Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601
(502) 564-3999

Draft

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Century Aluminum Sebree, LLC**
Mailing Address:	**9404 State Route 2096** **Robards, KY 42452-9735**
Source Name:	**Century Aluminum Sebree, LLC**
Mailing Address:	**9404 State Route 2096** **Robards, KY 42452-9735**
Source Location:	**Same as Above**
Permit ID:	**V-26-005**
Agency Interest #:	**1788**
Activity ID:	**APE20240003**
Review Type:	**Title V, Operating**
Source ID:	**21-101-00029**
Regional Office:	**Owensboro Regional Office** **3032 Alvey Park Dr. W., Suite 700** **Owensboro, KY 42303** **(270) 687-7304**
County:	**Henderson**
Application Complete Date:	**July 4, 2024**
Issuance Date:	
Expiration Date:	

For Michael J. Kennedy, P.E.
Director
Division for Air Quality

Version 4/1/2022

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Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
V-26-005	Renewal	APE20240003	7/4/2024		Renewal Application
	Significant Revision	APE20240004	12/30/2024		Requested changes to resolve violations of the 1-hr SO_2 NAAQS

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit was issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

SUBJECT ITEM 1 REQUIREMENTS: Existing Process Sources

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
Emission Group I: Raw Materials						
A1	(T1, T2, T3)	8/4/1972	Barge Unloading	1-DU-DC 2-DU-DC BC1-TP-DC	Alumina, Coke	154.2
A2	(S1, S2, S3)	8/4/1972	Alumina Storage	140A-DC 140B-DC 140C-DC	Alumina	154.2
A8	(T4)	8/4/1972	Material Transfer	140X-DC TT2-DC	Alumina, Coke	154.2
C1	(T5)	8/4/1972	Material Transfer Rail Car	140Y-DC	Alumina, Fluoride, Coke	75.0
C2	(T6, 2S)	8/4/1972	Aluminum Fluoride	140G-DC 140H-DC	Aluminum Fluoride	75.0
C4	(T7, T8, T9)	8/4/1972	Coke Handling	252Y-DC TT6-DC TT7-DC	Petroleum Coke	150.0
C6	(3S, 4S)	8/4/1972	Coke Storage Tanks	252A-DC 252B-DC	Petroleum Coke	150.0
Emission Group II: Green Carbon Dry						
K7	(E6)	1972	Coke Crushing	CCD-2-DC	Petroleum Coke	24.04
L1	(E7)	1972	Coke Ball Mill	CF-13-DC	Petroleum Coke	18.32
L3	(E8)	1972	Coke Fines Handling	CFD-2-DC	Petroleum Coke	20.0
M1	(E9)	12/12/1972	Anode Mix Hopper	MD-2-DC	Anode Raw Materials (No POM)	28.90
U2	(CI7)	1972	Coke Intermediates Handling	CI-7-DC	Intermediate Coke	45.00
Emission Group V: Anode Butts Processing						
J1	(E1)	8/4/1972	Butt Surge Tank	254Y-DC	Anode Butts	15.75
J2	(E2)	8/4/1972	Anode Butt Cleaning	SW-DC	Shot Blast Material	2.59

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
K5	(E5)	1972	Butt Impactor	BD-6-DC (replaced 2025)	Anode Butts	30.0
Emission Group VI: Bath Salvage						
K1	[P1(23)]	1972	Bath Crushing/Crucible Cleaning	RB10-DC	Anode Cover	40.0
U1	(5P)	1972	Bath Transfer to Storage Processing	104H-BS-DC	Anode Cover	40.00
Emission Group VII: Anode Rods						
Q4	(EG)	1972	Anode Rod Cleaning	NW-DC	Shot Blast Material	17.60
Emission Group VIII: Potlines						
B4	(S7, S8)	8/4/1972	Reacted Alumina Storage	141R-DC 142R-DC	Reacted Alumina	40.0
B6	(S4, S5)	8/4/1972	Unreacted Alumina Storage	141M-DC 142M-DC	Unreacted Alumina	200.0
Emission Group X: Casthouse Operations						
G8	(I9)	8/4/1972	Ingot Casting Dross Loading	DL-DC	Dross Material	9.75

Note: Emissions from all units controlled by dust collectors.

APPLICABLE REGULATIONS:
401 KAR 61:020, *Existing process operations*

40 CFR 64, *Compliance Assurance Monitoring*, applicable with respect to PM emissions from emission units C1, G8, J2, K1, K5, K7, L1, L3, Q4, and U1.

1. **Operating Limitations:**
   The associated control device(s) shall be operated at all times when the units listed above are in operation.

2. **Emission Limitations:**

   a. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than forty (40) percent opacity. [401 KAR 61:020, Section 3(1)(a)]

      Compliance Demonstration Method:
      Refer to **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. For all emission units listed above, except for emission units K1 and U1: For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 61:020, Appendix A: [401 KAR 61:020, Section 3(2)(a)]

i. For process weight rates ≤ 0.50 ton/hour: $E = 2.58$

ii. For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 4.10P^{0.67}$

iii. For process weight rates > 30 tons/hr: $E = 55.0P^{0.11} - 40$

Where: E = rate of emission in lb/hr, and
P = process weight rate in tons/hr.

Compliance Demonstration Method:
Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}} \times \left(1 - CE_j\right)$$

Where:
i = month;
j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);
h_{ij} = actual total hours of operation for unit j during month i (hours/month); and
CE_j = overall control efficiency (%) of any air pollution control equipment associated with unit j.

c. For emission units K1 and U1: For emissions from a control device or stack, the permittee shall meet the following standards in lieu of the value in 401 KAR 61:020, Appendix A: [401 KAR 61:020, Section 3(2)(b)]

i. A maximum exit particulate emission concentration of 0.02 grains per standard cubic foot; [401 KAR 61:020, Section 3(2)(b)(1.)]

ii. Air pollution control equipment of at least ninety-seven (97) percent actual efficiency; and [401 KAR 61:020, Section 3(2)(b)(2.)]

iii. Addition of dilution air shall not constitute compliance. [401 KAR 61:020, Section 3(2)(b)(3.)]

Compliance Demonstration Method:
Refer to **5. Specific Recordkeeping Requirements (b)** and **7. Specific Control Equipment Operating Conditions (b).**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 61:005, Section 2(1)]

4. Specific Monitoring Requirements:

a. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly (or more frequently, for those units subject to CAM as specified in Appendix A, CAM plans) while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

b. For each emission unit listed above, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight (except for K1 and U1);
   iii. Hourly particulate emission rates, calculated monthly.

c. For emission units C1, G8, J2, K1, K5, K7, L1, L3, Q4, and U1:
   i. Upon detecting an excursion or exceedance (as defined in the appropriate CAM plan), the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. [40 CFR 64.7(d)(1)]
   ii. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance (as defined in the CAM plan) will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.7(d)(2)]

d. For emission units C1, G8, J2, K1, K5, K7, L1, L3, Q4, and U1, refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. For each emission unit listed above, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly pollutant emission rates, calculated monthly;
   iv. The qualitative visual observations required by **4. Specific Monitoring Requirements (a),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted;
   v. Preventative maintenance and/or equipment inspections performed.

b. The permittee shall maintain records of the technical specifications for each control device, including the design exhaust flow rate and information about the filters used (e.g., type of filter unit, filter manufacturer and model, filter material, air: cloth design ratio, and cleaning method), or the most recent Division approved stack test report identifying the exit grain loading and control efficiency achieved during the test, if testing has been required. [401 KAR 52:020, Section 10]

c. For emission units C1, G8, J2, K1, K5, K7, L1, L3, Q4, and U1:
   i. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]
   ii. Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(1)]

d. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. For emission units C1, G8, J2, K1, K5, K7, L1, L3, Q4, and U1:
   i. On and after the date specified in 40 CFR 64.7(a) by which the permittee must use monitoring that meets the requirements of 40 CFR 64, the permittee shall submit monitoring reports to the Division in accordance with **SECTION F**. [40 CFR 64.9(a)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. A report for monitoring under 40 CFR 64 shall include, at a minimum, the information required under 40 CFR 70.6(a)(3)(iii) and the following information, as applicable: [40 CFR 64.9(a)(2)]
   1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   3) A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [40 CFR 64.9(a)(2)(iii)]
   4) The threshold for requiring the implementation of a QIP is an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a semiannual reporting period. [40 CFR 64.8(a)]

iii. Refer to **Appendix A** for reporting requirements under 40 CFR 64.

b. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. For emission units K1 and U1, the associated control equipment shall achieve at least 97% actual control efficiency. [401 KAR 61:020, Section 3(2)(b)(2)]

b. The control equipment specified in the above table shall be maintained in accordance with a maintenance management system that reflects the manufacturer’s recommendations. Maintenance shall include preventative maintenance activities as well as visual inspections. The permittee shall maintain records of all maintenance performed as well as any corrective actions taken to correct upset conditions. [401 KAR 52:020, Section 10]

c. The permittee shall calibrate or replace any monitoring devices (i.e., pressure drop monitoring equipment) for the control equipment in a manner consistent with the manufacturer’s recommendations or, at a minimum, annually. [401 KAR 52:020, Section 10]

d. Refer to **SECTION E**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 2 REQUIREMENTS: New Process Sources

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
Emission Group IV: Anode Bake Furnace						
U4	(EQ1)	2004	Anode Saw Dust Collector	240AS-DC	Anodes	20.50
Emission Group V: Anode Butts Processing						
J3	(E3)	7/28/1977	Butt Stripping/Crushing	232H-DC	Anode Butts	15.75
K3	(E4)	6/19/1979	Butt Dust Collector	254A-DC	Anode Butts	30.00
U3	(EJ)	1990	Central Anode Butts Cleaning	CB-DC	Anode Butts	9.13
Emission Group VII: Anode Rods						
Q2	(EF)	#1 & #2: 12/6/1989 #3: 1/2006	Electric Induction Furnaces #1, #2, #3	232F-DC	Cast Iron	3.75*
Emission Group VIII: Potlines						
B5	(S9)	8/4/1979	Reacted Alumina Storage	143R-DC	Reacted Alumina	20.0
B7	(S6)	7/28/1977	Unreacted Alumina Storage	143M-DC	Unreacted Alumina	200.0
Emission Group IX: Spent Potliner Processing						
E6	(EL)	10/1/1995	Transloading Spent Potliner & Sandblasting Operations	138AW-DC	Spent Potliner	20.62

Note: Emissions from all units controlled by baghouse(s).
*Refer to Operating Limitations.

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*

40 CFR 64, *Compliance Assurance Monitoring*, applicable to PM emissions from emission units E6, J3, K3, U3, and U4.

PRECLUDED REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality*, for Q2

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations:

a. The permittee shall not operate more than two electric induction furnaces at one time. [To preclude 401 KAR 51:017]

b. For EU Q2, the permittee shall not exceed a total induction furnace process rate of 9,360 tons of cast iron production per year, on a rolling 12-month basis. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (a)(vi).**

c. The associated control device(s) shall be operated at all times when the units listed above are in operation.

