West Virginia Department of Environmental Protection
Division of Air Quality

Austin Caperton
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

Felman Production LLC
R30-05300004-2018

William F. Durham
Director, Division of Air Quality

Issued: July 10, 2018 • Effective: July 24, 2018
Expiration: July 10, 2023 • Renewal Application Due: January 10, 2023

Permit Number: **R30-05300004-2018**
Permittee: **Felman Production LLC**
Permittee Mailing Address: **4442 Graham Station Road, Letart, WV 25253-8701**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	New Haven, Mason County, West Virginia
Telephone Number:	304-882-1187
Type of Business Entity:	LLC
Facility Description:	Manufacturing of Manganese and Silicon Based Ferroalloys
SIC Codes:	Primary 3313; Secondary 3341;
UTM Coordinates:	419.73 km Easting • 4312.468 km Northing • Zone 17

Permit Writer: Bobbie Scroggie

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001-01	001-01	No. 2 Furnace; Elkem	1966	15.26 TPH; 48.25 MW	Baghouse BH2
001-02	001-02	No. 5 Furnace; Lectromelt	1974	7.18 TPH; 22.80 MW	Baghouse BH5
001-03	001-03	No. 7 Furnace; Lectromelt	1975	8.08 TPH; 25.65 MW	Baghouse BH7
002-0B	002-0B	Outdoor Storage Piles	1952	3 acres	NA
005-01	005-01	Unpaved Road - Raw Material Delivery	NA	NA	NA
005-02	005-02	Unpaved Road - Gravel Delivery	NA	NA	NA
005-03	005-03	Unpaved Road - Raw Material/Stock Delivery	NA	NA	NA
005-04	005-04	Unpaved Road - Scrap Metal Delivery	NA	NA	NA
005-05	005-05	Unpaved Road - Products Shipments	NA	NA	NA
005-06	005-06	Unpaved Road - Raw Material Transfer	NA	NA	NA
005-07	005-07	Unpaved Road - End Loaders	NA	NA	NA
009-01	009-01	Crushing and Screening System #1	2014	150 TPH	Baghouse
009-02	009-02	Crushing and Screening System #2	NA	33 TPH	Baghouse
009-06	009-06	Transfer Points	NA	28 TPH	NA
00A-01	00A-01	Product Casting Operations	NA	20 TPH	Baghouse
00C-01	00C-01	Ladle Burners (Two Systems)	NA	140 mmBtu/hr	NA
SC-1C	SC-1CE	Grizzly Feeder	2010	400 TPH	Baghouse
BC-1C	T3C	Screen Reject Belt Conveyor	2010	400 TPH	WS
CR-1C	009-03	Jaw Crusher	2010	400 TPH	Baghouse
BC-2C	T6C	Belt Conveyor	2010	400 TPH	WS
OS-1C	OS-1CE	Unsized Stockpile	2010	5,000 sq. ft.	WS
OS-2C	OS-2CE	Sized Stockpile	2010	5,000 sq. ft.	WS
EX-1	EX-1E	Extruder Unit	2010	20 TPH	FE
OS-1X	OS-1XE	Briquette Stockpile	2010	5,000 sq. ft.	NA
PT-1	PT-1E	Pelletizer Unit	2010	6 TPH	FE
OS-1P	OS-1PE	Pellet Stockpile	2010	5,000 sq. ft.	NA
SC-01A	SC-01A	Barge Loadout Screen/Diesel Engine	2012	250 TPH	FE

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
SC-01B	SC-01B	Water Jig Screen	2012	200 TPH	FE/WS
RBSC-01	RBSC-01	Rebel Screen #1	2012	150 TPH	FE
RBSC-02	RBSC-02	Rebel Screen #2	2012	150 TPH	FE
BTSC-01	BTSC-01	Bivitech Screen/Diesel Engine	2009	150 TPH	NA
CR-01B	CR-01B	Water Jig Crusher	2012	200 TPH	FE/WS
RBCR-01	RBCR-01	Rebel Crusher	2012	150 TPH	FE
BC1A	BC1A	Belt Conveyor	2012	250 TPH	PE
BC2A	BC2A	Belt Conveyor	2012	250 TPH	PE
BC1B	BC1B	Belt Conveyor	2012	200 TPH	PE
BC2B	BC2B	Belt Conveyor	2012	200 TPH	PE
BC1C	BC1C	Belt Conveyor	2009	150 TPH	NA
BC2C	BC2C	Belt Conveyor	2009	150 TPH	NA
BC1D	BC1D	Belt Conveyor	2012	150 TPH	PE
BC2D	BC2D	Belt Conveyor	2012	150 TPH	PE
OCS1	OCS1	Concentrate Stockpile	2012	5,000 ton	PE
OCS2	OCS2	Middlings Stockpile	2012	5,000 ton	PE
OCS3	OCS3	Slag Stockpile	2012	5,000 ton	PE
Equipment permitted under R13-2857					
H1	H1	Hopper	2014	150 tph	PE
PF	2E	Pan Feeder	2011	150 tph	FE+BH
CS1	2E	Screen No. 1	2014	150 tph	FE+BH
CC1	CC1	Crusher No. 1	2014	120 tph	FE+BH
BC1	1E	Conveyor No. 1	2014	120 tph	FE+BH
BC2	BC2	Conveyor No. 2	2011	120 tph	FE+BH
BC3	BC3	Conveyor No. 3	2011	120 tph	FE+BH
CS2	1E	Screen No. 2	2011	120 tph	PE+BH
BC4	BC4	Conveyor No. 4	2011	60 tph	FE
CC2	CC2	Crusher No. 2	2014	60 tph	FE+BH
CS3	3E	Screen 3 / Terex Screener	2014	60 tph	FE+BH
BC5	BC5	Conveyor No. 5	2011	60 tph	FE+BH

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
TMP-H1	TMP-H1	Crusher Hopper	2014	400 tph	PE
TMP-F1	TMP-F1	Grizzly Feeder	2014	400 tph	PE
TMP-CR1	TMP-CR1	Crusher	2014	400 tph	FE+WS
TMP-S1	TMP-S1	Screen	2014	400 tph	FE+WS
TMP-BC1	TMP-BC1	Top Deck Transfer Belt	2014	400 tph	FE+WS
TMP-BC2	TMP-BC2	Oversize Recirculation Belt	2014	400 tph	FE+WS
TMP-BC3	TMP-BC3	Bottom Deck Belt	2014	400 tph	FE+WS
Equipment permitted under R13-3217					
H1-M	H1-M	Crusher Hopper	2014	400 tph	PE
F1-M	F1-M	Grizzly Feeder	2014	400 tph	PE+WS
BC1-M	BC1-M	Belt Conveyor/Top Deck Transfer Belt	2014	400 tph	PE
CR1-M	CR1-M	Horizontal Impact Crusher; 271 hp, <10L displacement engine	2014	400 tph	FE+WS
BC2-M	BC2-M	Oversize Recirculation Belt	2014	400 tph	PE
BC3-M	BC3-M	Belt Conveyor	2014	400 tph	PE+WS
S1-M	S1-M	Sizing Screen; 129 hp, <10L displacement engine	2014	400 tph	PE

FE = Full Enclosure, WS = Water Spray, PE = Partial Enclosure, BH = Baghouse

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2857D	**November 6, 2014**
R13-3217	**April 29, 2015**

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
m	Thousand
MACT	Maximum Achievable Control Technology
mm	Million
mmBtu/hr	Million British Thermal Units per Hour
mmft^3/hr	Million Cubic Feet Burned per Hour
NA *or* N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10μm in diameter
pph	Pounds per Hour
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.
[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. The permitted facility was at the time being properly operated;

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement. **[45CSR§30-5.7.e.]**

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act. **[45CSR§30-5.2.a.]**

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 CFR Part 2. **[45CSR§30-5.1.f.5.]**

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information. **[45CSR§30-4.2.]**

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof. **[45CSR§30-5.6.a.]**

2.21.2. Nothing in this permit shall alter or affect the following:

a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.
[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.
[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 CFR § 61.145, 40 CFR § 61.148, and 40 CFR § 61.150. The permittee must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 CFR § 61.145(b)(3)(I). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40 CFR 61 and 45CSR34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality.
[W.Va. Code § 22-5-4(a)(14)]

3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 CFR §§ 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR § 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR § 82.161.

[40 CFR 82, Subpart F]

3.1.8. **Risk Management Plan.** Should this stationary source, as defined in 40 CFR § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 CFR §

68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 CFR Part 70 or 71.
[40 CFR 68]

3.1.9. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1. and 45CSR13-R13-2857, Condition 4.1.15.]

3.1.10. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2.]

3.1.11. The permittee shall maintain on site and operate a pressurized particulate suppressant spray truck, as often as necessary, to minimize fugitive emissions from plant access roads, lots, or access areas.
[CO-R7-95-13, Condition 7.a.11.C. State-Enforceable only.]

3.1.12. **Implementation of a Preventative Maintenance Program**

a. The permittee shall maintain a computerized spare parts inventory tracking system for inventory, purchases, suppliers and availability of all components and materials necessary for operation of all emission control systems at the facility and the permittee's air pollution control spare parts inventory shall be updated monthly;

b. The permittee shall use its best efforts to maintain availability of all components and materials identified in the permittee's air pollution control spare parts inventory as being prone to failure or otherwise requiring frequent replacement and shall provide monthly reports to the Secretary;

c. The permittee shall take all steps necessary to implement the requirements of Sections 3.1.11. through 3.1.14., and 5.1.4. through 5.1.7. of this permit, including the air pollution control spare parts inventory and the Inspection and Maintenance Program submitted by the permittee as Appendix A of Consent Order agreement of April 16, 1993, a copy of which is attached hereto as Appendix A.

[CO-R7-95-13, Condition 7.a.12. State-Enforceable only.]

3.1.13. **General Operating Provision.** The permittee shall implement all measures necessary, including, but not limited to reducing furnace power input levels and stoking of furnaces, to abate or minimize, to the greatest extent practicable any fugitive or process emissions released or emitted as the result of the complete failure of the air pollution control equipment serving a source of fugitive or process emissions. This provision applies following the failure of any air pollution control equipment, and, such measures shall include the cessation of material tapping, crushing, sizing, or any other manufacturing, processing, or handling, to the extent emissions from such manufacturing, processing, or handling equipment is directly captured or controlled by the associated air pollution control equipment experiencing failure. Notwithstanding the above, a furnace, following the failure of that furnace's associated air pollution control equipment, may be tapped once; thereby reducing the level of molten material in the furnace and protecting the immediate health and safety of plant personnel and equipment.

This provision does not limit or waive the permittee's right to pursue a variance request pursuant to 45CSR§7-10. Any decision by the Secretary in regards to such a variance request shall, for purposes of Consent Judgement CO-R7-95-13: Civil Action 94-C-1084, be deemed a final agency action, appealable directly to the Kanawha County Circuit Court pursuant to W.Va.R.C.p.81(a)(1). The permittee shall abide by the above referenced provisions pending review of this matter by the Kanawha County Circuit Court.
[CO-R7-95-13, Condition 7.a.13. State-Enforceable only.]

