to 15A NCAC 02Q .0501(b)(2), for completion of the two-step significant modification process initiated by Application No. 2900394.22A, the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of any of the sources listed in Section 1.

Reporting [15A NCAC 02Q .0308(a)]

b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of any of the sources listed in Section 1, postmarked no later than 30 days after such date.

State-enforceable only

6. 15A NCAC 02Q .0711: EMISSION RATES REQUIRING A PERMIT

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

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b. PRIOR to exceeding any of the TPERs listed in 15A NCAC 02Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements found in 15A NCAC 02D .1100 "Control of Toxic Air Pollutants."
c. The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 02Q .0711.
d. The TPER table listed below is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 02Q .0711(a) and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.

TPERs Limitations				
Pollutant (CAS Number)	**Carcinogens (lb/yr)**	**Chronic Toxicants (lb/day)**	**Acute Systemic Toxicants (lb/hr)**	**Acute Irritants (lb/hr)**
1,1,2,2-tetrachloroethane (79-34-5)	430			
1,4-dioxane (123-91-1)		12		
acetaldehyde (75-07-0)				6.8
carbon disulfide (75-15-0)		3.9		
carbon tetrachloride (56-23-5)	460			
chlorobenzene (108-90-7)		46		
chloroform (67-66-3)	290			
ethylene dibromide	27			
formaldehyde (50-00-0)				0.04
n-hexane (110-54-3)		23		
hexane isomers except n-hexane				92
mercury, vapor (7439-97-6)		0.013		
methylene chloride (75-09-2)	1,600		0.39	
methyl ethyl ketone (78-93-3)		78		22.4
methyl isobutyl ketone (108-10-1)		52		7.6
nickel metal (7440-02-0)		0.13		
trichloroethene (79-01-6)	4,000			
toluene (108-88-3)		98		14.4
vinyl chloride (75-01-4)	26			
xylene (1330-20-7)		57		16.4

7. **PERMIT RENEWAL REQUIREMENT** - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 02Q .0304(d) and (f). Pursuant to 15A NCAC 02Q .0203(i), no permit application fee is required for renewal of an existing air permit (without a modification request). The renewal request (with application Form A) should be submitted to the Regional Supervisor, DAQ.

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8. **ANNUAL EMISSION INVENTORY REQUIREMENT** - As required by 15A NCAC 02Q .0207 "Annual Emissions Reporting," 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.

9. 15A NCAC 02D .0535: EXCESS EMISSIONS REPORTING AND MALFUNCTIONS

Reporting Requirements for Excess Emissions [15A NCAC 02D .0535(f) and 02Q .0308(a)]

a. 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.

b. 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:

   i. 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:

      (A) 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:
         (1) name and location of the facility;
         (2) nature and cause of the malfunction or breakdown;
         (3) time when the malfunction or breakdown is first observed;
         (4) expected duration; and
         (5) estimated rate of emissions;

      (B) notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and

      (C) submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

   This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

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SECTION 3 - INSIGNIFICANT / EXEMPT ACTIVITIES

[RESERVED]

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SECTION 4 - GENERAL CONDITIONS AND LIMITATIONS

1. In accordance with G.S. 143-215.108(c)(1), TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

   Regional Supervisor
   North Carolina Division of Air Quality
   Winston-Salem Regional Office
   450 West Hanes Mill Road, Suite 300
   Winston-Salem, NC 27105
   336-776-9800

   For identification purposes, each submittal should include the facility name as listed on the permit, the facility identification number, and the permit number.

2. RECORDS RETENTION REQUIREMENT - In accordance with 15A NCAC 2D .0605, any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.

3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.

4. EQUIPMENT RELOCATION - In accordance with 15A NCAC 2Q .0301, a new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.

5. REPORTING REQUIREMENT - In accordance with 15A NCAC 2Q .0309, any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:

   a. changes in the information submitted in the application regarding facility emissions;

   b. changes that modify equipment or processes of existing permitted facilities; 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.

6. In accordance with 15A NCAC 2Q .0309, this permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or

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violations of conditions contained in this permit have occurred. In accordance with G.S. 143-215.108(c)(1), the facility shall be properly operated and maintained at all times in a manner that will effectuate 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 cleaning device(s) and appurtenances.

7. CHANGES NOT REQUIRING PERMIT REVISIONS - Pursuant to 15A NCAC 02Q .0318, changes to the facility that are not exempt pursuant to 15A NCAC 02Q .0102 may be allowed without first modifying an applicable air permit if the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5) and the owner or operator notifies the Director in writing, using forms provided by the Division, seven calendar days before the change is made. Within 10 business days of receipt of the notice, the Division shall notify the owner or operator of its determination of whether the change(s) meet(s) the requirements of 15A NCAC 02Q .0318(b)(1) through (b)(5).

8. In accordance with G.S. 143-215.108(c)(1), this permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.

9. In accordance with G.S. 143-215.108(c)(1), this issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.

10. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.

11. In accordance with 15A NCAC 2D .0605, reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such 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.

14. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

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15. PERMIT RETENTION REQUIREMENT - In accordance with 15A NCAC 2Q .0110, the Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.

16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 15A NCAC 2D .2100 "Risk Management Program," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan with the USEPA in accordance with 40 CFR Part 68.

17. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval. Additionally, in accordance with 15A NCAC 2D .0605, the Permittee shall follow the procedures for obtaining any required audit sample and reporting those results.

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