2. Emission Limitations:

a. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

b. For emissions from a control device or stack the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]

i. For process weight rates ≤ 0.50 ton/hour: $E = 2.34$
ii. For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 3.59P^{0.62}$
iii. For process weight rates > 30 tons/hr: $E = 17.31P^{0.16}$

Where: E = rate of emission in lb/hr, and
P = process weight rate in tons/hr

Compliance Demonstration Method:
Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}} \times \left(1 - CE_j\right)$$

Where:
i = month;

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j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);
h_{ij} = actual total hours of operation for unit j during month i (hours/month); and
CE_j = overall control efficiency (%) of any air pollution control equipment associated with unit j.

c. The permittee shall not allow emissions from Induction Furnace #3 to exceed 15 tons of PM_{10} per year, on a rolling 12-month basis. [To preclude 401 KAR 51:017]
Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements (b)(iv)** and **5. Specific Recordkeeping Requirements (a)(iv)**.

3. Testing Requirements:
Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 59:005, Section 2(2)]

4. Specific Monitoring Requirements:

a. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly (or more frequently, for those units subject to CAM as specified in Appendix A, CAM plans) while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

b. For each emission unit listed above, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly PM emission rates, calculated monthly;
   iv. Monthly and 12-month rolling PM_{10} emissions from Induction Furnace #3, calculated monthly.

c. For emission units E6, J3, K3, U3, and U4:
   i. Upon detecting an excursion or exceedance (as defined in the appropriate CAM plan), the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. [40 CFR 64.7(d)(1)]

ii. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance (as defined in the CAM plan) will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.7(d)(2)]

d. For emission units E6, J3, K3, U3, and U4, refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

e. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. For each emission unit listed above, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly PM emission rates, calculated monthly;
   iv. Monthly and 12-month rolling PM_{10} emissions from Induction Furnace #3, calculated monthly;
   v. The qualitative visual observations required by **4. Specific Monitoring Requirements (a),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted;
   vi. Preventative maintenance and/or equipment inspections performed.

b. The permittee shall maintain records of the technical specifications for each control device, including the design exhaust flow rate, or the most recent Division approved stack test report identifying the exit grain loading or control efficiency achieved during the test, if testing has been required. [401 KAR 52:020, Section 10]

c. For emission units E6, J3, K3, U3, and U4:
   i. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR 64 (such as

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data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]

ii. Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(1)]

d. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. For emission units E6, J3, K3, U3, and U4:

i. On and after the date specified in 40 CFR 64.7(a) by which the permittee must use monitoring that meets the requirements of 40 CFR 64, the permittee shall submit monitoring reports to the Division in accordance with **SECTION F**. [40 CFR 64.9(a)(1)]

ii. A report for monitoring under 40 CFR 64 shall include, at a minimum, the information required under 40 CFR 70.6(a)(3)(iii) and the following information, as applicable: [40 CFR 64.9(a)(2)]

1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]

2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]

3) A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [40 CFR 64.9(a)(2)(iii)]

4) The threshold for requiring the implementation of a QIP is an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a semiannual reporting period. [40 CFR 64.8(a)]

iii. Refer to **Appendix A** for reporting requirements under 40 CFR 64.

b. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The control equipment specified in the above table shall be maintained in accordance with a maintenance management system that reflects the manufacturer’s recommendations. Maintenance shall include preventative maintenance activities as well as visual inspections. The permittee shall maintain records of all maintenance performed

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as well as any corrective actions taken to correct upset conditions. [401 KAR 52:020, Section 10]

b. The permittee shall calibrate or replace any monitoring devices (i.e., pressure drop monitoring equipment) for the control equipment in a manner consistent with the manufacturer's recommendations or, at a minimum, annually. [401 KAR 52:020, Section 10]

c. Refer to **SECTION E.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 3 REQUIREMENTS: Indirect Heat Exchangers

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity (MMBtu/hr)
Emission Group III: Green Carbon Wet						
S6	(EI)	12/31/1972	Indirect Heat Exchanger	None	Natural Gas	12.5
S7	---	9/2021	Green Mill Boiler	None	Natural Gas	12.6
Emission Group XIII: Boilers						
A3	---	1974	Building 004 Security Boiler	None	Natural Gas	1.26
A4	---	1972	Building 044 Main Building Boiler	None	Natural Gas	1.68
I4	---	1972	Building 134F Boiler	None	Natural Gas	1.89

APPLICABLE REGULATIONS:
401 KAR 59:015, *New indirect heat exchangers*

401 KAR 60:005, Section 2(2)(d), 40 C.F.R. 60.40c through 60.48c (Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,* applies to EU S7.

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 15 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

1. **Operating Limitations:**

   a. The permittee must meet each emission limit and work practice standard in Tables 1 through 3 and 11 through 15 to 40 CFR 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. [40 CFR 63.7500(a)(1)]

   b. At all times, the permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), 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 63.7500(a)(3)]

   c. For emission units A3, A4, and I4, the permittee shall complete a tune-up every 5 years as specified in 40 CFR 63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11

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through 15 to 40 CFR 63, Subpart DDDDD, or the operating limits in Table 4 to 40 CFR 63, Subpart DDDDD. [40 CFR 63.7500(e)]

d. The permittee must be in compliance with the emission limits, work practice standards, and operating limits in 40 CFR 63, Subpart DDDDD. These emission and operating limits apply at all times the affected unit is operating except for the periods noted in 40 CFR 63.7500(f). [40 CFR 63.7505(a)]

e. The permittee must conduct an annual or 5-year performance tune-up according to 40 CFR 63.7540(a)(10) or (12), respectively. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each 5-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For EU S7, the first annual tune-up must be no later than 13 months after the initial startup of the new affected source. [40 CFR 63.7515(d)]

f. The permittee must complete a subsequent tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi) and the schedule described in 40 CFR 63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up. [40 CFR 63.7515(g)]

g. For emission units S6 and S7, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i) through (vi). The permittee must conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. [40 CFR 63.7540(a)(10) and 40 CFR 63, Subpart DDDDD, Table 3(3)]
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment; [40 CFR 63.7540(a)(10)(i)]
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [40 CFR 63.7540(a)(10)(ii)]
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). [40 CFR 63.7540(a)(10)(iii)]
   iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; [40 CFR 63.7540(a)(10)(iv)]
   v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis

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before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [40 CFR 63.7540(a)(10)(v)]

vi. Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR 63.7540(a)(10)(vi)(A) through (C), [40 CFR 63.7540(a)(10)(vi)]
   1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; [40 CFR 63.7540(a)(10)(vi)(A)]
   2) A description of any corrective actions taken as a part of the tune-up; [40 CFR 63.7540(a)(10)(vi)(B)]

h. For emission units A3, A4, and I4, the permittee shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through (vi) to demonstrate continuous compliance. The permittee may delay the burner inspection specified in 40 CFR 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. [40 CFR 63.7540(a)(12) and 40 CFR 63, Subpart DDDDD, Table 3(1)]

i. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]

j. During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 59:015, Section 7. [401 KAR 59:015, Section 7]
   i. The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]
   ii. The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]
   iii. All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]
   iv. The actions, including duration of the startup period, of the permittee during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence; [401 KAR 59:015, Section 7(1)(d)]
   v. Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]
      1) The manufacturer’s recommended procedures; or [401 KAR 59:015, Section 7(1)(e)1.]
      2) Recommended procedures for a unit of similar design, for which manufacturer’s recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements (b).**

2. Emission Limitations:

a. The permittee shall not cause emissions of particulate matter in excess of the following: [401 KAR 59:015, Section 4(1)(c)]

EU	Description	Emission Limit (lb/MMBtu actual heat input)
A3	Building 004 Boiler Security	0.42
A4	Building 044 Main Building Boiler	0.42
I4	Building 134F Boiler	0.42
S6 (EI)	Indirect Heat Exchanger Boiler	0.42
S7	Green Mill Boiler	0.42

b. The permittee shall not cause emissions of particulate matter in excess of 20 percent opacity, except: [401 KAR 59:015, Section 4(2)]
   i. A maximum of 40 percent opacity shall be allowed for a maximum of 6 consecutive minutes in any 60 consecutive minutes during fire box cleaning or soot blowing; and [401 KAR 59:015, Section 4(2)(b)]
   ii. For emissions from an affected facility caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015, Section 4(2)(c)]

c. The permittee shall not cause emissions of gases that contain sulfur dioxide in excess of the following: [401 KAR 59:015, Section 5(1)(c)]

EU	Unit Name	Emission Limit (lbs/MMBtu actual heat input)
A3	Building 004 Boiler Security	1.82
A4	Building 044 Main Building Boiler	1.85
I4	Building 134F Boiler	1.85
S6 (EI)	Indirect Heat Exchanger Boiler	1.85
S7	Green Mill Boiler	1.82

Compliance Demonstration Method:
Compliance with the 401 KAR 59:015 emission standards is assumed. [401 KAR 50:045, Section 4(3)(c)1.]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:
Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 59:005, Section 2(2)]

4. Specific Monitoring Requirements:

a. For each emission unit listed above except EU S7, the permittee shall monitor the amount of natural gas combusted annually, in MMscf. [401 KAR 52:020, Section 10]

b. For EU S7, the permittee shall monitor the amount of natural gas combusted during each calendar month. [401 KAR 52:020, Section 10]

c. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. For each emission unit listed above except EU S7, the permittee shall maintain records of the amount of natural gas combusted annually, in MMscf. [401 KAR 52:020, Section 10]

b. The permittee shall keep records of the manufacturer's recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective action taken. [401 KAR 52:020, Section 10]

c. For SU S7, the permittee shall record and maintain records of the amount of natural gas combusted during each calendar month. [40 CFR 60.48c(g)(2)]

d. The permittee must keep records according to 40 CFR 63.7555(a)(1) and (2). [40 CFR 63.7555(a)]
   i. A copy of each notification and report that the permittee submitted to comply with 40 CFR 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]
   ii. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.7555(a)(2)]

e. Records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560(a)]

f. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560(b)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

g. The permittee must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3 years. [40 CFR 63.7560(c)]

h. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee must report each instance in which the permittee did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 15 to 40 CFR 63, Subpart DDDDD that applies. These instances are deviations from the emission limits or operating limits, respectively, in 40 CFR 63, Subpart DDDDD. These deviations must be reported according to the requirements in 40 CFR 63.7550. [40 CFR 63.7540(b)]

b. The permittee must submit each report in Table 9 to 40 CFR 63, Subpart DDDDD that applies. [40 CFR 63.7550(a)]