3.1.14. Notwithstanding the provisions of Section 3.1.13. of this permit, the permittee may achieve compliance with this permit and any other applicable requirement through shutdown of a source, group of sources, or the facility. The permittee may restart any source, group of sources, or facility shut down to achieve compliance provided that prior to restarting, the permittee, to the extent applicable, complies with all preceding compliance milestones applicable to the source, group of sources, or facility, as the case may be. To the extent that the permittee and the DAQ cannot agree regarding shutdown, restarting, and applicable preceding compliance milestones, either party may petition the Court for dispute resolution in accordance with Section 3.1.13. of this permit.
[CO-R7-95-13, Condition 7.a.14. State-Enforceable only.]

3.1.15. **Emission Standards.**

a. Electric arc furnaces. You must install, operate and maintain an effective capture system that collects the emissions from each electric arc furnace operation and conveys the collected emissions to a control device for the removal of the pollutants specified in the emissions standards specified in paragraphs a.1. through 5. below.

1. Particulate matter emissions. You must not discharge exhaust gases from each electric arc furnace operation containing particulate matter in excess of 25 mg/dscm into the atmosphere from any existing electric arc furnace.

2. Mercury emissions.

i. You must not discharge exhaust gases from each electric arc furnace operation containing mercury emissions in excess of 130 μg/dscm into the atmosphere from any existing electric arc furnace when producing ferromanganese.

ii. You must not discharge exhaust gases from each electric arc furnace operation containing mercury emissions in excess of 12 μg/dscm into the atmosphere from any existing electric arc furnace when producing silicomanganese.

3. Polycyclic aromatic hydrocarbon emissions.

i. You must not discharge exhaust gases from each electric arc furnace operation containing polycyclic aromatic hydrocarbon emissions in excess of 12,000 μg/dscm into the atmosphere from any existing electric arc furnace when producing ferromanganese.

ii. You must not discharge exhaust gases from each electric arc furnace operation containing polycyclic aromatic hydrocarbon emissions in excess of 130 μg/dscm into the atmosphere from any existing electric arc furnace when producing silicomanganese.

4. Hydrochloric acid emissions. You must not discharge exhaust gases from each electric arc furnace operation containing hydrochloric acid emissions in excess of 1,100 μg/dscm into the atmosphere from any existing electric arc furnace.

5. Formaldehyde emissions. You must not discharge exhaust gases from each electric arc furnace operation containing formaldehyde emissions in excess of 201 μg/dscm into the atmosphere from any existing electric arc furnace.

b. Process fugitive emissions.

1. You must install, operate and maintain a capture system that is designed to collect 95 percent or more of the emissions from process fugitive emissions sources and convey the collected emissions to a control device that is demonstrated to meet the applicable emission limit specified in Condition 3.1.15.a.1. or 3.1.15.c.

2. The determination of the overall capture must be demonstrated as required by Condition 3.1.16.a.

3. Unless you meet the criteria of paragraph b.3.iii. below, you must not cause the emissions exiting from a shop building to exceed an average of 8 percent opacity over a furnace or MOR process cycle.

i. This 8 percent opacity requirement is determined by averaging the individual opacity readings observed during the furnace or MOR process cycle.

ii. An individual opacity reading shall be determined as the average of 24 consecutive images recorded at 15-second intervals with the opacity values from each individual digital image rounded to the nearest 5 percent.

iii. If the average opacity from the shop building is greater than 8 percent opacity during an observed furnace or MOR process cycle, the opacity of two more additional furnace or MOR process cycles must be observed within 7 days and the average of the individual opacity readings during the three observation periods must be less than 8 percent opacity.

iv. At no time during operation may the average of any two consecutive individual opacity readings be greater than 20 percent opacity.

c. Local ventilation emissions. If you operate local ventilation to capture tapping, casting, or ladle treatment emissions and direct them to a control device other than one associated with the electric arc furnace, you must not discharge into the atmosphere any captured emissions containing particulate matter in excess of 4.0 mg/dscm.

d. Crushing and screening equipment. You must not discharge into the atmosphere from any new, reconstructed, or existing piece of equipment associated with crushing and screening exhaust gases containing particulate matter in excess of 13 mg/dscm.

e. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source.

[40 CFR §§63.1623(a), (b), (c), (e), and (f) and 45CSR34]

3.1.16. **Operational and work practice standards: Fugitive dust sources.**

a. Process fugitive emissions sources.

1. You must prepare, and at all times operate according to, a process fugitive emissions ventilation plan that documents the equipment and operations designed to effectively capture process fugitive emissions. The plan will be deemed to achieve effective capture if it consists of the following elements:

   i. Documentation of engineered hoods and secondary fugitive capture systems designed according to the most recent, at the time of construction, ventilation design principles recommended by the American Conference of Governmental Industrial Hygienists (ACGIH). The process fugitive emissions capture systems must be designed to achieve sufficient air changes to evacuate the collection area frequently enough to ensure process fugitive emissions are effectively collected by the ventilation system and ducted to the control device(s). The required ventilation systems should also use properly positioned hooding to take advantage of the inherent air flows of the source and capture systems that minimize air flows while also intercepting natural air flows or creating air flows to contain the fugitive emissions. Include a schematic for each building indicating duct sizes and locations, hood sizes and locations, control device types, size and locations and exhaust locations. The design plan must identify the key operating parameters and measurement locations to ensure proper operation of the system and establish monitoring parameter values that reflect effective capture.

   ii. List of critical maintenance actions and the schedule to conduct them.

2. You must submit a copy of the process fugitive emissions ventilation plan to the designated permitting authority on or before the applicable compliance date for the affected source as specified in 40 CFR §63.1621 in electronic format and whenever an update is made to the plan. The requirement for you to operate the facility according to the written process fugitives ventilation plan and specifications must be incorporated in the operating permit for the facility that is issued by the designated permitting authority under part 70 or 71 of this chapter, as applicable.

3. You must update the information required in Condition 3.1.16.a.1. and 2. every 5 years or whenever there is a significant change in variables that affect process fugitives ventilation design such as the addition of a new process.

b. Outdoor fugitive dust sources.

1. You must prepare, and at all times operate according to, an outdoor fugitive dust control plan that describes in detail the measures that will be put in place to control outdoor fugitive dust emissions from the individual fugitive dust sources at the facility.

2. You must submit a copy of the outdoor fugitive dust control plan to the designated permitting authority on or before the applicable compliance date for the affected source as specified in 40 CFR §63.1621. The requirement for you to operate the facility according to a written outdoor fugitive dust control plan must be incorporated in the operating permit for the facility that is issued by the designated permitting authority under part 70 or 71 of this chapter, as applicable.

3. You may use existing manuals that describe the measures in place to control outdoor fugitive dust sources required as part of a state implementation plan or other federally enforceable requirement for particulate matter to satisfy the requirements of Condition 3.1.16.b.1.

[40 CFR § 63.1624 and 45CSR34]

3.2. Monitoring Requirements

3.2.1. The permittee shall conduct visual emission (VE) observations in accordance with the methodology set forth in 45CSR7A "Compliance Test Procedures for 45CSR7". Emissions from all operating baghouses shall be read at least once per shift during daylight hours for a period of at least six (6) minutes while such source is in operation and venting to the associated baghouse. This requirement does not replace any VE observation requirements under Regulation 16 or any other permit requirements.
[CO-R7-95-13, Condition 7.b.1.A. State-Enforceable only.]

3.2.2. All VE observation reports shall be conducted and completed by certified VE observers, and verified as true and accurate, and shall contain sufficient documentation to verify that all VE observations were taken in accordance with 45CSR7A. Thereafter, these records shall be maintained on file for five years at the facility as a permanent record of the permittee's VE observations.
[CO-R7-95-13, Conditions 7.b.3. State-Enforceable only.]

3.2.3. a. Baghouse monitoring. You must prepare, and at all times operate according to, a standard operating procedures manual that describes in detail procedures for inspection, maintenance and bag leak detection and corrective action plans for all baghouses (fabric filters or cartridge filters) that are used to control process vents, process fugitive, or outdoor fugitive dust emissions from any source subject to the emissions standards in Condition 3.1.15.

b. You must submit the standard operating procedures manual for baghouses required by Condition 3.2.3.a to the Administrator or delegated authority for review and approval.

c. For an existing positive pressure baghouse used to control emissions from an electric arc furnace that is not equipped with a bag leak detection system, you must specify in the standard operating procedures manual for inspections and routine maintenance, at a minimum, the requirements of paragraphs 1. and 2. below.

1. You must visually inspect the outlet of each baghouse using Method 22 on a twice daily basis (at least 4 hours apart) for evidence of any visible emissions indicating abnormal operations and must initiate corrective actions within 1 hour of any visible emissions that indicates abnormal operation. Corrective actions shall include, at a minimum, isolating, shutting down and conducting an internal inspection of the baghouse compartment that is the source of the visible emissions that indicate abnormal operations.

2. In addition to the daily visible emissions observation, you must conduct the following activities:

i. Weekly confirmation that dust is being removed from hoppers through visual inspection, or equivalent means of ensuring the proper functioning of removal mechanisms.

ii. Daily check of compressed air supply for pulse-jet baghouses.

iii. An appropriate methodology for monitoring cleaning cycles to ensure proper operation.

iv. Monthly check of bag cleaning mechanisms for proper functioning through visual inspection or equivalent means.

v. Quarterly visual check of bag tension on reverse air and shaker-type baghouses to ensure that the bags are not kinked (kneed or bent) or lying on their sides. Such checks are not required for shaker-type baghouses using self-tensioning (spring loaded) devices.

vi. Quarterly confirmation of the physical integrity of the baghouse structure through visual inspection of the baghouse interior for air leaks.

vii. Semiannual inspection of fans for wear, material buildup and corrosion through visual inspection, vibration detectors, or equivalent means.

d. For all other non-furnace baghouses that are not equipped with bag leak detection or CEMS, the procedures that you specify in the standard operating procedures manual for inspections and routine maintenance must, at a minimum, include the requirements of paragraphs 1. and 2. below.

1. You must observe the baghouse outlet on a daily basis for the presence of any visible emissions.

2. In addition to the daily visible emissions observation, you must conduct the activities in Condition 3.2.3.c.2.

e. Bag leak detection system.

1. For each baghouse used to control emissions from an electric arc furnace, you must install, operate, and maintain a bag leak detection system according to paragraphs 2. through 4. below, unless a system meeting the requirements of 40 CFR §63.1626(p), for a CEMS and continuous emissions rate monitoring system, is installed for monitoring the concentration of particulate matter, or an existing positive pressure baghouse used to control emissions from an electric arc furnaces that is subject to Condition 3.2.3.c. You may choose to install, operate, and maintain a bag leak detection system for any other baghouse in operation at the facility according to paragraphs 2. through 4. below.

2. The procedures you specified in the standard operating procedures manual for baghouse maintenance must include, at a minimum, a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance.