c. The permittee must submit each report, according to 40 CFR 63.7550(h), by the date in Table 9 to 40 CFR 63, Subpart DDDDD and according to the requirements in 40 CFR 63.7550(b)(1) through (4). For the emission units listed above, the permittee may submit only an annual or 5-year compliance report, as applicable, as specified in 40 CFR 63.7550(b)(1) through (4), instead of a semi-annual compliance report. [40 CFR 63.7550(b)]
   i. The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within 1 or 5 years, as applicable, after the compliance date that is specified for the source in 40 CFR 63.7495. [40 CFR 63.7550(b)(1)]
   ii. The first annual or 5-year compliance report must be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(2)]
   iii. Each subsequent annual and 5-year compliance reports must cover the applicable 1- or 5-year periods from January 1 to December 31. [40 CFR 63.7550(b)(3)]
   iv. Each subsequent annual and 5-year compliance reports must be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(4)]
   v. The permittee may submit the first and subsequent compliance reports according to the dates the Division has established in **SECTION F** instead of according to the dates in 40 CFR 63.7550(b)(1) through (4). [40 CFR 63.7550(b)(5)]

d. A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in 40 CFR 63, Subpart DDDDD. [40 CFR 63.7550(c)]
   i. If the facility is subject to the requirements of a tune up the permittee must submit a compliance report with the information in 40 CFR 63.7550(c)(5)(i) through (iii), (xiv) and (xvii). [40 CFR 63.7550(c)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. Company and Facility name and address. [40 CFR 63.7550(c)(5)(i)]
iii. Process unit information, emissions limitations, and operating parameter limitations. [40 CFR 63.7550(c)(5)(ii)]
iv. Date of report and beginning and ending dates of the reporting period. [40 CFR 63.7550(c)(5)(iii)]
v. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual or 5-year tune-up according to 40 CFR 63.7540(a)(10) or (12) respectively. Include the date of the most recent burner inspection if it was not done annually or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. [40 CFR 63.7550(c)(5)(xiv)]
vi. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [40 CFR 63.7550(c)(5)(xvii)]

e. For each deviation from an emission limit or operating limit in 40 CFR 63, Subpart DDDDD that occurs at an individual boiler or process heater, or from the work practice standards for periods of startup and shutdown, the compliance report must additionally contain the information required in 40 CFR 63.7550(d)(1) through (3). [40 CFR 63.7550(d)]
   i. A description of the deviation and which emission limit, operating limit, or work practice standard from which the permittee deviated. [40 CFR 63.7550(d)(1)]
   ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken. [40 CFR 63.7550(d)(2)]

f. The permittee shall submit the reports according to the procedures specified in 40 CFR 63.7550(h)(1) through (3). [40 CFR 63.7550(h)]
   i. The permittee must submit all reports required by Table 9 of 40 CFR 63, Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The permittee must use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for 40 CFR 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to 40 CFR 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h)(3)]

g. Refer to **SECTION F** for general reporting requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 4 REQUIREMENTS: Existing CWPB1 Potlines

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
Emission Group VIII: Potlines						
E1	E1-1 (P4, P5)	8/4/1972	Potline 1 Roof Monitors	None – Vents to Atmosphere	Aluminum	9.65*
	E1-2 (P2, P3)		Potline 1	A-398 Dry Alumina Scrubbers: 161S A-398 161N A-398		
E3	E3-1 (P8, P9)	8/4/1972	Potline 2 Roof Monitors	None – Vents to Atmosphere	Aluminum	9.65*
	E3-2 (P6, P7)		Potline 2	A-398 Dry Alumina Scrubbers: 162S A-398 162N A-398		
E5	E5-1 (3P, 4P)	8/1/1979	Potline 3 Roof Monitors	None – Vents to Atmosphere	Aluminum	9.65*
	E5-2 (1P, 2P)		Potline 3	A-398 Dry Alumina Scrubbers: 163S A-398 163N A-398		

*Refer to **1. Operating Limitations (e)** – The hourly capacity values listed are based upon an annual average.

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 53:010, *Ambient air quality standards*

401 KAR 61:165, *Existing primary aluminum reduction plants*

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants*

40 CFR 64, *Compliance Assurance Monitoring,* applicable to Potlines #1-3 with respect to $PM_{10}/PM_{2.5}$.

1. **Operating Limitations:**
   a. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source. [40 CFR 63.843(f)]

b. ***Startup of potlines.*** The permittee shall develop a written startup plan as described in 40 CFR 63.854(b) that contains specific procedures to be followed during startup periods of potline(s). Compliance with the applicable standards in 40 CFR 63.854(b) will be demonstrated through site inspection(s) and review of site records by the Division. [40 CFR 63.847(k)]

c. ***Periods of operation other than startup.*** The permittee shall comply with the requirements of 40 CFR 63.854(a)(1) through (8) during periods of operation other than startup. [40 CFR 63.854(a)]
   i. Ensure the potline scrubbers and exhaust fans are operational at all times. [40 CFR 63.854(a)(1)]
   ii. Ensure that the primary capture and control system is operating at all times. [40 CFR 63.854(a)(2)]
   iii. Hood covers should be replaced as soon as possible after each potroom operation. [40 CFR 63.854(a)(3)]
   iv. Inspect potlines daily and perform the work practices specified in 40 CFR 63.854(a)(4)(i) through (iii). [40 CFR 63.854(a)(4)]
      1) Identify unstable pots as soon as practicable but in no case more than 12 hours from the time the pot became unstable; [40 CFR 63.854(a)(4)(i)]
      2) Reduce cell temperatures to as low as practicable, and follow the written operating plan described in 40 CFR 63.854(b)(4) if the cell temperature exceeds the specified high temperature limit; and [40 CFR 63.854(a)(4)(ii)]
      3) Reseal pot crusts that have been broken as often and as soon as practicable. [40 CFR 63.854(a)(4)(iii)]
   v. Ensure that hood covers fit properly and are in good condition. [40 CFR 63.854(a)(5)]
   vi. If the exhaust system is equipped with an adjustable damper system, the hood exhaust rate for individual pots must be increased whenever hood covers are removed from a pot, provided that the exhaust system will not be overloaded by placing too many pots on high exhaust. [40 CFR 63.854(a)(6)]
   vii. Dust entrainment must be minimized during material handling operations and sweeping of the working aisles. [40 CFR 63.854(a)(7)]
   viii. Only tapping crucibles with functional aspirator air return systems (for returning gases under the collection hooding) can be used, unless the Division approves an alternative tapping crucible. [40 CFR 63.854(a)(8)]

d. ***Periods of startup.*** The permittee shall comply with the requirements of 40 CFR 63.854(a)(1) through (8) and (b)(1) through (4) during periods of startup for each affected potline. [40 CFR 63.854(b)]
   i. Develop a potline startup schedule before starting up the potline. [40 CFR 63.854(b)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. Keep records of the number of pots started each day. [40 CFR 63.854(b)(2)]
iii. Inspect potlines daily and adjust pot parameters to their optimum levels, as specified in the operating plan described in 40 CFR 63.854(b)(4), including, but not limited to: alumina addition rate, exhaust air flow rate, cell voltage, feeding level, anode current and liquid and solid bath levels. [40 CFR 63.854(b)(3)]
iv. Prepare a written operating plan to minimize emissions during startup to include, but not limited to, the requirements in 40 CFR 63.854(b)(1) through (3). The operating plan must include a specified high temperature limit for pots that will trigger corrective action. [40 CFR 63.854(b)(4)]

e. The permittee shall operate each dry scrubber/baghouse system when the associated potline is in operation. [401 KAR 51:017]

f. The permittee shall not exceed a total aluminum production rate of 253,531 cumulative tons per year from Potlines 1, 2, & 3, based on a 12-month rolling total. [401 KAR 51:017]

g. The petroleum coke used to make the green anodes shall not exceed 3.0 percent sulfur by weight and the pitch shall not exceed 0.80 percent sulfur by weight as measured by the standard ASTM method, an approved alternative method, or by vendor Certificate of Analysis (per shipment basis). [401 KAR 51:017]

h. The permittee shall follow good design and combustion practices for the potlines to control CO emissions. The standard operating procedures for following good operational procedures shall be kept available at site for inspection. Records shall be kept of continuing practices and maintenance. [401 KAR 51:017]

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements,** and **6. Specific Reporting Requirements.**

2. Emission Limitations:

a. For each potline (combined roof monitor and stack emissions), the permittee shall not discharge or cause to be discharged into the atmosphere any emissions in excess of the following limits: [40 CFR 63.843(a)]
i. ***TF limit.*** Emissions of TF shall not exceed: 1.9 lb/ton (0.95 kg/Mg) of aluminum produced. [40 CFR 63.843(a)(1)(i)]
ii. ***POM limit.*** Emissions of POM shall not exceed 1.1 lb/ton (0.55 kg/Mg) of aluminum produced. [40 CFR 63.843(a)(2)(iv)]
iii. ***PM limit.*** Emissions of PM shall not exceed 7.4 lb/ton (3.7 kg/Mg) of aluminum produced. [40 CFR 63.843(a)(3)(i)]
iv. ***COS limit.*** Emissions of COS shall not exceed: 3.9 lb/ton (1.95 kg/Mg) of aluminum produced. [40 CFR 63.843(e)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee may average emissions from potlines and demonstrate compliance with the limits in Tables 1 through 3 of 40 CFR 63, Subpart LL using the procedures in 40 CFR 63.846(b)(1) through (3). [40 CFR 63.846(b)]
   i. Semiannual average emissions of TF shall not exceed the applicable emission limit in Table 1 of 40 CFR 63, Subpart LL (1.6 lb/ton if 3 potlines are averaged or 1.7 lb/ton if 2 potlines are averaged). The emission rate shall be calculated based on the total primary and secondary emissions from all potlines comprising the averaging group over the period divided by the quantity of aluminum produced during the period, from all potlines comprising the averaging group. To determine compliance with the applicable emission limit in Table 1 of 40 CFR 63, Subpart LL for TF emissions, the permittee shall determine the average emissions (in lb/ton) from each potline from at least three runs per potline semiannually for TF secondary emissions and at least three runs per potline primary control system each year using the procedures and methods in 40 CFR 63.847 and 63.849. The permittee shall combine the results of secondary TF average emissions with the TF results for the primary control system and divide total emissions by total aluminum production. [40 CFR 63.846(b)(1)]
   ii. Semiannual average emissions of POM shall not exceed the applicable emission limit in Table 2 of 40 CFR 63, Subpart LL (0.9 lb/ton if 3 potlines are averaged, or 1 lb/ton if 2 potlines are averaged). The emission rate shall be calculated based on the total primary and secondary emissions from all potlines comprising the averaging group over the period divided by the quantity of aluminum produced during the period, from all potlines comprising the averaging group. To determine compliance with the applicable emission limit in Table 2 of 40 CFR 63, Subpart LL, for POM emissions, the permittee shall determine the average emissions (in lb/ton) from each potline from at least three runs per potline semiannually for POM secondary emissions and at least three runs per potline primary control system each year for POM primary emissions using the procedures and methods in 40 CFR 63.847 and 63.849. The permittee shall combine the results of secondary POM average emissions with the POM results for the primary control system and divide total emissions by total aluminum production. [40 CFR 63.846(b)(2)]
   iii. Semiannual average emissions of PM shall not exceed the applicable emission limit in Table 3 of 40 CFR 63, Subpart LL (6.1 lb/ton). The emission rate shall be calculated based on the total primary and secondary emissions from all potlines comprising the potline group over the period divided by the quantity of aluminum produced during the period, from all potlines comprising the averaging group. To determine compliance with the applicable emission limit in Table 3 of 40 CFR 63, Subpart LL for PM emissions, the permittee shall determine the average emissions (in lb/ton) from each potline from at least three runs per potline semiannually for PM secondary emissions and at least three runs per potline primary control system each year for PM primary emissions using the procedures and methods in 40 CFR 63.847 and 63.849. The permittee shall combine the results of secondary PM average emissions with the PM results for the primary control system and divide total emissions by total aluminum production. [40 CFR 63.846(b)(3)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