3. Each bag leak detection system must meet the specifications and requirements in paragraphs i. through viii. below.

i. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1.0 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

ii. The bag leak detection system sensor must provide output of relative PM loadings.

iii. The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loadings is detected over a preset level.

iv. You must install and operate the bag leak detection system in a manner consistent with the guidance provided in "Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance" EPA-454/R-98-015, September 1997 (incorporated by reference, see 40 CFR §63.14) and the manufacturer's written specifications and recommendations for installation, operation and adjustment of the system.

v. The initial adjustment of the system must, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device and establishing the alarm set points and the alarm delay time.

vi. Following initial adjustment, you must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in the approved standard operating procedures manual required under Condition 3.2.3.a. You cannot increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection that demonstrates that the baghouse is in good operating condition.

vii. You must install the bag leak detector downstream of the baghouse.

viii. Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

4. You must include in the standard operating procedures manual required by Condition 3.2.3.a. a corrective action plan that specifies the procedures to be followed in the case of a bag leak detection system alarm. The corrective action plan must include, at a minimum, the procedures that you will use to determine and record the time and cause of the alarm as well as the corrective actions taken to minimize emissions as specified in paragraphs i. and ii. below.

i. The procedures used to determine the cause of the alarm must be initiated within 30 minutes of the alarm.

ii. The cause of the alarm must be alleviated by taking the necessary corrective action(s) that may include, but not be limited to, those listed in paragraphs A. through F. below.

A. Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions.

B. Sealing off defective bags or filter media.

C. Replacing defective bags or filter media, or otherwise repairing the control device.

D. Sealing off a defective baghouse compartment.

E. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

F. Shutting down the process producing the particulate emissions.

f. If you use curtains or partitions to prevent process fugitive emissions from escaping the area around the process fugitive emission source or other parts of the building, you must perform quarterly inspections of the physical condition of these curtains or partitions to determine if there are any tears or openings.

g. Shop building opacity. In order to demonstrate continuous compliance with the opacity standards in Condition 3.1.15., you must comply with the requirements in Condition 3.3.2.d.1. and one of the monitoring options in paragraphs 1. or 2. below. The selected option must be consistent with that selected during the initial performance test described in Condition 3.3.2.d.2. Alternatively, you may use the provisions of 40 CFR §63.8(f) to request approval to use an alternative monitoring method.

1. If you choose to establish operating parameters during the compliance test as specified in Condition 3.3.2.d.2.i., you must meet one of the following requirements.

i. Check and record the control system fan motor amperes and capture system damper positions once per shift.

ii. Install, calibrate and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood.

iii. Install, calibrate and maintain a monitoring device that continuously records the volumetric flow rate at the inlet of the air pollution control device and check and record the capture system damper positions once per shift.

2. If you choose to establish operating parameters during the compliance test as specified in Condition 3.3.2.d.2.ii., you must monitor the selected parameter(s) on a frequency specified in the assessment and according to a method specified in the engineering assessment.

3. All flow rate monitoring devices must meet the following requirements:

i. Be installed in an appropriate location in the exhaust duct such that reproducible flow rate monitoring will result.

ii. Have an accuracy ±10 percent over its normal operating range and be calibrated according to the manufacturer's instructions.

4. The Administrator may require you to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of appendix A-1 of part 60 of this chapter.

5. Failure to maintain the appropriate capture system parameters (e.g., fan motor amperes, flow rate and/or damper positions) establishes the need to initiate corrective action as soon as practicable after the monitoring excursion in order to minimize excess emissions.

h. Furnace capture system. You must perform quarterly (once every three months) inspections of the furnace fugitive capture system equipment to ensure that the hood locations have not been changed or obstructed because of contact with cranes or ladles, quarterly inspections of the physical condition of hoods and ductwork to the control device to determine if there are any openings or leaks in the ductwork, quarterly inspections of the hoods and ductwork to determine if there are any flow constrictions in ductwork due to dents or accumulated dust and quarterly examinations of the operational status of flow rate controllers (pressure sensors, dampers, damper switches, etc.) to ensure they are operating correctly. Any deficiencies must be recorded and proper maintenance and repairs performed.

[40 CFR §§63.1626(a), (b), (c), (d) (e), (g), (h), and (i) and 45CSR34]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 CFR Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Condition 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.3.2. **Performance test and compliance requirements.**

a. Performance testing.

1. All performance tests must be conducted according to the requirements in 40 CFR §63.7.

2. Each performance test in Conditions 3.3.2.c.1. and 2. must consist of three separate and complete runs using the applicable test methods.

3. Each run must be conducted under conditions that are representative of normal process operations.

4. Performance tests conducted on air pollution control devices serving electric arc furnaces must be conducted such that at least one tapping period, or at least 20 minutes of a tapping period, whichever is less, is included in at least two of the three runs. The sampling time for each run must be at least three times the average tapping period of the tested furnace, but no less than 60 minutes.

5. You must conduct the performance tests specified in Section 3.3.2.c. under such conditions as the Administrator specifies based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

b. **Test methods.** The following test methods in appendices of part 60 or 63 of this chapter or as specified elsewhere must be used to determine compliance with the emission standards.

1. Method 1 of appendix A-1 of 40 CFR part 60 to select the sampling port location and the number of traverse points.

2. Method 2 of appendix A-1 of 40 CFR part 60 to determine the volumetric flow rate of the stack gas.

3. i. Method 3A or 3B of appendix A-2 of 40 CFR part 60 (with integrated bag sampling) to determine the outlet stack and inlet oxygen and CO_2 content.

   ii. You must measure CO_2 concentrations at both the inlet and outlet of the positive pressure fabric filter in conjunction with the pollutant sampling in order to determine isokinetic sampling rates.

   iii. As an alternative to EPA Reference Method 3B, ASME PTC-19-10-1981-Part 10 may be used (incorporated by reference, see 40 CFR §63.14).

4. Method 4 of appendix A-3 of 40 CFR part 60 to determine the moisture content of the stack gas.

5. i. Method 5 of appendix A-3 of 40 CFR part 60 to determine the particulate matter concentration of the stack gas for negative pressure baghouses and positive pressure baghouses with stacks.

   ii. Method 5D of appendix A-3 of 40 CFR part 60 to determine particulate matter concentration and volumetric flow rate of the stack gas for positive pressure baghouses without stacks.

   iii. The sample volume for each run must be a minimum of 4.0 cubic meters (141.2 cubic feet). For Method 5 testing only, you may choose to collect less than 4.0 cubic meters per run provided that the filterable mass collected (i.e., net filter mass plus mass of nozzle, probe and filter holder rinses) is equal to or greater than 10 mg. If the total mass collected for two of three of the runs is less than 10 mg, you must conduct at least one additional test run that produces at least 10 mg of filterable mass collected (i.e., at a greater sample volume). Report the results of all test runs.

6. Method 30B of appendix A-8 of 40 CFR part 60 to measure mercury. Apply the minimum sample volume determination procedures as per the method.

7. Method 26A of appendix A-8 of 40 CFR part 60 to determine outlet stack or inlet hydrochloric acid concentration. Collect a minimum volume of 2 cubic meters.

8. Method 316 of appendix A of this part to determine outlet stack or inlet formaldehyde. Collect a minimum volume of 1.0 cubic meter.

9. *Reserved*

10. California Air Resources Board (CARB) Method 429 (incorporated by reference, see 40 CFR §63.14).

11. The owner or operator may use alternative measurement methods approved by the Administrator following the procedures described in 40 CFR§63.7(f).

    In accordance with the EPA Approval Letter from Steffan M. Johnson to Ms. Laure Guillot and Ms. Laura K. McAfee dated June 8, 2017, the facility shall comply with the following:

    i. Use of Method 9 shall not impact the format of the standard nor affect any of the other requirements related to conducting the opacity observations.

    ii. Method 9 observations must be conducted by a certified Method 9 observer for the same period(s) as specified for DCOT observations in 40 CFR §63.1625(d)(1) and shall be recorded at 15-second intervals through the duration of the observation period.

    iii. Consistent with our historical guidance3 for Method 9, take a minimum of 3 digital color photographs documenting each electric arc furnace or MOR process cycle being observed for opacity. One photo should be taken during the tapping of each electric arc furnace and during pouring for each MOR process, with the other photos spaced at nominally equal intervals over the observation period (e.g., approximately 30 minutes apart). As per our guidance, the photos are intended to represent the point of view of the Method 9 observer with the plume evaluation site and emissions point as the object of the photo. As our guidance directs, such photos are intended to document the Method 9 observations and augment the record with visual confirmation. We expect that a current model smart phone camera would be appropriate for these documentation purposes.

    iv. Recordkeeping and reporting of the opacity results for each electric arc furnace and MOR process, including Method 9 data sheets and digital files for photos must follow the requirements of 40 CFR §63.1628.

    v. EPA intends to revisit this approval as part of the next Technology Review for Subpart XXX, currently scheduled for June of 2023. As this approval is separate from Subpart XXX, any change in this approval would be discussed in advance with the affected facilities. The provisions to request an alternative test method under 40 CFR §63.7(e)(2)(ii) will continue to be available to the affected facilities.

c. Compliance demonstration with the emission standards.

    1. Initial performance test. You must conduct an initial performance test for air pollution control devices or vent stacks subject to Condition 3.1.15.a., b.1., c. and d. to demonstrate compliance with the applicable emission standards.

    2. Periodic performance test.

        i. You must conduct particulate matter tests every 5 years for fabric filter air pollution control devices subject to Condition 3.1.15.a.1. to demonstrate compliance with the applicable emission standards.

        ii. You must conduct annual mercury performance tests for wet scrubber and fabric filter air pollution control devices or vent stacks subject to Condition 3.1.15.a.2. to demonstrate compliance with the applicable emission standards.

iii. You must conduct PAH performance tests for wet scrubber and fabric filter air pollution control devices or vent stacks subject to Condition 3.1.15.a.3. to demonstrate compliance with the applicable emission standards.

A. For furnaces producing silicomanganese, you must conduct a PAH performance test every 5 years for each furnace that produces silicomanganese subject to Condition 3.1.15.a.3.

B. For furnaces producing ferromanganese, you must conduct a PAH performance test every 3 months or 2,190 cumulative hours of ferromanganese production for each furnace subject to Condition 3.1.15.a.3.

C. If a furnace producing ferromanganese demonstrates compliance with four consecutive PAH tests, the owner/operator may petition the permitting authority to request reduced frequency of testing to demonstrate compliance with the PAH emission standards. However, this PAH compliance testing cannot be reduced to less than once per year.

iv. You must conduct ongoing performance tests every 5 years for air pollution control devices or vent stacks subject to Condition 3.1.15.a.4., a.5., b.1., c. and d. to demonstrate compliance with the applicable emission standards.

3. Compliance is demonstrated for all sources performing emissions tests if the average concentration for the three runs comprising the performance test does not exceed the standard.

4. Operating limits. You must establish parameter operating limits according to paragraph i. below. Unless otherwise specified, compliance with each established operating limit shall be demonstrated for each 24-hour operating day.

i. For emission sources with fabric filters that choose to demonstrate continuous compliance through bag leak detection systems you must install a bag leak detection system according to the requirements in §63.1626(d) and you must set your operating limit such that the sum duration of bag leak detection system alarms does not exceed 5 percent of the process operating time during a 6-month period.

d. Compliance demonstration with shop building opacity standards.