1. The permittee shall determine compliance with the applicable TF, POM, or PM emission limits using the following equations and procedures: [40 CFR 63.847(e)]
   A. Compute the emission rate (E_p) of TF, POM, or PM from each potline using the following equation: [40 CFR 63.847(e)(1)]

$$E_p = \frac{[(C_{s1} \times Q_{sd})_1 + (C_{s2} \times Q_{sd})_2]}{(P \times K)}$$

   Where:
   E_p = emission rate of TF, POM, or PM from a potline, lb/ton (kg/Mg);
   C_{s1} = concentration of TF, POM, or PM from the primary control system, mg/dscf (mg/dscm);
   Q_{sd} = volumetric flow rate of effluent gas corresponding to the appropriate subscript location, dscf/hr (dscm/hr);
   C_{s2} = concentration of TF, POM, or PM as measured for roof monitor emissions, mg/dscf (mg/dscm);
   P = aluminum production rate, ton/hr (Mg/hr);
   K = conversion factor, 453,600 mg/lb (106 mg/kg) for TF, POM, and PM;
   1 = subscript for primary control system effluent gas; and
   2 = subscript for secondary control system or roof monitor effluent gas.
   B. Determine the weight of the aluminum tapped from the potline using the monitoring devices required in 40 CFR 63.848(j). [40 CFR 63.847(e)(5)]
   C. Determine the aluminum production rate (P) by dividing the number of hours in the calendar month into the weight of aluminum tapped from the potline during the calendar month that includes the three runs of a performance test. [40 CFR 63.847(e)(6)]
2. ***Carbonyl sulfide (COS) emissions.*** The permittee shall calculate, for each potline, the emission rate of COS for each calendar month of operation using the following equation: [40 CFR 63.847(j)]

$$E_{COS} = [K] \times \left[\frac{Y}{Z}\right] \times [S]$$

   Where:
   E_{COS} = the emission rate of COS during the calendar month, pounds per ton of aluminum produced;
   K = factor accounting for molecular weights and conversion of sulfur to carbonyl sulfide = 234;
   Y = the mass of anode consumed in the potline during the calendar month, tons;
   Z = the mass of aluminum produced by the potline during the calendar month, tons; and
   S = the weighted average fraction of sulfur in the anode coke consumed in the production of aluminum during the calendar month (e.g., if the weighted average sulfur content of the anode coke consumed during the calendar month was 2.5 percent, then S = 0.025). The weight of anode coke used

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during the calendar month of each different concentration of sulfur is used to calculate the overall weighted average fraction of sulfur.

Compliance is demonstrated if the calculated value of E_{COS} is less than the applicable standard for COS emissions in 40 CFR 63.843(e).

c. ***Standard for Visible Emissions.*** The permittee shall not cause to be discharged into the atmosphere: [401 KAR 61:165, Section 3]
   i. From any potroom roof monitor any gases which exhibit ten (10) percent opacity or greater during normal potroom operation except start-up cells; [401 KAR 61:165, Section 3(1)]
   ii. From any potroom roof monitor section directly above sick cells or start-up cells any gases which exhibit forty (40) percent opacity or greater; [401 KAR 61:165, Section 3(2)]
   iii. From any dry scrubbing plant primary control system any gases which exhibit ten (10) percent opacity or greater. [401 KAR 61:165, Section 3(3)]

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements (e)** and **5. Specific Recordkeeping Requirements (g)(iii).**

d. ***Standard for Fluorides.*** The permittee shall not, from a dry scrubbing plant, cause to be discharged into the atmosphere gases which contain total fluorides in excess of one and nine-tenths (1.9) lb/ton of aluminum produced. [401 KAR 61:165, Section 4(1)(a) and 401 KAR 51:017]

e. In the event of a recorded violation of the fluoride standard (either HF or TF) prescribed in 401 KAR 53:010, the Cabinet shall require that remedial measures be initiated from the source(s) responsible for causing said violation. [401 KAR 61:165, Section 4(2)]

Compliance Demonstration Method:
In the event of a recorded violation of the fluoride standard (either HF or TF) prescribed in 401 KAR 53:010, the permittee shall initiate remedial measures for the source(s) responsible for causing the violation. A record of these immediate remedial measures and a corrective action plan for future corrective action and remediation must be submitted to the Division with the next quarterly report required in **6. Specific Reporting Requirements (k).**

f. The permittee shall not allow CO emissions from each of the potlines (combined roof monitor and stack emissions) to exceed 233.6 lb/ton of aluminum produced. [401 KAR 51:017]

g. The permittee shall not allow PM emissions from each of the potlines (combined roof monitor and stack emissions) to exceed 4.88 lb/ton of aluminum produced. [401 KAR 51:017]

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h. The permittee shall not allow $PM_{10}/PM_{2.5}$ emissions from each of the potlines (combined roof monitor and stack emissions) to exceed 2.1 lb/ton of aluminum produced. [401 KAR 51:017]

Compliance Demonstration Method:
Refer to **3. Testing Requirements (s).**

i. The permittee shall not allow the combined total SO_2 emissions from Potlines #1 through #3 (combined roof monitor and stack emissions from EU 1, E3, and E5) to exceed 1,018 lb/hr on a calendar month average basis. [401 KAR 53:005, Section 1(3)]

Compliance Demonstration Method:

1. Compliance with the SO_2 emission limit shall be demonstrated each month by calculating the SO_2 emissions from the potlines during the previous calendar month using the following equation:

$$E_{SO_2 Potlines} = \frac{A \times \%S_{BA}}{H} \times 93.75\% \times \frac{64}{32} \times 2000$$

Where:

$E_{SO_2 Potlines}$ = Calendar month average SO_2 emissions from Potlines #1 - #3 in lb/hr;
A = Total anode consumption in the potlines during month (ton/month); based on the potline production rate (ton aluminum/month) multiplied by the monthly average anode consumption rate (ton anode/ton aluminum).
$\%S_{BA}$ = Average baked anode core samples sulfur content (weight %) for the month based on all daily samples tested;
H = Operating hours in the month (hr/month);
93.75% = Assumed conversion of sulfur to SO_2 with the balance being COS (6.25%);
$64/32$ = Ratio of mass of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2= 1 lbmole S;
2000 = Conversion of tons to lb (2,000 lb/ton)

2. Refer to **4. Specific Monitoring Requirements (e)** and **5. Specific Recordkeeping Requirements (g).**

j. For group SO_2 standards, refer to **SECTION D 3, 6,** and **7.**

k. For HF standards, refer to **SECTION D 4.**

l. For TF standards, refer to **SECTION D 5**.

3. Testing Requirements:

a. ***Test plan.*** The permittee shall prepare a site-specific test plan prior to the initial performance test according to the requirements of 40 CFR 63.7(c). The test plan shall

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include procedures for conducting the initial performance test and for subsequent performance tests required in 40 CFR 63.848 for emission monitoring. In addition to the information required by 40 CFR 63.7, the test plan shall include: [40 CFR 63.847(b)]

i. Procedures to ensure a minimum of three runs are performed annually for the primary control system for each source; [40 CFR 63.847(b)(1)]
ii. For a source with a single control device exhausted through multiple stacks, procedures to ensure that at least three runs are performed annually by a representative sample of the stacks satisfactory to the Division; [40 CFR 63.847(b)(2)]
iii. Procedures for establishing the frequency of testing to ensure that at least one run is performed before the 15th of the month, at least one run is performed after the 15th of the month, and that there are at least 6 days between two of the runs during the month, or that secondary emissions are measured according to an alternate schedule satisfactory to the Division. [40 CFR 63.847(b)(8)]

b. Following approval of the site-specific test plan, the permittee shall conduct a performance test to demonstrate initial compliance according to the procedures in 40 CFR 63.847(d). If a performance test has been conducted on the primary control system for the potlines within the 12 months prior to the compliance date, the results of that performance test may be used to demonstrate initial compliance. The permittee shall conduct the performance test: [40 CFR 63.847(c)]

i. During the first month following: [40 CFR 63.847(c)(1)]
   1) October 7, 1999 for TF testing. [40 CFR 63.847(a)(1)]
   2) October 17, 2016 for calculation of COS emissions pursuant to 40 CFR 63.847(j). [40 CFR 63.847(a)(2)(ii)]
   3) October 16, 2017 for POM and PM testing. [40 CFR 63.847(a)(2)(iii)]
ii. For an existing potline that was shut down at the time compliance would have otherwise been required and is subsequently restarted, by the 180th day following startup for a potline or potroom group. The 180-day period starts when the first pot in a potline or potroom group is energized. [40 CFR 63.847(c)(3)(i)]

c. ***Performance test requirements.*** The initial performance test and all subsequent performance tests shall be conducted in accordance with the applicable requirements of the general provisions in 40 CFR 63, Subpart A, the approved test plan, and the procedures in 40 CFR 63.847. Performance tests shall be conducted under such conditions as the Administrator specifies to the permittee based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.847(d)]

d. ***TF, POM and PM emissions from potlines.*** For each potline, the permittee shall measure and record the emission rates of TF, POM and PM exiting the outlet of the primary control system and the rate of secondary emissions exiting through each roof monitor. Using the equation in 40 CFR 63.847(e)(1), the permittee shall compute and record the