1. i. If you are subject to Condition 3.1.15.b., you must conduct opacity observations of the shop building to demonstrate compliance with the applicable opacity standards according to 40 CFR §63.6(h)(5), which addresses conducting opacity or visible emission observations.

ii. You must conduct the opacity observations according to ASTM D7520-16 (incorporated by reference, see 40 CFR §63.14), for a period that includes at least one complete furnace process cycle for each furnace.

iii. For a shop building that contains more than one furnace, you must conduct the opacity observations according to ASTM D7520-16 for a period that includes one tapping period from each furnace located in the shop building.

iv. You must conduct the opacity observations at least once per week for each shop building containing one or more furnaces.

vi. You may reduce the frequency of observations to once per month for each shop building that demonstrates compliance with the weekly 8-percent opacity limit for 26 consecutive complete observations that span a period of at least 26 weeks. Any monthly observation in excess of 8-percent opacity will return that shop building opacity observation to a weekly compliance schedule. You may reduce the frequency of observations again to once per month for each shop building that demonstrates compliance with the weekly 8-percent opacity limit after another 26 consecutive complete observations that span a period of at least 26 weeks.

2. You must determine shop building opacity operating parameters based on either monitoring data collected during the compliance demonstration or established in an engineering assessment.

   i. If you choose to establish parameters based on the initial compliance demonstration, you must simultaneously monitor parameter values for one of the following: The capture system fan motor amperes and all capture system damper positions, the total volumetric flow rate to the air pollution control device and all capture system damper positions, or volumetric flow rate through each separately ducted hood that comprises the capture system. Subsequently you must monitor these parameters according to §63.1626(g) and ensure they remain within 10 percent of the value recorded during the compliant opacity readings.

   ii. If you choose to establish parameters based on an engineering assessment, then a design analysis shall include, for example, specifications, drawings, schematics and ventilation system diagrams prepared by the owner or operator or capture or control system manufacturer or vendor that describes the shop building opacity system ventilation design based on acceptable engineering texts. The design analysis shall address vent stream characteristics and ventilation system design operating parameters such as fan amps, damper position, flow rate and/or other specified parameters.

   iii. You may petition the Administrator to reestablish these parameter ranges whenever you can demonstrate to the Administrator's satisfaction that the electric arc furnace operating conditions upon which the parameter ranges were previously established are no longer applicable. The values of these parameter ranges determined during the most recent demonstration of compliance must be maintained at the appropriate level for each applicable period.

3. You will demonstrate continuing compliance with the opacity standards by following the monitoring requirements specified in §63.1626(g) and the reporting and recordkeeping requirements specified in §63.1628(b)(5).

e. Compliance demonstration with the operational and work practice standards.

   1. Process fugitive emissions sources. You will demonstrate compliance by developing and maintaining a process fugitives ventilation plan, by reporting any deviations from the plan and by taking necessary corrective actions to correct deviations or deficiencies.

   2. Outdoor fugitive dust sources. You will demonstrate compliance by developing and maintaining an outdoor fugitive dust control plan, by reporting any deviations from the plan and by taking necessary corrective actions to correct deviations or deficiencies.

   3. Baghouses equipped with bag leak detection systems. You will demonstrate compliance with the bag leak detection system requirements by developing an analysis and supporting documentation

demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR §60.57c(h).
[40 CFR §63.1625 and 45CSR34]

3.4. Record keeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.
[45CSR§30-5.1.c.2.A. and 45CSR13-R13-2857, Condition 4.3.1.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. The permittee shall record on a daily basis the hours of operation and gallons of water or other materials used in operation of pressurized particulate suppressant truck.
[CO-R7-95-13, Condition 7.b.2.B. State-Enforceable only.]

3.4.5. **Recordkeeping.**

a. You must comply with all of the recordkeeping and reporting requirements specified in 40 CFR §63.10 of the General Provisions that are referenced in Table 1 to 40 CFR 63 subpart XXX.

1. Records must be maintained in a form suitable and readily available for expeditious review, according to 40 CFR §63.10(b)(1). However, electronic recordkeeping and reporting is encouraged and required for some records and reports.

2. Records must be kept on site for at least 2 years after the date of occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR §63.10(b)(1).

b. You must maintain, for a period of 5 years, records of the information listed in paragraphs 1. through 11. below.

1. Electronic records of the bag leak detection system output.

2. An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the corrective actions taken and the date and time the cause of the alarm was corrected.

3. All records of inspections and maintenance activities required under Condition 3.2.3.c. as part of the practices described in the standard operating procedures manual for baghouses required under Condition 3.2.3.a.

4. Electronic records of the shop building capture system monitoring required under Condition 3.2.3.g.1. and 2., as applicable, or identification of periods when the capture system parameters were not maintained and an explanation of the corrective actions taken.

5. Records of the results of quarterly inspections of the furnace capture system required under Condition 3.2.3.h.

6. Electronic records of the continuous flow monitors or pressure monitors required under Condition 3.2.3.h. and an identification of periods when the flow rate or pressure was not maintained as required in Condition 3.2.3.e.

7. Records of the occurrence and duration of each startup and/or shutdown.

8. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment.

9. Records that explain the periods when the procedures outlined in the process fugitives ventilation plan required under Condition 3.1.16.a., the fugitives dust control plan required under Condition 3.1.16.b., and the standard operating procedures manual for baghouses required under Condition 3.2.3.a. were not followed.

[40 CFR §§63.1628(a), 63.1628(b), and 45CSR34]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and

other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Associate Director
Office of Air Enforcement and Compliance
Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement[1]:

DEPAirQualityReports@wv.gov

[1] For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ: DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. The permittee shall maintain all VE observation records on site for a period of at least five years and shall provide to the Director on a monthly basis a copy of all visible emissions observations certified by plant management to be an accurate and true report for the previous month.
[CO-R7-95-13, Conditions 7.b.1.C. State-Enforceable only.]

3.5.11. For any failure of air pollution control equipment subject to the provisions in Condition 3.1.13. of this permit, with a duration in excess of two (2) hours, the permittee is required to: notify the Division of Air Quality regarding the failure of air pollution control equipment within twenty-four (24) hours, excluding weekends and holidays, by telephone; and record the date, time, and duration of the failure of air pollution control equipment, the steps taken to determine the cause of the failure of air pollution control equipment, and the steps taken by the permittee to minimize emissions and their impact. The permittee is required to summarize this information in a written report to be submitted within fourteen (14) days to the Director, Division of Air Quality. The permittee shall retain a copy of this notice letter in its files for a period of five (5) years.
[CO-R7-95-13, Conditions 7.b.7. State-Enforceable only.]

3.5.12. Any reports required under the provisions of Condition 3.5.10. of this permit shall be provided to the Director within thirty (30) days of the end of the month.
[CO-R7-95-13, Conditions 7.b.8. State-Enforceable only.]

3.5.13. a. You must comply with all of the reporting requirements specified in 40 CFR §63.10 of the General Provisions that are referenced in Table 1 to 40 CFR 63 subpart XXX.

1. You must submit reports no less frequently than specified under 40 CFR §63.10(e)(3) of the General Provisions.

2. Once a source reports a violation of the standard or excess emissions, you must follow the reporting format required under 40 CFR §63.10(e)(3) until a request to reduce reporting frequency is approved by the Administrator.

b. In addition to the information required under the applicable sections of 40 CFR §63.10, you must include in the reports required under Condition 3.5.13.a. the information specified in paragraphs 1. through 7. below.

1. Reports that identify and explain the periods when the procedures outlined in the process fugitives ventilation plan required under Condition 3.1.16.a., the fugitives dust control plan required under Condition 3.1.16.b., and the standard operating procedures manual for baghouses required under Condition 3.2.3.a. were not followed.

2. Bag leak detection system. Reports including the following information:

i. Records of all alarms.

ii. Description of the actions taken following each bag leak detection system alarm.

3. Reports of the shop building capture system monitoring required under 3.2.3.g.1. and 2., as applicable, identification of periods when the capture system parameters were not maintained and an explanation of the corrective actions taken.

4. Reports of the results of quarterly inspections of the furnace capture system required under Condition 3.2.3.h.

5. If a malfunction occurred during the reporting period, the report must include the number, duration and a brief description for each type of malfunction that occurred during the reporting period and caused or may have caused any applicable emissions limitation to be exceeded. The report must also include a description of actions taken by the owner or operator during a malfunction of an affected source to minimize emissions in accordance with Condition 3.1.15.e., including actions taken to correct a malfunction.

[40 CFR §§63.1628(c) and (d), and 45CSR34]

3.6. Compliance Plan

3.6.1. None.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

a. 40 CFR Part 60, subpart K, Ka, and Kb - The facility has three above ground storage tanks with capacities less than 19,813 gallons.

b. 40 CFR Part 60, subpart Z - This NSPS applies to facilities that commence construction or modification after October 21, 1974. Electric Arc Furnaces No. 2 and No. 5, were installed in 1966, and in January, 1974, respectively. Electric Arc Furnace No. 7 commenced construction in March 1974 when the owner or operator entered into contractual obligations.

c. 40 CFR 64 - The emissions controls for the new equipment consists of full and partial enclosures. Enclosures do not meet the definition of a control device in accordance with 40 CFR § 64.1, therefore CAM is not applicable to the new equipment. It was determined during the initial permit review and subsequent renewal that CAM was not applicable to the rest of the facility.

4.0. Furnace Requirements [No. 2 (001-01), No. 5 (001-02), and No. 7 (001-03)]

4.1. Limitations and Standards

4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except for smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§§7-3.1. and 3.2.]

4.1.2. No person shall circumvent the provisions of 45CSR7 by adding additional gas to any exhaust or group of exhausts for the purpose of reducing the stack gas concentration.
[45CSR§7-4.3.]

4.1.3. Type 'b' duplicate source operations whose air pollution control equipment efficiency is a minimum of ninety-nine percent (99%) by weight and whose total process weight rate is less than two hundred fifty thousand (250,000) pounds per hour shall be exempted from the requirements of 45CSR§7-4.1 provided that smoke emitted into the open air from any such duplicate source operation is less than twenty percent (20%) opacity.
[45CSR§7-4.7.a.]

4.1.4. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12.]

4.1.5. Potential Hazardous Material Emissions--Persons responsible for manufacturing process source operations from which hazardous particulate matter material may be emitted such as, but not limited to, lead, arsenic, beryllium and other such materials shall give the utmost care and consideration to the potential harmful effects of the emissions resulting from such activities. Evaluations of these facilities as to adequacy, efficiency and emission potential will be made on an individual basis by the Director working in conjunction with other appropriate governmental agencies.
[45CSR§7-4.13.]

4.1.6. No person shall cause, suffer, allow or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1.]

4.1.7. Sections 4.1.1. and 4.1.6. of this permit shall not apply to particulate matter emitted from the operation of an existing ferroalloy electric submerged arc furnace during blowing taphole events, poling and oxygen lancing operations. Poling emissions shall not exceed five (5) minutes in duration during any poling operation.
[45CSR§7-5.3.]

4.1.8. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in subdivisions 4.1.a through 4.1.e. of 45CSR10.
[45CSR§10-4.1.]

4.2. Monitoring Requirements

4.2.1. The permittee shall conduct visual emission (VE) observations in accordance with Sections 3.2.1. and 3.2.2. of this permit.

a. Visible emissions observations on the No. 5 and No. 7 furnace baghouse are not required during any shift in which proper observer location cannot be achieved;

b. For each incident during daylight hours where any furnace by-pass cap is opened, regardless of furnace power input or operations status, VE observations shall be initiated no later than ten (10) minutes from the time such by-pass caps are opened and shall continue for at least four (4) hours, until such time as the by-pass caps are closed, or VE observations of the by-pass cap are 10% or less for at least ten minutes, whichever occurs first;

[CO-R7-95-13, Conditions 7.b.1.A. and B. State-Enforceable only.]

4.2.2. The permittee shall continue to calibrate, maintain, and operate instrumentation to continuously monitor and record the following:

a. Power input to each furnace.

b. Current or power input and winding temperature for each furnace baghouse fan motor.

c. Pressure drop across each furnace baghouse fan. Compliance with this limit shall demonstrate compliance with the less stringent limitation of 40 CFR §63.1657(a)(2)(i).

[CO-R7-95-13, Condition 7.b.4. State-Enforceable only.]

4.3. Testing Requirements

4.3.1. The permittee shall demonstrate compliance with Section 4.1.8. of this permit by periodic testing in accordance with 40 CFR Part 60, Appendix A, Method 6 or other equivalent EPA testing method approved by the Director and the approved monitoring plan (See Appendix B.)
[45CSR§10-8.1.]

4.4. Record keeping Requirements

4.4.1. Records of the visible emission checks conducted in accordance with Section 4.2.1. of this permit shall be maintained in accordance with Section 3.2.2. of this permit..
[CO-R7-95-13, Conditions 7.b.3. State-Enforceable only.]

4.4.2. The permittee shall record on a daily basis:

a. During each incident of by-pass cap usage or where any visual emissions are observed from such by-pass cap, the permittee shall record the following information:

i. Exact time that the by-pass cap was opened;

ii. Exact time that the by-pass cap was closed;

iii. Cause or causes leading to the by-pass cap usage;

iv. Actions taken to prevent recurrence of cause or causes leading to by-pass cap usage;

v. Reports of any citizen complaints filed with or received by the permittee;

vi. Power input to the furnace.

[CO-R7-95-13, Condition 7.b.2.A. State-Enforceable only.]

4.4.3. The permittee shall maintain on file at the facility a permanent record of the fan performance curve or representative fan performance curve prepared for a specific temperature for each furnace baghouse fan. **[CO-R7-95-13, Condition 7.b.5. State-Enforceable only.]**

4.4.4. The permittee shall maintain a certified log of the time, duration and furnace number of all "blowing tap holes," "poling," and "oxygen lancing" at each furnace. This log must be made available upon request of any representative of the Division of Air Quality and must be retained for five (5) years. **[CO-R7-95-13, Condition 7.b.6. State-Enforceable only.]**

4.5. Reporting Requirements

4.5.1. None.

4.6. Compliance Plan

4.6.1. None.

5.0. Manufacturing Processes Requirements [009-01, 009-02, 009-06, 00A-01, and 00C-01]

5.1. Limitations and Standards

5.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except for smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§§7-3.1. and 3.2.]

5.1.2. No person shall cause, suffer, allow, or permit PM to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantities specified in this permit.

Emission Unit ID	Equipment Description	Max. Allowable PM Emission Limit (lb/hr)
009-06	Transfer Points	31.24

[45CSR§7-4.1. (009-06)]

5.1.3. Type 'b' duplicate source operations whose air pollution control equipment efficiency is a minimum of ninety-nine percent (99%) by weight and whose total process weight rate is less than two hundred fifty thousand (250,000) pounds per hour shall be exempted from the requirements of 45CSR§7-4.1 provided that smoke emitted into the open air from any such duplicate source operation is less than twenty percent (20%) opacity.
[45CSR§7-4.7.a. (009-01, 009-02, 009-03, 009-04 and 00A-01)]

5.1.4. The permittee shall maintain instrumentation to continuously monitor water pressures at or near each spray nozzle of the wet suppression systems for slag crushing systems. The permittee shall repair or replace any nozzle failing to provide effective flow characteristics at anytime that the slag crushing is in operation.
[CO-R7-95-13, Condition 7.a.10.A. and CO-R7, 13, 16-93-1, Condition IV.9. State-Enforceable only.]

5.1.5. The permittee shall not employ soderburg paste to provide refractory lining for any ladle.
[CO-R7-95-13, Condition 7.a.11.B. State-Enforceable only.]

5.1.6. All ladle to ladle repouring of molten material shall be conducted with a system to minimize fugitive emissions.
[CO-R7-95-13, Condition 7.a.6.E. State-Enforceable only.]

5.1.7. The permittee shall maintain the product crushing and sizing operations in good operating condition.
[CO-R7-95-13, Condition 7.a.9.A. State-Enforceable only.]

5.2. Monitoring Requirements

5.2.1. The permittee shall conduct visual emission (VE) observations in accordance with Sections 3.2.1. and 3.2.2 of this permit.
[CO-R7-95-13, Conditions 7.b.1.A. and B. State-Enforceable only.]

5.3. Testing Requirements

5.3.1. None.

5.4. Record keeping Requirements

5.4.1. Records of the visible emission checks conducted in accordance with Section 5.2.1. of this permit shall be maintained in accordance with Section 3.2.2. of this permit.
[CO-R7-95-13, Conditions 7.b.3. State-Enforceable only.]

5.4.2. The permittee shall record on a daily basis the hours of operation and gallons of water used in operation on the slag crushing plant.
[CO-R7-95-13, Conditions 7.b.2.c. State-Enforceable only.]

5.5. Reporting Requirements

5.5.1. None.

5.6. Compliance Plan

5.6.1. None.

6.0. R13-2857 Permit Requirements [SC-1C, BC-1C, CR-1C, BC-2C, OS-1C, OS-2C, EX-1, OS-1X, PT-1, OS-1P, SC-01A, SC-01B, RBSC-01, RBSC-02, BTSC-01, CR-01B, RBCR-01, BC1A, BC2A, BC1B, BC2B, BC1C, BC2C, BC1D, BC2D, OCS1, OCS2, OCS3, H1, PF, CS1, CC1, BC1, BC2, BC3, CS2, BC4, CC2, CS3, BC5, TMP-H1, TMP-F1. TMP-CR1, TMP-S1, TMP-BC1, TMP-BC2, TMP-BC3]

6.1. Limitations and Standards

6.1.1. Emissions from the operations covered under this permit application shall not exceed the following:

	PM/Mn Compounds		PM_{10}/Mn Compounds	
	lb/hr	TPY	lb/hr	TPY
Crushing	21.8	2.45	10.31	1.16
Screening	21.8	2.45	10.31	1.16
Pelletizer	0.01	0.01	0.01	0.01
Extruder	0.39	0.10	0.18	0.05
Transfer Points	29.0	3.32	13.71	1.57
Stockpiles	3.36	0.61	1.59	0.29
Total	**76.36**	**8.94**	**36.11**	**4.24**

[45CSR13-R13-2857, Condition 4.1.1.]

6.1.2. Total combined throughput of material into the following equipment shall not exceed:

Crusher CR-1C	400 tons per hour	90,000 tons per year
Screen SC-1C	400 tons per hour	90,000 tons per year
Extruder EX-1	20 tons per hour	10,000 tons per year
Pelletizer PT-1	6 tons per hour	10,000 tons per year

Compliance with these limits shall be based on a 12 month rolling total. For the purposes of this permit a 12 month rolling total means the sum of material throughput at the end of any given month for the previous 12 months.
[45CSR13-R13-2857, Conditions 4.1.2., 4.1.3., 4.1.4., 4.1.5. and 45CSR§30-5.1.c.]

6.1.3. The base area of these stockpiles shall not exceed 5,000 sq. ft. EACH: OS-1C, OS-2C, OS-1X, and OS-1P.
[45CSR13-R13-2857, Condition 4.1.6., 4.1.7., 4.1.8., 4.1.9.]

6.1.4. Emissions from Crusher CR-1C and Screen SC-1C shall be controlled by use of a baghouse. Said baghouse shall be designed, installed, operated and maintained so as to achieve a minimum overall efficiency of at least 89%.
[45CSR13-R13-2857, Condition 4.1.10.]

6.1.5. The following transfer points shall be controlled by enclosures:T1C, T2C, T4C, T7C, T1P, T3P, T1X and T3X.
[45CSR13-R13-2857, Condition 4.1.11.]

6.1.6. Transfer points T3C and T6C shall be controlled by water sprays.
[45CSR13-R13-2857, Condition 4.1.12.]

6.1.7. Transfer point T5C shall be controlled by both an enclosure and water sprays.
[45CSR13-R13-2857, Condition 4.1.13.]

6.1.8. Opacity from any process source operation shall not exceed 20% except for opacity which is less than 40% for a period or periods aggregating no more than 5 minutes in any 60 minute period.
[45CSR§7-3.1, 45CSR§7-3.2, and 45CSR13-R13-2857, Condition 4.1.14.]

6.1.9. When processing limestone, the permittee shall comply with all applicable standards of 40 CFR 60 Subpart OOO including but not limited to the following:

a.. The Crusher CR-1C and Screen SC-1C must both meet a PM limit of 0.014 grain/dscf.

b. The transfer points associated with belts BC-1C and BC-2C must meet an opacity limit of 7%.
[40 CFR§§60.672(a) and (b), 45CSR13-R13-2857, Condition 4.1.16., and 45CSR16]

6.1.10. Particulate emissions from the listed sources shall not exceed the following:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Screen SC-01A[1]	25	12.5	11.82	5.92	3.72	1.86
Screen SC-01B	10	3.5	4.73	1.66	1.49	0.53
Screen BTSC-01[1]	15	12.5	7.09	5.92	2.23	1.86
Screen RBSC-01	15	0.6	7.09	0.28	2.23	0.09
Screen RBSC-02	15	0.6	7.09	0.28	2.23	0.09
Crusher RBCR-01	15	0.6	7.09	0.28	2.23	0.09
Crusher CR-01B	10	3.5	4.73	1.66	1.49	0.53
Total	**90**	**21.3**	**42.55**	**10.08**	**13.39**	**3.19**

[1]Screens SC-01A and BTSC-01 will not operate at the same time, will have a combined throughput limit and have a **combined** annual emission limit of 12.5/5.92/1.86 tpy.
[45CSR13-R13-2857, Condition 4.1.18.]

6.1.11. Screens SC-01A and BTSC-01 combined shall not process more than 250,000 tons per year of material. Compliance with this limit shall be based on a 12 month rolling total.
[45CSR13-R13-2857, Condition 4.1.19.]

6.1.12. Total combined throughput of material into the following equipment shall not exceed:

Screen SC-01B	200 tons per hour	140,000 tons per year
Screen RBSC-01	150 tons per hour	12,000 tons per year
Screen RBSC-02	150 tons per hour	12,000 tons per year
Crusher RBCR-01	150 tons per hour	12,000 tons per year
Crusher CR-01B	200 tons per hour	140,000 tons per year

Compliance with these limits shall be based on a 12 month rolling total. For the purposes of this permit a 12 month rolling total means the sum of material throughput at the end of any given month for the previous 12 months.
[45CSR13-R13-2857, Conditions 4.1.20., 4.1.21., 4.1.22., 4.1.23., 4.1.24., and 45CSR§30-5.1.c.]