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average of at least three runs semiannually for secondary emissions and at least three runs each year for the primary control system to determine compliance with the applicable emission limit. Compliance is demonstrated when the emission rates of TF, POM, and PM are equal to or less than the applicable emission limits in 40 CFR 63.843 or 40 CFR 63.846. [40 CFR 63.847(d)(1)]

e. ***Previous control device tests.*** If the permittee has performed more than one test of primary emission control device(s) for a potline during the previous consecutive 12 months, the average of all runs performed in the previous 12-month period shall be used to determine the contribution from the primary emission control system. [40 CFR 63.847(d)(3)]

f. ***TF and PM emissions from potlines.*** Using the procedures in 40 CFR 63.847 and in the approved test plan, the permittee shall monitor emissions of TF and PM from each potline by conducting annual performance tests on the primary control system and semiannual performance tests on the secondary emissions. The permittee shall compute and record the average semiannually from at least three runs for secondary emissions and the average from at least three runs for the primary control system to determine compliance with the applicable emission limit. The permittee shall include all valid runs in the semiannual average. The duration of each run for secondary emissions shall represent a complete operating cycle. Potline emissions shall be recorded as the sum of the average of at least three runs from the primary control system and the average of at least three runs from the roof monitor or secondary emissions control device. [40 CFR 63.848(a)]

g. ***POM emissions from potlines.*** Using the procedures in 40 CFR 63.847 and in the approved test plan, the permittee shall monitor emissions of POM from each potline stack annually and secondary potline POM emissions semiannually. The permittee shall compute and record the semiannual average from at least three runs for secondary emissions and at least three runs for the primary control systems to determine compliance with the applicable emission limit. The permittee shall include all valid runs in the semiannual average. The duration of each run for secondary emissions shall represent a complete operating cycle. The primary control system shall be sampled over an 8-hour period, unless site-specific factors dictate an alternative sampling time subject to the approval of the Division. Potline emissions shall be recorded as the sum of the average of at least three runs from the primary control system and the average of at least three runs from the roof monitor or secondary emissions control device. [40 CFR 63.848(b)]

h. ***Similar potlines.*** As an alternative to semiannual monitoring of TF, POM or PM secondary emissions from each potline using the methods in 40 CFR 63.849, the permittee may perform semiannual monitoring of TF, POM or PM secondary emissions from one potline using the test methods in 40 CFR 63.849(a) or (b) to represent the performance of similar potline(s). The similar potline(s) shall be monitored using an alternative method that meets the requirements of 40 CFR 63.848(d)(1) through (7). Two or more potlines are similar if the permittee demonstrates that their structure, operability,

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type of emissions, volume of emissions and concentration of emissions are substantially equivalent. [40 CFR 63.848(d)]

i. To demonstrate (to the satisfaction of the Division) that the level of emission control performance is the same or better, the permittee shall perform an emission test using an alternative monitoring procedure for the similar potline simultaneously with an emission test using the applicable test methods. The results of the emission test using the applicable test methods shall be in compliance with the applicable emission limit for existing potlines in 40 CFR 63.843. An alternative method: [40 CFR 63.848(d)(1)]
   1) For TF emissions, shall account for or include gaseous fluoride and cannot be based on measurement of particulate matter or particulate fluoride alone; and [40 CFR 63.848(d)(1)(i)]
   2) For TF, POM and PM emissions, shall meet or exceed Method 14 criteria. [40 CFR 63.848(d)(1)(ii)]

ii. An HF continuous emission monitoring system is an approved alternative for the monitoring of TF secondary emissions. [40 CFR 63.848(d)(2)]

iii. If the permittee elects to use an alternative monitoring procedure, the permittee shall establish an alternative emission limit based on at least nine simultaneous runs using the applicable test methods and the alternative monitoring method. All runs shall represent a full process cycle. [40 CFR 63.848(d)(3)]

iv. The permittee shall derive an alternative emission limit for the HF continuous emission monitor or an alternative method using either of the following procedures: [40 CFR 63.848(d)(4)]
   1) Use the highest value from the alternative method associated with a simultaneous run by the applicable test method that does not exceed the applicable emission limit; or [40 CFR 63.848(d)(4)(i)]
   2) Correlate the results of the two methods (the applicable test method results and the alternative monitoring method results) and establish an emission limit for the alternative monitoring system that corresponds to the applicable emission limit. [40 CFR 63.848(d)(4)(ii)]

v. The permittee shall submit the results required in 40 CFR 63.848(d)(4) and all supporting documentation to the Division for review and approval. [40 CFR 63.848(d)(5)]

vi. The Division will review and approve or disapprove the request for an alternative method and alternative emission limit. The criterion for approval shall be a demonstration (to the satisfaction of the Division) that the alternative method and alternative emission limit achieve a level of emission control that is the same as or better than the level that would have otherwise been achieved by the applicable method and emission limit. [40 CFR 63.848(d)(6)]

vii. If the alternative method is approved by the Division, the permittee shall perform semiannual emission monitoring using the approved alternative monitoring procedure to demonstrate compliance with the alternative emission limit for each similar potline. [40 CFR 63.848(d)(7)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. The permittee shall use the following reference methods to determine compliance with the applicable emission limits for TF, POM, PM, and conduct visible emissions observations: [40 CFR 63.849(a)]
   i. Method 1 in 40 CFR 60, Appendix A for sample and velocity traverses; [40 CFR 63.849(a)(1)]
   ii. Method 2 in 40 CFR 60, Appendix A for velocity and volumetric flow rate; [40 CFR 63.849(a)(2)]
   iii. Method 3 in 40 CFR 60, Appendix A for gas analysis; [40 CFR 63.849(a)(3)]
   iv. Method 13A or Method 13B in 40 CFR 60, Appendix A, or an approved alternative, for the concentration of TF where stack or duct emissions are sampled; [40 CFR 63.849(a)(4)]
   v. Method 13A or Method 13B and Method 14 or Method 14A in 40 CFR 60, Appendix A or an approved alternative method for the concentration of TF where emissions are sampled from roof monitors not employing wet roof scrubbers; [40 CFR 63.849(a)(5)]
   vi. Method 315 in 40 CFR 63, Appendix A or an approved alternative method for the concentration of POM where stack or duct emissions are sampled; [40 CFR 63.849(a)(6)]
   vii. Method 315 in 40 CFR 63, Appendix A and Method 14 or 14A in 40 CFR 60, Appendix A or an approved alternative method for the concentration of POM where emissions are sampled from roof monitors not employing wet roof scrubbers. Method 315 need not be set up as required in the method. Instead, when using Method 14A, replace the Method 14A monitor cassette filter with the filter specified by Method 315. Recover and analyze the filter according to Method 315. When using Method 14, test at ambient conditions, do not heat the filter and probe, and do not analyze the back half of the sampling train; [40 CFR 63.849(a)(7)]
   viii. Method 5 in 40 CFR 60, Appendix A or an approved alternative method for the concentration of PM where stack or duct emissions are sampled; [40 CFR 63.849(a)(8)]
   ix. Method 17 and Method 14 or Method 14A in 40 CFR 60, Appendix A or an approved alternative method for the concentration of PM where emissions are sampled from roof monitors not employing wet roof scrubbers. Method 17 need not be set up as required in the method. Instead, when using Method 14A, replace the Method 14A monitor cassette filter with the filter specified by Method 17. Recover and analyze the filter according to Method 17. When using Method 14, test at ambient conditions, do not heat the filter and probe, and do not analyze the back half of the sampling train; [40 CFR 63.849(a)(9)]
   x. Method 22 in 40 CFR 60, Appendix A or an approved alternative method for determination of visual emissions; [40 CFR 63.849(a)(12)]

j. Except as provided in 40 CFR 63.845(g)(1), references to “potroom” or “potroom group” in Method 14 in 40 CFR 60, Appendix A shall be interpreted as “potline” for the purposes of 40 CFR 63, Subpart LL. [40 CFR 63.849(c)]

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k. For sampling using Method 14 in 40 CFR 60, Appendix A, the permittee shall install one Method 14 manifold per potline in a potroom that is representative of the entire potline, and this manifold shall meet the installation requirements specified in 40 CFR 60, Appendix A, Method 14, Section 2.2.1. [40 CFR 63.849(d)]

l. The permittee may use an alternative test method for TF or POM emissions providing: [40 CFR 63.849(e)]
   i. The permittee has already demonstrated the equivalency of the alternative method for a specific plant and has received previous approval from the U.S. EPA or the Division for TF or POM measurements using the alternative method; or [40 CFR 63.849(e)(1)]
   ii. The permittee demonstrates to the satisfaction of the Division that the results from the alternative method meet the criteria specified in 40 CFR 63.848(d)(1) and (d)(3) through (d)(6). The results from the alternative method shall be based on simultaneous sampling using the alternative method and the following reference methods: [40 CFR 63.849(e)(2)]
      1) For TF, Methods 13 and 14 or Method 14A in 40 CFR 60, Appendix A; or [40 CFR 63.849(e)(2)(i)]
      2) For POM, Method 315 in 40 CFR 63, Appendix A and Method 14 in 40 CFR 60, Appendix A. [40 CFR 63.849(e)(2)(ii)]

m. The permittee shall use either ASTM D4239-14e1 or ASTM D6376-10 (incorporated by reference; see 40 CFR 63.14) for determination of the sulfur content in anode coke shipments to determine compliance with the applicable emission limit for COS emissions. [40 CFR 63.849(f)]

n. Reference methods as defined in Appendix A of 40 CFR 60 or as otherwise specified, filed by reference in 401 KAR 50:015, except as provided for in 401 KAR 50:045, shall be used to determine compliance with the standards prescribed in 401 KAR 61:165, Sections 3, 4 and 5 as follows: [401 KAR 61:165, Section 7(1)]
   i. For sampling emissions from stacks: [401 KAR 61:165, Section 7(1)(a)]
      1) Reference Method 13A or 13B for the concentration of total fluoride and the associated moisture content; [401 KAR 61:165, Section 7(1)(a)(1)]
      2) Reference Method 1 for sample and velocity traverses; [401 KAR 61:165, Section 7(1)(a)(2)]
      3) Reference Method 2 for velocity and volumetric flow rate; [401 KAR 61:165, Section 7(1)(a)(3)]
      4) Reference Method 3 for gas analysis; and [401 KAR 61:165, Section 7(1)(a)(4)]
      5) Reference Method 5 for particulate emissions. [401 KAR 61:165, Section 7(1)(a)(5)]
   ii. For sampling emissions from roof monitors not employing stacks or pollutant collection systems: [401 KAR 61:165, Section 7(1)(b)]
      1) Reference Method 14 and Kentucky Method 130 for the concentration of gaseous fluorides and associated moisture content; [401 KAR 61:165, Section 7(1)(b)(1)]