6.1.13. Gaseous emissions from the listed sources shall not exceed the following:

Engine	SO_2		NO_x		CO		VOC	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Rebel	0.32	0.11	4.83	1.69	1.04	0.36	0.38	0.13
Bivitec	0.32	0.11	4.83	1.69	1.04	0.36	0.38	0.13
Barge Screen	0.32	0.11	4.83	1.69	1.04	0.36	0.38	0.13
Total	**0.96**	**0.33**	**14.49**	**5.07**	**3.12**	**1.08**	**1.14**	**0.39**

[45CSR13-R13-2857, Condition 4.1.25.]

6.1.14. Total diesel fuel consumption from the three engines listed in Condition 6.1.13. shall not exceed 16,800 gal/yr.
[45CSR13-R13-2857, Condition 4.1.26.]

6.1.15. CO levels in the exhaust of the Bivitec and Barge Screening Engine shall not exceed 230 ppmvd at 15% O2.
[40 CFR §63.6602, 45CSR13-R13-2857, Condition 4.1.28., and 45CSR34]

6.1.16. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment permitted by R13-2857, and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11. and 45CSR13-R13-2857, Condition 4.1.36. *(Baghouses, watersprays, full enclosures and partial enclosures to equipment permitted under R13-2857)*]

6.1.17. a. An owner or operator of any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified after April 28, 2008, must meet the requirements in Sections 6.1.17.a.1. through 3.

1. Except as provided in Section 6.1.17.a.3., the owner or operator must not cause to be discharged into the atmosphere from the affected facility any gases which exhibit 10 percent opacity or greater.

2. The owner or operator must not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

3. Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of Section 6.1.17.a.1.

b. The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in Sections 6.1.17.b.1. through 3.

1. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile.

2. For open coal storage piles, the fugitive coal dust emissions control plan must require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source (when the provisions of 6.1.17.b.3. are met), use of a wind barrier, compaction, or use of a vegetative cover. The owner or operator must select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source.

3. Where appropriate chemical dust suppression agents are selected by the owner or operator as a control measure to minimize fugitive coal dust emissions, only chemical dust suppressants with Occupational Safety and Health Administration (OSHA)-compliant material safety data sheets (MSDS) are to be allowed; the MSDS must be included in the fugitive coal dust emissions control plan; and the owner or operator must consider and document in the fugitive coal dust emissions control plan the site-specific impacts associated with the use of such chemical dust suppressants.

[40 CFR §§60.254(b) and (c)(1), (2) and (6), and 45CSR16 *(Conveyors BC1A, BC2A, BC1C, BC2C, BC1D, and BC2D; Screens SC-01A, BTSC-01, RBSC-01, and RBSC-02; and Crusher CR-01B)*]

6.1.18. For the Rebel engine (RBSC-01, RBSC-02, and RBCR-01), owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder shall:

a. comply with the NO_x emission standard of 6.9 g/hp-hr.

b. purchase diesel fuel that meets the requirements of 40 CFR §80.510(b) for non-road diesel fuel.

c. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

d. Change only those emission-related settings that are permitted by the manufacturer; and

e. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

[40 CFR§§60.4204(a), 60.4207(b), 60.4211(a), and Table 1, 45CSR13-R13-2857, Condition 4.1.27., and 45CSR16]

6.1.19. For the Bivitech and barge screener engines (BTSC-01 and SC-01A), the permittee shall comply with the requirements in Table 2c to 40 CFR part 63, subpart ZZZZ by May 3, 2013. In addition, the permittee:

a. must limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.

b. shall be in compliance with the general requirements of 40 CFR §63.6605.

c. shall meet the applicable general provisions specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ.

d. shall demonstrate initial compliance according to 40 CFR §63.6630 and Table 5 of 40 CFR Part 63, Subpart ZZZZ.

e. shall comply with the continuous compliance requirements of 40 CFR §63.6640(a).

f. shall comply with the Monitoring, Installation, Collection, Operation and Maintenance Requirements of 40 CFR §63.6625(h).

[40 CFR §§63.6595(a)(1), 63.6602, 63.6605, 63.6625(h), 63.6630, 63.6640, 63.6645(a)(1), 63.6665, Tables 2c-Row 3, 5-Row 12, and 8; and 45CSR34]

6.1.20. Emissions from the operations covered under permit application R13-2857B shall not exceed the following:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Screens	17.99	8.29	8.51	3.92	0.22	0.10
Crushers	9.81	3.49	4.64	1.65	0.12	0.04
Transfer Points	23.24	10.03	10.99	4.74	3.45	1.49
Total	**51.04**	**21.81**	**24.14**	**10.31**	**3.79**	**1.63**

[45CSR13-R13-2857, Condition 4.1.29.]

6.1.21. The total amount of material processed through Hopper H1 shall not exceed 160,000 tons per year. Compliance with this limit shall be based on a 12 month rolling total.
[45CSR13-R13-2857, Condition 4.1.30.]

6.1.22. Emissions from Screen CS1, CS2, and CS3, and transfer points TP1, TP2, TP4, TP5, TP6, TP10, TP11, TP12, TP14, TP15, and TP16 shall be controlled by use of baghouses. Said baghouses shall be designed, installed, operated and maintained so as to achieve a minimum overall efficiency of at least 89.1% (90% capture, 99% control).
[45CSR13-R13-2857, Condition 4.1.31.]

6.1.23. Pressure drop across each baghouse shall be maintained within manufacturer specifications.
[45CSR13-R13-2857, Condition 4.1.32.]

6.1.24. Emissions from the operations covered under permit application R13-2857C shall not exceed the following:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Screen	20.00	3.58	9.46	1.69	2.98	0.53
Crusher	20.00	3.58	9.46	1.69	2.98	0.53
Transfer Points	0.81	0.15	0.38	0.07	0.12	0.02
Total	**40.81**	**7.31**	**19.30**	**3.45**	**6.08**	**1.08**

[45CSR13-R13-2857, Condition 4.1.33.]

6.1.25. The total amount of material processed through Hopper TMP-H1 shall not exceed 143,000 tons per year. Compliance with this limit shall be based on a rolling 12 month total.
[45CSR13-R13-2857, Condition 4.1.34.]

6.1.26. Emissions from Screen TMP-S1 and Crusher TMP-CR1 shall be controlled by use of a water spray and full enclosure.
[45CSR13-R13-2857, Condition 4.1.35.]

6.2. Testing Requirements

6.2.1. The permittee shall comply with all applicable testing requirements of 40 CFR Part 60, Subpart OOO including but not limited to the following:

The owner or operator shall determine compliance with the PM standards in Section 6.1.9.a. as follows:

a. Except as specified in 40 CFR §§60.675(e)(3) and (4), Method 5 of Appendix A3 of 40 CFR 60 or Method 17 of Appendix A6 of 40 CFR 60 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

b. Method 9 of Appendix A4 of this part and the procedures in 40 CFR § 60.11 shall be used to determine opacity.

[40CFR§§60.675(b)(1) and (b)(2), 45CSR13-R13-2857, Condition 4.2.1., and 45CSR16]

6.2.2. **Performance Tests and Other Compliance Requirements for Subpart Y - Performance Tests.** An owner or operator of each affected facility that commenced construction, reconstruction, or modification after April 28, 2008, must conduct performance tests according to the requirements of 40 CFR§60.8 and the methods identified in 40 CFR §60.257 to demonstrate compliance with the applicable emission standards in Section 6.1.17. of this permit as specified below.

For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted according to the requirements in Conditions 6.2.2.a. and b. of this section, as applicable, except as provided for in Condition 6.2.3. of this permit. Performance tests and other compliance requirements for coal truck dump operations are specified in 40 CFR §60.255(h).

a. If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

b. If all 6-minute average opacity readings in the most recent performance are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calender months of the date that the previous performance test was required to be completed.

[40 CFR§§60.255(b), (b)(2), (b)(2)(i), and (b)(2)(ii), 45CSR13-R13-2857, Condition 4.2.3., and 45CSR16]

6.2.3. **Performance Tests and Other Compliance Requirements for Subpart Y - Monitoring Visible Emissions or Digital Opacity Compliance System.** As an alternative to meeting the requirements in Condition 6.2.2. of this permit, an owner or operator of an affected facility that commenced construction, reconstruction, or modification after April 28, 2008, may elect to comply with the requirements in Condition 6.2.3.a. or b.

a. Monitor visible emissions from each affected facility according to the requirements in paragraphs i. through iii. below.

i. Conduct one daily 15-second observation each operating day for each affected facility (during normal operation) when the coal preparation and processing plant is in operation. Each observation must be recorded as either visible emissions observed or no visible emissions observed. Each observer determining the presence of visible emissions must meet the training requirements specified in Section 2.3 of Method 22 of appendix A-7 of 40 CFR 60. If visible emissions are observed during any 15-second observation, the owner or operator must adjust the operation of the affected facility and demonstrate within 24 hours that no visible emissions are observed from the affected facility. If visible emissions are observed, a Method 9, of appendix A-4 of 40 CFR 60, performance test must be conducted within 45 operating days.

ii. Conduct monthly visual observations of all processes and control equipment. If any deficiencies are observed, the necessary maintenance must be performed as expeditiously as possible.

iii. Conduct a performance test using Method 9 of Appendix A-4 of 40 CFR 60 at least once every 5 calender years for each affected facility.

b. Prepare a written site-specific monitoring plan for a digital opacity compliance system for approval by the Administration or delegated authority. The plan shall require observations of at least one digital image every 15 seconds for 10-minute periods (during normal operation) every operating day. An approvable monitoring plan must include a demonstration that the occurrences of visible emissions are not in excess of 5 percent of the observation period. For reference purposes in preparing the monitoring plan, *see* OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. The monitoring plan approved by the Administrator delegated authority shall be implemented by the owner or operator.

[40 CFR §§60.255(f),(f)(1) and (f)(2), 45CSR13-R13-2857, Condition 4.2.4., and 45CSR16]

6.2.4 For the Bivitec and barge screening engines, the permittee shall comply with the testing requirements established in 40 CFR §§63.6612, 63.6620, and Tables 4 and 5 to 40 CFR Part 63, Subpart ZZZZ.
[40 CFR §§63.6612, 63.6620 and Tables 4, and 5, 45CSR13-R13-2857, Condition 4.2.5., and 45CSR34]

6.3. Monitoring and Recordkeeping Requirements

6.3.1. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment permitted by R13-2857, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13-R13-2857, Condition 4.3.2.]

6.3.2. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment permitted by R13-2857, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
[45CSR13-R13-2857, Condition 4.3.3.]

6.3.3. The permittee shall comply with all applicable monitoring and recordkeeping requirements of 40 CFR Part 60, Subpart OOO including but not limited to the following:

The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under Section 6.4.1.

Except as specified in 40 CFR §§60.674(d) or (e), the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A7). The Method 22 (40 CFR part 60, Appendix A7) test shall be conducted while the

baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A7) test, including the date and any corrective actions taken, in the logbook required under Section 6.4.1. The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to 40 CFR § 60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.
[40CFR §§60.674(b) and (c), 45CSR13-R13-2857, Condition 4.3.4., and 45CSR16]

6.3.4. In order to determine compliance with Sections 6.1.2., 6.1.11., 6.1.12., 6.1.21., and 6.1.25. of this permit the permittee shall monitor and record the amount of material processed through each of the following equipment on a monthly basis: Screen SC-1C, Extruder EX-1, Pelletizer PT-1, Screens SC-01A, BTSC-01, SC-01B, RBSC-01, RBSC-02, Crushers RBCR-01 and CR-01B, and Hoppers H1 and TMP-H1.
[45CSR13-R13-2857, Conditions 4.3.6. through 4.3.14., 4.3.16. and 4.3.18.]

6.3.5. In order to determine compliance with sections 6.1.13. and 6.1.14. of this permit the permittee shall monitor and record the amount of fuel oil consumed by the listed engines.
[45CSR13-R13-2857, Condition 4.3.15.]

6.3.6. If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in Section 6.1.18. of this permit, you must demonstrate compliance according to one of the methods specified in 40 CFR §60.4211(b)(1) through (5).

Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
[40 CFR §60.4211(b)(1) and 45CSR16 *(Rebel Engine)*]

6.3.7. For the Bivitec and barge screening engines, the permittee shall comply with the recordkeeping requirements of 40 CFR §§63.6655 except paragraphs (c), (e), and (f)
[40 CFR §63.6655 and 45CSR34]

6.3.8. In order to determine compliance with section 6.1.23. of this permit the permittee shall monitor and record the pressure drop across each baghouse at least once per operating day.
[45CSR13-R13-2857, Condition 4.3.17.]

6.4. Reporting Requirements

6.4.1. The permittee shall comply with all applicable reporting requirements of 40 CFR Part 60 Subpart OOO.

Owners or operators of affected facilities for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under Section 6.3.3., including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.
[40 CFR §60.676(b)(1), 45CSR13-R13-2857, Condition 4.4.1., and 45CSR16]

6.4.2. The permittee shall comply with all applicable reporting requirements of 40 CFR 60 Subpart Y including but not limited to the reporting requirements of 40 CFR§60.258. The permittee must submit the fugitive coal dust emissions control plan to the Administrator or delegated authority as specified in Section 6.4.2.1.i. and ii..

i. The plan must be submitted to the Administrator or delegated authority prior to startup of the new, reconstructed, or modified affected facility, or 30 days after the effective date of this rule, whichever is later.

ii. The plan must be revised as needed to reflect any changing conditions at the source. Such revisions must be dated and submitted to the Administrator or delegated authority before a source can operate pursuant to these revisions. The Administrator or delegated authority may also object to such revisions as specified in paragraph (c)(5) of 40 CFR §60.254.

[45CSR13-R13-2857, Condition 4.4.3., 40 CFR §60.254(c)(4) and 45CSR16]

6.4.3. The permittee shall comply with all applicable reporting requirements of 40 CFR 63 Subpart ZZZZ. For the Bivitec and barge screening engines, the permittee must submit all of the notifications specified in 40 CFR §§63.6640(b) and (e), §63.6645, and §63.6650.

[45CSR13-R13-2857, Condition 4.4.4., 40 CFR §§63.6640(b) and (e), §63.6645, §63.6650, and 45CSR34]

6.5. Compliance Plan

6.5.1. None.

7.0. R13-3217 Permit Requirements [H1-M, F1-M, BC1-M, CR1-M, BC2-M, BC3-M, S1-M]

7.1. Limitations and Standards

7.1.1. Emissions from the operations covered under permit application R13-3217 shall not exceed the following:

	PM		PM_{10}		$PM_{2.5}$	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Screen	20.00	3.58	9.46	1.69	2.98	0.54
Crusher	20.00	3.58	9.46	1.69	2.98	0.54
Transfer Points	0.82	0.15	0.39	0.07	0.12	0.02
Total	**40.82**	**7.31**	**19.31**	**3.45**	**6.08**	**1.1**

[45CSR13 - R13-3217, 4.1.1.]

7.1.2. Total combined throughput of material into the Crusher CR1-M shall not exceed 400 tons per hour nor 143,000 tons per year. Compliance with this limit shall be based on a 12 month rolling total. For the purposes of this permit a 12 month rolling total means the sum of material throughput at the end of any given month for the previous 12 months.
[45CSR13 - R13-3217, 4.1.2.]

7.1.3. Total combined throughput of material into the Screen S1-M shall not exceed 400 tons per hour nor 143,000 tons per year. Compliance with this limit shall be based on a 12 month rolling total.
[45CSR13 - R13-3217, 4.1.3.]

7.1.4. Of the annual throughput limits in 7.1.2 and 7.1.3, Silicomanganese shall account for no more than 23,000 tpy. Compliance with this limit shall be based on a 12 month rolling total.
[45CSR13 - R13-3217, 4.1.4.]

7.1.5. Emissions from Crusher CR1-M shall be controlled by use of water sprays.
[45CSR13 - R13-3217, 4.1.5.]

7.1.6. Only those emission units/sources as identified in Table 1.1 - Equipment permitted under R13-3217, with the exception of any *de minimis* sources as identified under Table 45-13B of 45CSR13, are authorized by this permit. In accordance with the information filed in Permit Application R13-3217, the emission units/sources identified under Table 1.1 - Equipment Permitted under R13-3217 shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants, shall not exceed the listed maximum design capacities, and shall use the specified control devices.
[45CSR13 - R13-3217, 4.1.6.]

7.1.7. Opacity from any process source operation shall not exceed 20% except for opacity which is less than 40% for a period or periods aggregating no more than 5 minutes in any 60 minute period.
[45CSR§§7-3.1 &3.2, 45CSR13 - R13-3217, 4.1.7.]

7.1.8. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to,

process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1, 45CSR13 - R13-3217, 4.1.8.]

7.1.9. Emissions from the screen and crusher engines shall not exceed the following (in g/kW-hr):

	NO_x	$NMHC+NO_x$	CO	PM	NMHC
Screen Engine	--	4.0	5.0	0.3	--
Crusher Engine	0.40	--	3.5	0.02	0.19

[40CFR§60.4204(b), 45CSR16, and 45CSR§30-5.1.c.]

7.1.10. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0, Equipment permitted under R13-3217, and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.11, 45CSR13 - R13- 3217, 4.1.10.]

7.1.11. The permittee shall use diesel fuel that meets the requirements of 40 CFR § 80.510(b).
[40CFR§60.4207(b) and 45CSR16]

7.2. Testing Requirements

7.2.1. For the purposes of demonstrating compliance with visible emissions limitations set forth in 7.1.7, the permittee shall:

a. Conduct an initial Method 22 visual emission observation on all applicable process source operations to determine the compliance with the visible emission provisions. The permittee shall take a minimum of two (2) hours of visual emissions observations on all applicable process source operations.

b. Conduct Method 22 visible emission observations on all applicable process source operations every 6 months to ensure proper operation for a minimum of ten (10) minutes per observation.

c. In the event visible emissions are observed in excess of the limitations given under 7.1.7, the permittee shall take immediate corrective action.

[45CSR13 - R13- 3217, 4.2.2.]

7.3. Monitoring and Recordkeeping Requirements

7.3.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.
[45CSR13 - R13- 3217, 4.3.1.]

7.3.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, Equipment permitted under R13-3217, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13 - R13- 3217, 4.3.2.]

7.3.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, Equipment permitted under R13-3217, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
[45CSR13 - R13- 3217, 4.3.3.]

7.3.4. In order to determine compliance with sections 7.1.1, 7.1.2, 7.1.3 and 7.1.4 of this permit the permittee shall monitor and record the amount of total material and the amount of silicomanganese processed through the Crusher CR1-M on a monthly basis.
[45CSR13 - R13- 3217, 4.3.5.]

7.3.5. The permittee shall maintain records of all visual emission observations pursuant to the monitoring required under 7.2.1. including any corrective action taken.
[45CSR13 - R13- 3217, 4.3.6..]

7.3.6. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the 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) and 45CSR16]

7.3.7. a. If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

1. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

2. Change only those emission-related settings that are permitted by the manufacturer; and

3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

b. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in Section 7.1.9., you must comply by purchasing an engine certified to the emission standards in Section 7.1.9. for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR § 60.4211(g).
[40 CFR §§60.4211(a), (c) and 45CSR16]

7.4. Reporting Requirements

7.4.1. The permittee shall comply with all applicable reporting requirements of 40 CFR 60 Subpart IIII including but not limited to the following reporting requirements:

If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep 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), 45CSR16]

7.4.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.
[45CSR13 - R13- 3217, 4.4.2.]

APPENDIX A
Inspection and Maintenance Program

Felman Production, Inc.
Emission Control System ("ECS")
Inspection and Maintenance Program

Item	Inspection Frequency	Condition	Comments
I. Submerged Arc Furnaces ("SAF")			
a) Furnace Doors	1/week		
b) Furnace Hoods			
i) Electrode Fume Seals	1/day		
ii) Mix Chutes	1/day		
iii) ECS "Draw"	1/day		
c) Tapping Hoods			
i) Alignment	1/day		
ii) Hydraulic Operation	1/month		
iii) Fan & Damper Operation	1/month		
iv) ECS "Draw"	1/week		
II. ECS Ductwork			
a) Flexible Duct Seals	1/week		
b) Stack Cap Seals	1/week		
c) Expansion Joints & Ductwork	1/Q		
d) Multiclones	1/Q		
e) Heat Exchangers	1/Q		
f) Tempering Air Dampers	1/month		
III. Pouring Hoods			
a) Alignment	1/day		
b) Hydraulic Operation	1/month		
c) Fan & Damper Operation	1/month		
d) ECS "Draw"	1/week		
IV. Baghouses (2, 5, 7)			
a) Filter Bags & their attachments	1/day		
b) Compartment Hoppers			
i) Door Seals	1/day		
ii) Steel Plating	1/week		
iii) Screw Conveyors & their drives	1/week		

Item	Inspection Frequency	Condition	Comments
c) Primary Fan & Motors			
i) Bearings (Lubrication & Vibration)	1/day		
ii) Pre-Spin Dampers	1/week		
iii) Flexible Connections to Duct	1/week		
d) Instrumentation			
i) Magnahelic Gages and/or Manometers	1/shift		
ii) Vibration Monitors	1/month		
iii) Damper Controller	1/month		
iv) Temperature Monitoring Inst.	1/month		
v) Pneumatic Damper Operators & Solenoids	1/month		
vi) Annunciation	1/week		
e) Bullseye Dampers			
i) Isolation Damper Seals	1/week		
ii) Reverse Air Damper Seals	1/week		
f) Miscellaneous Steelwork			
i) Baffleplates	1/week		
ii) Dirty Air Ductwork	1/day		
g) Bag Cleaning Apparatus			
i) Reverse Air Fan (2,5,7)	1/week		
h) Fume Removal Systems			
i) Rotary Gate Valves	1/week		
ii) Vibrators	1/week		
iii) Pneumatic Blowers	1/month		
iv) Pneumatic Piping	1/Q		
v) Fume Storage Silos	1/week		
vi) Pelletizer	1/day		
i) Miscellaneous			
i) General Clean Up	1/day		
ii) Compressed Air System	1/Q		