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2) Reference Method 1 for sample and velocity traverses; [401 KAR 61:165, Section 7(1)(b)(2)]
3) Reference Method 2 and Reference Method 14 for velocity and volumetric flow rate; and [401 KAR 61:165, Section 7(1)(b)(3)]
4) Reference Method 3 for gas analysis. [401 KAR 61:165, Section 7(1)(b)(4)]

iii. For opacity determination: Reference Method 9. [401 KAR 61:165, Section 7(1)(c)]

o. For Reference Method 13A or 13B, 14, and Kentucky Method 130, the sampling time for each run shall be at least eight (8) hours for any potroom sample, and the minimum sample volume shall be six and eight-tenths (6.8) dscm (240 dscf) for any potroom sample except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Cabinet. [401 KAR 61:165, Section 7(2)]

p. The air pollution control system for each affected facility shall be constructed so that volumetric flow rates and total fluoride emissions can be accurately determined using applicable methods specified under 401 KAR 61:165, Section 7(1). [401 KAR 61:165, Section 7(3)]

q. The rate of aluminum production is determined by dividing 720 hours into the weight of aluminum tapped from the affected facility during a period of thirty (30) days prior to and including the final run of a performance test. [401 KAR 61:165, Section 7(4)]

r. For each run for any plant with an emission limitation expressed in lbs/ton of aluminum produced, potroom group emissions expressed in kg/metric ton of aluminum produced shall be determined using the equation in 401 KAR 61:165, Appendix A. [401 KAR 61:165, Section 7(5)]

s. The following compliance tests shall be performed to demonstrate compliance with all applicable emission limitations and to develop emission factors for CO, SO_2, PM, PM_{10}, and $PM_{2.5}$:

i. The permittee shall conduct performance tests on the primary control system and roof monitor for particulate emissions (filterable PM, $PM_{10,}$ $PM_{2.5}$ and Condensable Particulate) once every 12 months during the life of permit V-26-005. The tests shall be performed according to Reference Method 5 and Reference Method 201A/202 for particulate emissions (filterable PM, $PM_{10,}$ $PM_{2.5}$ and Condensable Particulate). Where similar potlines exist, the permittee may perform sampling on a representative potline, provided the representative potlines meet the requirements in 40 CFR 63.848(d) and are approved by the Division. These tests can be performed simultaneously with the testing required by 40 CFR 63, Subpart LL.

ii. The permittee shall conduct performance tests on the primary control system and roof monitors according to Reference Method 6 for sulfur dioxide (SO_2) emissions once every 12 months, starting no later than 180 days after issuance of permit V-26-005. Where similar potlines exist, the permittee may perform sampling on a representative potline, provided the representative potlines meet the requirements in 40 CFR

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63.848(d) and are approved by the Division. The first test shall be performed within 180 days of the issuance of permit V-26-005.

iii. The permittee shall conduct performance tests on the primary control system and roof monitor according to Reference Method 10 for CO emissions every 12 months, starting no later than 180 days after issuance of permit V-26-005. Where similar potlines exist, the permittee may perform sampling on a representative potline, provided the representative potlines meet the requirements in 40 CFR 63.848(d) and are approved by the Division.

iv. The permittee may use other test methods as approved by the Division.

t. For SO_2 and CO, the permittee shall perform one annual test according to **3. Testing Requirements (s)** on those pollutants that were less than or equal to 75% of the limitations for SO_2 and CO in **2. Emission Limitations**. With respect to the 75% criteria, for SO_2, the emission rate determined from the stack test (lb/hr) shall be compared to the calendar month average limit specified in **2. Emission Limitations**. For CO, the emission rate determined from the stack test shall be normalized to the monthly average potline production rate for the month of the test to yield a lb/ton value to compare to the limit in **2. Emission Limitations.** If the results of the annual test remain less than or equal to 75% of the permit limit, then no additional testing of those pollutants is required for the duration of the current permit. If the result(s) of testing are not less than or equal to 75% of the permit limit or if no testing was performed on a pollutant during the previous permit period, then annual testing is required until two consecutive annual tests demonstrate that the emissions of SO_2 and CO, are less than or equal to 75% of the standards specified herein. No additional testing for SO_2 and CO is required during the term of this permit once two consecutive annual tests have met these criteria.

u. For sampling emissions from roof monitors not employing stacks or pollutant collection systems, the permittee may use Reference Method 14A for the concentration of gaseous fluorides and associated moisture content in lieu of the methods specified in 401 KAR 61:165, Section 7(1)(b)(1).

v. If the permittee chooses to perform representative sampling on a potline in lieu of performing testing on each potline, the permittee shall ensure that each potline is equipped for sampling (both stack and roof monitor sampling) such that different potlines can be sampled in future tests.

w. Pursuant to 401 KAR 61:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. ***Selection of monitoring parameters.*** The permittee shall determine the operating limits and monitoring frequency for each control device that is to be monitored as required in 40 CFR 63.848(f). [40 CFR 63.847(h)]

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i. For potlines, the permittee shall determine upper and/or lower operating limits, as appropriate, for each monitoring device for the emission control system from the values recorded during each of the runs performed during the initial performance test and from historical data from previous performance tests conducted by the methods specified in 40 CFR 63, Subpart LL. [40 CFR 63.847(h)(1)]
ii. The permittee may redetermine the upper and/or lower operating limits, as appropriate, based on historical data or other information and submit an application to the Division to change the applicable limit(s). The redetermined limits shall become effective upon approval by the Division. [40 CFR 63.847(h)(3)]

b. ***Weight of aluminum.*** The permittee shall install, operate, and maintain a monitoring device to determine the daily weight of aluminum produced. [40 CFR 63.848(j)]

c. The permittee shall install, use, and maintain ambient air monitoring equipment in accordance with such methods as the Cabinet shall prescribe; establish and maintain records of same; and make periodic emission reports at intervals prescribed by the Cabinet. [401 KAR 61:165, Section 6(3)]

d. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack and roof monitor daily and maintain a log of the observations. If visible emissions from a stack or roof monitor are observed (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9. The Method 22 observations performed for 40 CFR 63, Subpart LL may also be used to meet the qualitative requirement for the stack. [401 KAR 52:020, Section 10]

e. For each emission unit listed above, the permittee shall monitor the following parameters: [401 KAR 52:020, Section 10]
i. Monthly hours of operation;
ii. Monthly and 12-month rolling aluminum production for each potline in tons;
iii. Monthly anode consumption rate in Potlines #1 - #3 in tons of anode consumed/ton aluminum produced.

f. Upon detecting an excursion or exceedance (as defined in the appropriate CAM plan), the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator

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range, designated condition, or below the applicable emission limitation or standard, as applicable. [40 CFR 64.7(d)(1)]

g. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance (as defined in the CAM plan) will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.7(d)(2)]

h. For Potlines 1-3, refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

i. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.10(b) and by 40 CFR 63, Subpart LL. [40 CFR 63.850(e)]

b. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained offsite; [40 CFR 63.850(e)(1)]

c. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; [40 CFR 63.850(e)(2)]

d. The permittee may report required information on paper or on a labeled computer disc using commonly available and compatible computer software; and [40 CFR 63.850(e)(3)]

e. In addition to the general records required by 40 CFR 63.10(b), the permittee shall maintain records of the following information: [40 CFR 63.850(e)(4)]
   i. Daily production rate of aluminum; [40 CFR 63.850(e)(4)(i)]
   ii. Records supporting the monitoring of similar potlines demonstrating that the performance of similar potlines is the same as or better than that of potlines sampled by manual methods; [40 CFR 63.850(e)(4)(vi)]
   iii. Records supporting a request for reduced sampling of potlines; [40 CFR 63.850(e)(4)(vii)]
   iv. The current implementation plan for emission averaging and any subsequent amendments; [40 CFR 63.850(e)(4)(ix)]
   v. Records, such as a checklist or the equivalent, demonstrating that the daily visual inspection of the exhaust stack for each control device has been performed as required in 40 CFR 63.848(g), including the results of each inspection; [40 CFR 63.850(e)(4)(xi)]

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vi. For a potline equipped with an HF continuous emission monitor, records of information and data required by 40 CFR 63.10(c); [40 CFR 63.850(e)(4)(xii)]
vii. Records documenting the corrective actions taken when the limit(s) for an operating parameter established under 40 CFR 63.847(h) were exceeded or when visible emissions indicating abnormal operation were observed from a control device stack during a daily inspection required under 40 CFR 63.848(g). [40 CFR 63.850(e)(4)(xiii)]
viii. Records documenting any POM data that are invalidated due to the installation and startup of a cathode; [40 CFR 63.850(e)(4)(xiv)]
ix. Records documenting the portion of TF that is measured as particulate matter and the portion that is measured as gaseous when the particulate and gaseous fractions are quantified separately using an approved test method; [40 CFR 63.850(e)(4)(xv)]
x. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment; and [40 CFR 63.850(e)(4)(xvi)]
xi. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.850(e)(4)(xvii)]

f. Records of the installation, use, and maintenance of the ambient air monitoring equipment required by 401 KAR 61:165. [401 KAR 61:165, Section 6(3)]

g. For each emission unit listed above, the permittee shall maintain the following records: [401 KAR 52:020, Section 10]
i. Monthly hours of operation;
ii. Monthly and 12-month rolling aluminum production for each potline in tons;
iii. The qualitative visual observations required by **4. Specific Monitoring Requirements (e),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any Method 9 readings taken, and any corrective action taken including results due to observed emissions;
iv. Monthly anode consumption rate in Potlines #1 - #3 in tons of anode consumed/ton aluminum produced;
v. Records of sulfur contents of petroleum coke and pitch from standard ASTM methods, an approved alternative method, or by vendor Certificate of Analysis per shipment basis;
vi. Records of ambient air monitoring results for fluorides;
vii. Records of calibration for all monitoring devices;
viii. Records of the quarterly ambient monitoring data reports required by **6. Specific Reporting Requirements (k).**
ix. Records of standard operating procedures, continuing practices, and maintenance used to meet **1. Operating Limitations (h)**.
x. Records of violations of the ambient air standards for total and gaseous fluorides as prescribed in 401 KAR 53:010. [401 KAR 61:165, Section 4(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

xi. Monthly average SO_2 emissions from each potline in lb/hr;
xii. Monthly and 12-month rolling SO_2 emissions in tons.

h. The permittee shall record the occurrence, duration, cause and any corrective action taken for any incident or malfunction that occurs that causes or might cause an exceedance of the particulate emission or opacity standard when an emission unit is in operation. [401 KAR 52:020, Section 10]

i. The permittee shall maintain records of the current parametric monitoring plan submitted to the Division in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

j. For Potlines 1-3:
   i. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]
   ii. Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(1)]

k. Refer to **SECTION F** for general recordkeeping requirements.