APPENDIX B - Rule 10 Monitoring Plan

Electric Arc Furnace SO_2 Monitoring Plan

45CSR10 Control Limits of Sulfur Dioxide from Furnaces

Felman Production, Inc. (Felman) operates electric arc furnaces (EAF) for the production of ferroalloy metal. Sulfur dioxide emissions are generated in the EAFs Nos. 2, 5, and 7 from the use of sulfur bearing raw materials. Initial emission testing for SO_2 will be conducted as required. An EPA study related to emission testing from five EAFs stated no significant SO_2 concentrations were found in the exhaust gas. The SO_2 loss from furnaces equipped with air pollution control devices did not exceed 7 PPH. SO_2 concentrations ranged from 1 to 17 ppm. EPA stated that for this reason, SO_2 is rarely included in an emission test program (EPA-450/2-74-008, EPA-450/2-74-018A, and EPA-450/3-80-041). Based on a similar process, SO_2 testing data from West Virginia Alloy, Inc. on EAF No. 15 in 1998 that showed the average SO_2 concentration was 18 ppm. The calculated worst case SO_2 concentration for Felman is 48
ppm, which is well within the 2,000-ppm_v requirement of 45CSR§10-4.1. This is based on the following:

- Raw material sulfur content ranges from 0.6 to 2.0 percent
- Maximum design exhaust flow rate
- Worst case coal/coke usage rate (FeSi production)
- Final product sulfur analysis (SiMn production)
- Slag sulfur analysis (SiMn production)
- Baghouse dust/particulate sulfur analysis (SiMn production)

Applicable Standard:
No person shall cause, suffer, allow, or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations. 45 CSR 10§4.

Initial Compliance Testing:
45 CSR 10A §5.2.a. provides for an initial compliance test conducted in accordance with 40 CFR Part 60, Appendix A, Method 6 or other equivalent EPA testing method, and the results of this initial testing will be utilized to demonstrate compliance with this monitoring plan. Initial testing per Felman's Consent Order will be performed as soon as possible. As stated above it is expected that the SO_2 concentration will be only a fraction of the 45 CSR 10 §4 regulatory standard of 2,000 ppm. Based on these results Felman Production will be requesting an exemption from any further SO_2 testing.

Monitoring:
CEMS are required only if there is both the potential to emit 100 tons per year (TPY) of sulfur dioxide and the potential to emit sulfur dioxide at a rate greater than or equal to 90% of the applicable emission standard, which is 2,000 ppm. 45 CSR 10A, §6.2.b. Therefore, Felman does not anticipate the need for the installation of stack gas monitoring devices.
Coal or coke will be the only raw material utilized in the ferroalloy furnaces with any significant sulfur content. The average sulfur content of these materials is expected not to exceed 2.0%. Prior to stack testing Felman will monitor the following:

- Sulfur content of each coal/coke shipment received.
- Sulfur content of coal/coke consumed per furnace.
- Daily coal/coke usage per furnace.
- Daily operating hours per furnace.

Felman will maintain historical supplier sulfur content data for a period of five (5) years. If the coal/coke supplier fails to provide certificates of analysis, the following procedures will be utilized:

a. The owner or operator of a ferroalloy furnace shall meet the following minimum sampling requirements:

   1. The sample acquisition point shall be at a location where representative samples of the total raw material flow to the furnace may be obtained.
   2. The sulfur bearing material shall be sampled at least once per day
   3. Minimum sample size shall be five hundred (500) grams.
   4. Samples shall be composited and analyzed at the end of each calendar month

b. The samples shall be prepared for analysis in accordance with procedures specified in ASTM D2013-86. "Standard Method of Preparing Coal Samples for Analysis."

c. The sulfur content of the samples will be determined in accordance with procedures specified in ASTM D3177-84, "Standard Test Methods for Total Sulfur in the Analysis Sample of Coal and Coke", or ASTM D4239-85, "Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods."

Based on the worst-case sulfur content, the theoretical SO_2 concentration is 48 ppm (see attached calculation). Even at this worst-case sulfur content, compliance with the 2,000-ppm stack concentration limit is easily achieved. It is expected that stack testing will demonstrate that the SO_2 is only a fraction of the allowable limit. Based upon this margin of compliance with the 2,000-ppm limit, Felman does not believe that on-going monitoring of the sulfur content will be necessary. Felman therefore requests that these requirements be waived once the initial SO_2 stack test demonstrates compliance with this standard. Felman realizes this is contingent upon no operational or raw material changes.

An approved monitoring plan shall contain a response plan to be implemented during excursions (45 CSR 10A, 6.4.g.). As stated above, the worst -case sulfur content of 2.0% equates to an SO_2 concentration of 48 ppm. Therefore, it is not possible to exceed the 2,000-ppm SO_2 limit and no response plan will be required.

Reporting:
7.2.b. Non-CEMS Based Monitoring.
Each owner or operator employing monitoring pursuant to subsection 6.4 shall submit a "Monitoring Summary Report" and an "Excursion and Monitoring Plan Performance Report" to the Secretary on a quarterly basis, to the extent required under paragraphs 7.2.b.1 through 7.2.b.4; the Secretary may, on a case-by-case basis, require more frequent reporting if the Secretary deems it necessary to accurately assess the compliance status of the fuel burning unit(s). All reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter. The Monitoring Summary Report shall contain the information and be in a format approved by the Secretary.

Since it is not possible that the 45 CSR 10 §4 standard of 2,000 ppm can be violated by the electric arc furnaces, it is requested the reporting requirement be waived for these units.

The owner or operator of a ferroalloy furnace shall calculate the SO_2 emissions based on operating hours, daily coal/coke usage, and the results of the analysis for sulfur according to the following equations:

EQUATIONS	
Mass Emission	
SO_2 (lb/hr) = (Q_f / OpHrs) x (C_i / 100) x (64 / 32) x 2000	
Where: SO_2 (lb/hr) = hourly mass sulfur dioxide emissions, lb/hr Q_f = coal/coke usage, tons/day OpHrs = Furnace operating hours, hr/day C_i = sulfur concentration of pollutant, percent 64 = Molecular weight of sulfur dioxide, lb/lb-mole 32 = Molecular weight of sulfur, lb/lb-mole	SiMn Sulfur Breakdown as of 2/20/07 Sulfur in slag = 53% Sulfur in final product = 1% Sulfur to baghouse = 46%
Emission Concentration	
SO_2 (ppmv) = SO_2 (lb/hr) x (385/64) x (1/Qs) x (1/60) x 10^6	
Where: SO_2 (ppmv) = Sulfur dioxide concentration by volume SO_2 (lb/hr) = Sulfur dioxide hourly mass emission 385 = Molar volume, scf/lb-mole (ideal gas law) 64 = Molecular weight of sulfur dioxide, lb/lb-mole Q_s = Exhaust fan volumetric exhaust flow rate, scfm 60 = Minutes per hour	Design Exhaust Flow Rates Furnace #2 = 450,000 acfm @ 500°F Furnace #5 = 250,000 acfm @ 500°F Furnace #7 = 350,000 acfm @ 550°F

SULFUR CALCULATIONS: MASS BALANCE / MATERIAL ANALYSIS

Mass Emission
SO_2 (lb/hr) = (Qf / OpHrs) x (Ci / 100) x (64 / 32) x 2000
SO_2 (lb/hr) = hourly mass sulfur dioxide emissions, lb/hr

Concentration
SO_2 (ppmv) = SO_2 (lb/hr) x (385/64) x (1/Q_s) x (1/60) x 10^6
SO_2 (ppmv) = Sulfur dioxide concentration by volume

Q_f = coal/coke usage, tons/day
OpHrs = Furnace operating hours, hr/day
C_i = sulfur concentration of pollutant, percent
64 = Molecular weight of sulfur dioxide, lb/lb-mole
32 = Molecular weight of sulfur, lb/lb-mole
385 = Molar volume, scf/lb-mole (ideal gas law)
64 = Molecular weight of sulfur dioxide, lb/lb-mole
Q_s = Exhaust fan volumetric exhaust flow rate, scfm
60 = Minutes per hour

	Furnace #2	Furnace #5	Furnace #7	
OpHrs	24	24	24	hrs/day
Q_f	77	42	42	tons/day maximum projected coal/coke usage
	3.2	1.8	1.8	TPH*** based on FeSi Alloy
	6417	3500	3500	lb/hr
C_i	2	2	2	% maximum sulfur (coal/coke) -as received basis
MW_p	64	64	64	lb/lb-mole sulfur dioxide
EW_f	32	32	32	lb/lb-mole sulfur
Potential Furnace SO_2 Manufactured	256.67	140	140	lb/hr sulfur dioxide
Portion of Sulfur in Slag/ Waste*	53%	53%	53%	based on SiMn Alloy
Portion of Sulfur in Final Product	1%	1%	1%	based on SiMn Alloy
Portion of Sulfur in Exhaust Gas	46%	46%	46%	based on SiMn Alloy
SO_2 Emitted to Baghouse**	118.1	64.4	64.4	lb/hr
	517.1	282.1	282.1	TPY
Exhaust Temperature	500	500	550	°F
Exhaust Pressure	29.6	29.6	29.6	inHg@ 670 ft. elev. above sea level & +5 static pressure
Design Exhaust Flow Rate	450000	250000	350000	ACFM
	244999	136111	181121	SCFM
SO_2 Emitted to Baghouse**	48	47	36	ppmv

Notes:

* The raw material mix includes lime/limestone, which adsorbs sulfur released by the coal/coke. This is reflected by the portion of sulfur in the slag.

** SO_2 emitted to the baghouse. It is expected that some of the sulfur is converted to particulate sulfates which would be collected by the baghouse and reduce the sulfur emissions further. An EPA study stated no significant SO_2 concentrations were found in the exhuast gas for five furnaces tested. The SO_2 loss from furnaces equipped with control devices did not exceed 7 PPH. SO_2 concentrations ranged from 1 to 17 ppm. EPA stated that for this reason, SO_2 is rarely included in an emission test program (EPA-450/2-74-008, EPA-450/2-74-018A, and EPA-450/3-80-041).

*** Metric tons

Felman Production, Inc. New Haven Plant	Month / Year

Furnace #_____

DAILY RECORD SHEET

Day	Time		Hours Operated	Coal/Coke Usage (tons)	Initials	Comments and/or Excursion Incidents (ATTACH ADDITIONAL INFO. AS NEEDED)
	Startup	Shutdown				
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
		Totals				

This Record must be kept for 5 years from the above ending date.

Rev: 2/22/07

Felman Production, Inc.
New Haven Plant

Furnace #_____
Year_____

SO_2 MONITORING SUMMARY REPORT

Time Period	Hours Operated	Coal/Coke Usage (Tons)	Coal/Coke Analysis Sulfur (A/R)	Comments and/or Excursion Incidents
1st Quarter				
January				
February				
March				
Quarterly Totals				
2nd Quarter				
April				
May				
June				
Quarterly Totals				
3rd Quarter				
July				
August				
September				
Quarterly Totals				
4th Quarter				
October				
November				
December				
Quarterly Totals				
Grand Total				

This Record must be kept for 5 years from the above ending date.

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