6. <u>Specific Reporting Requirements</u>:

a. ***Implementation plan.*** If the permittee chooses to average emissions, the permittee shall develop and submit an implementation plan for emission averaging to the Division for review and approval according to the following procedures and requirements: [40 CFR 63.846(d)]
   i. ***Deadlines.*** The permittee shall submit the implementation plan no later than 6 months before the date that the facility intends to comply with the emission averaging limits. [40 CFR 63.846(d)(1)]
   ii. ***Contents.*** The permittee shall include the following information in the implementation plan or in the application for an operating permit for all emission sources to be included in an emissions average: [40 CFR 63.846(d)(2)]
      1) The identification of all emission sources (potlines) in the average; [40 CFR 63.846(d)(2)(i)]
      2) The assigned TF, POM and/or PM emission limit for each averaging group of potlines; [40 CFR 63.846(d)(2)(ii)]
      3) The specific control technologies or pollution prevention measures to be used for each emission source in the averaging group and the date of its installation or application. If the pollution prevention measures reduce or eliminate emissions

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

from multiple sources, the permittee shall identify each source; [40 CFR 63.846(d)(2)(iii)]

4) The test plan for the measurement of TF, POM and/or PM emissions in accordance with the requirements in 40 CFR 63.847(b); [40 CFR 63.846(d)(2)(iv)]
5) The operating parameters to be monitored for each control system or device and a description of how the operating limits will be determined; [40 CFR 63.846(d)(2)(v)]
6) If the permittee requests to monitor an alternative operating parameter pursuant to 40 CFR 63.848(l): [40 CFR 63.846(d)(2)(vi)]
   A. A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and [40 CFR 63.846(d)(2)(vi)(A)]
   B. A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Division, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and [40 CFR 63.846(d)(2)(vi)(B)]
7) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating conditions. [40 CFR 63.846(d)(2)(vii)]

iii. ***Approval criteria.*** Upon receipt, the Division will review and approve or disapprove the plan or permit application according to the following criteria: [40 CFR 63.846(d)(3)]
1) Whether the content of the plan includes all of the information specified in 40 CFR 63.846(d)(2); and [40 CFR 63.846(d)(3)(i)]
2) Whether the plan or permit application presents sufficient information to determine that compliance will be achieved and maintained. [40 CFR 63.846(d)(3)(ii)]

iv. ***Prohibitions.*** The Division will not approve an implementation plan or permit application containing any of the following provisions: [40 CFR 63.846(d)(4)]
1) Any averaging between emissions of differing pollutants or between differing sources. Emission averaging shall not be allowed between TF, POM and/or PM, and emission averaging shall not be allowed between potlines and anode bake furnaces; [40 CFR 63.846(d)(4)(i)]
2) The inclusion of any emission source other than an existing potline or existing anode bake furnace or the inclusion of any potline or anode bake furnace not subject to the same operating permit; or [40 CFR 63.846(d)(4)(ii)]
3) The inclusion of any potline or anode bake furnace while it is shut down, in the emission calculations. [40 CFR 63.846(d)(4)(iii)]

v. ***Term.*** Following review, the Division will approve the plan or permit application, request changes, or request additional information. Once the Division receives any additional information requested, the Division will approve or disapprove the plan or permit application within 120 days. [40 CFR 63.846(d)(5)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1) The Division will approve the plan for the term of the operating permit; [40 CFR 63.846(d)(5)(i)]
2) To revise the plan prior to the end of the permit term, the permittee shall submit a request to the Division; and [40 CFR 63.846(d)(5)(ii)]
3) The permittee may submit a request to the Division to implement emission averaging after the applicable compliance date. [40 CFR 63.846(d)(5)(iii)]

vi. ***Operation.*** While operating under an approved implementation plan, the permittee shall monitor the operating parameters of each control system, keep records, and submit periodic reports as required for each source subject to 40 CFR 63, Subpart LL. [40 CFR 63.846(d)(6)]

b. ***Accuracy and calibration.*** The permittee shall submit recommended accuracy requirements to the Division for review and approval. All monitoring devices required by 40 CFR 63.848 must be certified by the permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848(k)]

c. ***Alternative operating parameters.*** The permittee may monitor alternative control device operating parameters subject to prior written approval by the Division. [40 CFR 63.848(l)]

d. ***Notification of compliance approach.*** The permittee shall develop and submit to the Division, if requested, an engineering plan that describes the techniques that will be used to address the capture efficiency of the reduction cells for gaseous hazardous air pollutants in compliance with the emission limits in 40 CFR 63.843, 63.844, and 63.846; and [40 CFR 63.850(a)(8)]

e. The permittee shall submit a one-time notification of startup of an existing potline or potroom group that was shut down for a long period and subsequently restarted. The permittee must provide written notice to the Administrator at least 30 days before the startup. [40 CFR 63.850(a)(9)]

f. ***Performance test reports*****.** Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart LL, the permittee shall submit the results of the performance tests following the procedure specified in either 40 CFR 63.850(b)(1) or (b)(2). [40 CFR 63.850(b)]

i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (http://www.epa.gov/ttn/chief/ert/index.html) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/epa_home.asp). Performance test data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, the permittee may submit performance test data in an electronic file format consistent with the extensible markup language (XML) schema

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listed on the EPA's ERT Web site once the XML schema is available. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.850(b)(1)]

ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(2)]

iii. For data collected which requires summation of results from both ERT and non-ERT supported test methods in order to demonstrate compliance with an emission limit, the permittee must submit the results of the performance test(s) used to demonstrate compliance with that emission limit to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(3)]

g. ***Reporting*.** In addition to the information required under 40 CFR 63.10 of the General Provisions, the permittee shall provide semiannual reports containing the information specified in 40 CFR 63.850(d)(1) and (2) to the Division. [40 CFR 63.850(d)]

i. Excess emissions report. As required by 40 CFR 63.10(e)(3), the permittee shall submit a report (or a summary report) if measured emissions are in excess of the applicable standard. The report shall contain the information specified in 40 CFR 63.10(e)(3)(v) and be submitted quarterly. [40 CFR 63.850(d)(1)]

ii. If there was a malfunction during the reporting period, the permittee shall submit a report that includes the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including actions taken to correct a malfunction. [40 CFR 63.850(d)(2)]

h. All reports required by 40 CFR 63, Subpart LL not subject to the requirements in 40 CFR 63.850(b) or (c) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.850(b) in paper format. [40 CFR 63.850(f)]

i. The Division will notify the permittee in writing of the need for additional time to review the submissions in 40 CFR 63.851(a)(1) through (a)(5) or of approval or intent to deny approval of the submissions in 40 CFR 63.851(a)(1) through (a)(5) within 60 calendar

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days after receipt of sufficient information to evaluate the submission. The 60-day period begins after the permittee has been notified that the submission is complete. [40 CFR 63.851(a)]

i. The test plan in 40 CFR 63.847(b); [40 CFR 63.851(a)(1)]
ii. Request to change limits for operating parameters in 40 CFR 63.847(h)(3); [40 CFR 63.851(a)(2)]
iii. Request for similar potline monitoring in 40 CFR 63.848(d)(5); [40 CFR 63.851(a)(3)]
iv. Request for an alternative method in 40 CFR 63.849(e)(2). [40 CFR 63.851(a)(5)]

j. The Division will notify the permittee in writing whether the submission is complete within 30 calendar days of receipt of the original submission or within 30 days of receipt of any supplementary information that is submitted. When a submission is incomplete, the Division will specify the information needed to complete the submission and will give the permittee 30 calendar days after receipt of the notification to provide the information. [40 CFR 63.851(b)]

k. The permittee shall submit to the Division quarterly ambient monitoring data reports. If the maximum 24-hour average primary standard or any of the secondary standards for HF as defined in 401 KAR 53:010, Appendix A, are exceeded more than once annually, than any subsequent exceedance is a violation. Any exceedance of the secondary standards for TF as defined in 401 KAR 53:010, Appendix A, is a violation. Refer to **SECTION D.** [401 KAR 61:165]

l. The permittee shall submit any revisions of the parametric monitoring plan to the Division for approval in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

m. For Potlines 1-3:
i. On and after the date specified in 40 CFR 64.7(a) by which the permittee must use monitoring that meets the requirements of 40 CFR 64, the permittee shall submit monitoring reports to the Division in accordance with **SECTION F**. [40 CFR 64.9(a)(1)]
ii. A report for monitoring under 40 CFR 64 shall include, at a minimum, the information required under 40 CFR 70.6(a)(3)(iii) and the following information, as applicable: [40 CFR 64.9(a)(2)]
1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
3) A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall

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include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [40 CFR 64.9(a)(2)(iii)]

4) The threshold for requiring the implementation of a QIP is an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a semiannual reporting period. [40 CFR 64.8(a)]

iii. Refer to **Appendix A** for reporting requirements under 40 CFR 64.

n. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. ***Monitoring parameters for emission control devices.*** The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall submit for approval by the Division a description of the parameter(s) to be monitored, the operating limits, and the monitoring frequency to ensure that the control device is being properly operated and maintained. An explanation of the criteria used for selection of the parameter(s), the operating limits, and the monitoring frequency, including how these relate to emission control also shall be submitted to the Division. Except as provided in 40 CFR 63.848(l), the following monitoring devices shall be installed: [40 CFR 63.848(f)]

i. For dry alumina scrubbers, devices for the measurement of alumina flow and air flow; [40 CFR 63.848(f)(1)]

b. The owner or operator of an existing affected source that is equipped with a control device and is subject to a PM limit shall: [40 CFR 63.848(g)]

i. Install and operate a bag leak detection system in accordance with 40 CFR 63.848(f)(6); or [40 CFR 63.848(g)(1)]

ii. Install and operate a PM CEMS in accordance with 40 CFR 63.848(f)(7); or [40 CFR 63.848(g)(2)]

iii. Visually inspect the exhaust stack(s) using Method 22 on a twice daily basis (at least 4 hours apart) for evidence of any visible emissions indicating abnormal operations and, shall initiate corrective actions within 1 hour of a visible emissions inspection that indicates abnormal operation. Corrective actions shall include, at a minimum, isolating, shutting down and conducting an internal inspection of the compartment that is the source of the visible emissions that indicate abnormal operations. [40 CFR 63.848(g)(3)]

c. ***Corrective action.*** If a monitoring device for a primary control device measures an operating parameter outside the limit(s) established pursuant to 40 CFR 63.847(h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during a daily inspection, the permittee shall initiate corrective action procedures within 1 hour. Failure to initiate the corrective action procedures within 1

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hour or to take the necessary corrective actions to remedy the problem is a violation. [40 CFR 63.848(h)]

d. ***Exceedances.*** If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six times in any semiannual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period. [40 CFR 63.848(i)]

e. The permittee shall install, operate, and maintain the dry alumina scrubbers and baghouses in accordance with manufacturer's specifications. [401 KAR 51:017]

f. The permittee shall continuously monitor the alumina bed differential pressure and the baghouse differential pressure. [401 KAR 51:017]

g. Refer to **SECTION E.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 5 REQUIREMENTS: Paste Production Plant

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
Emission Group III: Green Carbon Wet						
M2-M7	(1E-9E)	6/19/1979; Modified to duct to single stack in 1999	Anode Mix Conveying (3) and Mixers (7)	Procedair Dry Coke Scrubber	Green Anodes	28.9

Units M5, M6, and M7 (The 7 Anode Mixers) include a common pitch scale not listed as a separate unit and prepares materials for two existing presses, Press 1 and Press 2.

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants*

1. Operating Limitations:

a. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source. [40 CFR 63.843(f)]

b. ***Startup of paste production plants.*** The permittee shall develop a written startup plan as described in 40 CFR 63.847(m)(1) through (3), to be followed during startup periods for paste production plants. Compliance with the startup plan will be demonstrated through site inspection(s) and review of site records by the Division. The written startup plan must contain specific procedures to be followed during startup periods of paste production plants, including the following: [40 CFR 63.847(m)]
   i. Records of time, date, duration of paste production plant startup and any nonroutine actions taken during startup of the paste production plants. [40 CFR 63.847(m)(1)]
   ii. A requirement that the associated emission control system be operating within normal parametric limits prior to startup of the paste production plant. [40 CFR 63.847(m)(2)]
   iii. A requirement to take immediate actions to stop the startup process as soon as practicable and continue to comply with 40 CFR 63.843(f) if the associated emission control system is off line at any time during startup. The paste production plant restart may resume once the associated emission control system is back on line and operating within normal parametric limits. [40 CFR 63.847(m)(3)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a. The permittee shall install, operate and maintain equipment to capture and control POM and PM emissions from the paste production plant. [40 CFR 63.843(b)]
   i. The emission capture system shall be installed and operated to meet the generally accepted engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in Chapters 3 and 5 of "Industrial Ventilation: A Handbook of Recommended Practice" (incorporated by reference; see 40 CFR 63.14); and [40 CFR 63.843(b)(1)]
   ii. Captured emissions shall be routed through a closed system to a dry coke scrubber; [40 CFR 63.843(b)(2)]
   iii. ***PM limit.*** Emissions of PM shall not exceed 0.082 lb/ton (0.041 kg/Mg) of paste. [40 CFR 63.843(b)(4)]

Compliance Demonstration Method:

1. The permittee shall determine compliance with the applicable PM emission limit using the following equations and procedures: [40 CFR 63.847(e)]
   A. Compute the emission rate (E_{PMpp}) of PM from each paste production plant using the following equation: [40 CFR 63.847(e)(8)]

$$E_{PMpp} = \frac{(C_s \times Q_{sd})}{(P_b \times K)}$$

Where:

E_{PMpp} = emission rate of PM, lb/ton (kg/mg) of green anode material exiting the paste production plant;
C_s = concentration of PM, mg/dscf (mg/dscm);
Q_{sd} = volumetric flow rate of effluent gas, dscf/hr (dscm/hr);
P_b = quantity of green anode material exiting the paste production plant, ton/hr (mg/hr); and
K = conversion factor, 453,600 mg/lb (106 mg/kg).

2. Initial compliance with the POM standards for existing paste production plants in 40 CFR 63.843(b) will be demonstrated through site inspection(s) and review of site records by the Division. [40 CFR 63.847(f)(1)]

b. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements.**

c. For emissions from a control device or stack the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]

i. For process weight rates ≤ 0.50 ton/hour: E = 2.34

ii. For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 3.59P^{0.62}$

Where: E = rate of emission in lb/hr, and
P = process weight rate in tons/hr

Compliance Demonstration Method:
Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}} \times \left(1 - CE_j\right)$$

Where:

i = month;
j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);
h_{ij} = actual total hours of operation for unit j during month i (hours/month); and
CE_j = overall control efficiency (%) of any air pollution control equipment associated with unit j.

3. Testing Requirements:

a. ***Test plan.*** The permittee shall prepare a site-specific test plan prior to the initial performance test according to the requirements of 40 CFR 63.7(c). The test plan shall include procedures for conducting the initial performance test and for subsequent performance tests required in 40 CFR 63.848 for emission monitoring. In addition to the information required by 40 CFR 63.7, the test plan shall include: [40 CFR 63.847(b)]
   i. Procedures to ensure a minimum of three runs are performed annually for the primary control system for each source; [40 CFR 63.847(b)(1)]

b. Following approval of the site-specific test plan, the permittee shall conduct a performance test to demonstrate initial compliance according to the procedures in 40 CFR 63.847(d). If a performance test has been conducted on the primary control system for the paste production plant within the 12 months prior to the compliance date, the results of that performance test may be used to demonstrate initial compliance. The permittee shall conduct the performance test: [40 CFR 63.847(c)]
   i. During the first month following October 17, 2016 for an existing paste production plant. [40 CFR 63.847(c)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. For an existing paste production plant that was shut down at the time compliance would have otherwise been required and is subsequently restarted, by the 30th day following startup of a paste production plant. The 30-day period starts when the paste production plant produces green anodes. [40 CFR 63.847(c)(3)(iii)]

c. ***Performance test requirements.*** The initial performance test and all subsequent performance tests shall be conducted in accordance with the applicable requirements of the general provisions in 40 CFR 63, Subpart A, the approved test plan, and the procedures in 40 CFR 63.847. Performance tests shall be conducted under such conditions as the Administrator specifies to the permittee based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.847(d)]

d. For each paste production plant, the permittee shall measure and record the emission rate of PM exiting the exhaust stacks(s) of the primary emission control system. Using the equation in 40 CFR 63.847(e)(8), the permittee shall compute and record the average of at least three runs each year to determine compliance with the applicable emission limits for PM. Compliance with the PM standards is demonstrated when the PM emission rates are less than or equal to the applicable PM emission limits in 40 CFR 63.843(b)(4). [40 CFR 63.847(f)(2)]

e. ***PM emissions from paste production plants.*** Using the procedures in 40 CFR 63.847 and in the approved test plan, the permittee shall monitor PM emissions from each paste production plant on an annual basis. The permittee shall compute and record the annual average of PM emissions from at least three runs to determine compliance with the applicable emission limits. The permittee shall include all valid runs in the annual average. [40 CFR 63.848(n)]

f. The permittee shall use the following reference methods to determine compliance with the applicable emission limits for PM and conduct visible emissions observations: [40 CFR 63.849(a)]
   i. Method 1 in 40 CFR 60, Appendix A for sample and velocity traverses; [40 CFR 63.849(a)(1)]
   ii. Method 2 in 40 CFR 60, Appendix A for velocity and volumetric flow rate; [40 CFR 63.849(a)(2)]
   iii. Method 3 in 40 CFR 60, Appendix A for gas analysis; [40 CFR 63.849(a)(3)]
   iv. Method 5 in 40 CFR 60, Appendix A or an approved alternative method for the concentration of PM where stack or duct emissions are sampled; [40 CFR 63.849(a)(8)]
   v. Method 22 in 40 CFR 60, Appendix A or an approved alternative method for determination of visual emissions; [40 CFR 63.849(a)(12)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

g. Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. ***Selection of monitoring parameters.*** The permittee shall determine the operating limits and monitoring frequency for each control device that is to be monitored as required in 40 CFR 63.848(f). [40 CFR 63.847(h)]
   i. For a paste production plant, the permittee shall specify and provide the basis or rationale for selecting parameters to be monitored and the associated operating limits for the emission control device. [40 CFR 63.847(h)(2)]
   ii. The permittee may redetermine the upper and/or lower operating limits, as appropriate, based on historical data or other information and submit an application to the Division to change the applicable limit(s). The redetermined limits shall become effective upon approval by the Division. [40 CFR 63.847(h)(3)]

b. The permittee shall perform a qualitative visual observation of the opacity of emissions at the stack twice daily while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). The Method 22 observations performed for 40 CFR 63; Subpart LL may also be used to meet the qualitative requirement. [401 KAR 52:020, Section 10]

c. For each emission unit listed above, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly particulate emission rates, calculated monthly.

d. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.10(b) and by 40 CFR 63, Subpart LL. [40 CFR 63.850(e)]

b. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained offsite; [40 CFR 63.850(e)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; [40 CFR 63.850(e)(2)]

d. The owner or operator may report required information on paper or on a labeled computer disc using commonly available and compatible computer software; and [40 CFR 63.850(e)(3)]

e. In addition to the general records required by 40 CFR 63.10(b), the permittee shall maintain records of the following information: [40 CFR 63.850(e)(4)]
   i. Records of design information for paste production plant capture systems; [40 CFR 63.850(e)(4)(iv)]
   ii. Records, such as a checklist or the equivalent, demonstrating that the daily visual inspection of the exhaust stack for each control device has been performed as required in 40 CFR 63.848(g), including the results of each inspection; [40 CFR 63.850(e)(4)(xi)]
   iii. Records documenting the corrective actions taken when the limit(s) for an operating parameter established under 40 CFR 63.847(h) were exceeded or when visible emissions indicating abnormal operation were observed from a control device stack during a daily inspection required under 40 CFR 63.848(g). [40 CFR 63.850(e)(4)(xiii)]
   iv. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment; and [40 CFR 63.850(e)(4)(xvi)]
   v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.850(e)(4)(xvii)]

f. For each emission unit listed above, the permittee shall maintain the following records: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly particulate emission rates, calculated monthly;
   iv. Records of calibration for all monitoring devices;
   v. The qualitative visual observations required by **4. Specific Monitoring Requirements (b),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted.

g. The permittee shall maintain records of the current parametric monitoring plan submitted to the Division in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

h. Refer to **SECTION F** for general recordkeeping requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a. ***Accuracy and calibration.*** The permittee shall submit recommended accuracy requirements to the Division for review and approval. All monitoring devices required by 40 CFR 63.848 must be certified by the permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848(k)]

b. ***Alternative operating parameters.*** The permittee may monitor alternative control device operating parameters subject to prior written approval by the Division. [40 CFR 63.848(l)]

c. The permittee shall submit a one-time notification of startup of an existing paste production plant that was shut down for a long period and subsequently restarted. The permittee must provide written notice to the Administrator at least 30 days before the startup. [40 CFR 63.850(a)(9)]

d. ***Performance test reports*****.** Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart LL, the permittee shall submit the results of the performance tests following the procedure specified in either 40 CFR 63.850(b)(1) or (b)(2). [40 CFR 63.850(b)]
   i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www.epa.gov/ert) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/epa_home.asp). Performance test data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, the permittee may submit performance test data in an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site once the XML schema is available. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.850(b)(1)]
   ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. For data collected which requires summation of results from both ERT and non-ERT supported test methods in order to demonstrate compliance with an emission limit, the permittee must submit the results of the performance test(s) used to demonstrate compliance with that emission limit to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(3)]

e. ***Reporting*.** In addition to the information required under 40 CFR 63.10 of the General Provisions, the permittee shall provide semiannual reports containing the information specified in 40 CFR 63.850(d)(1) and (2) to the Division. [40 CFR 63.850(d)]
   i. Excess emissions report. As required by 40 CFR 63.10(e)(3), the permittee shall submit a report (or a summary report) if measured emissions are in excess of the applicable standard. The report shall contain the information specified in 40 CFR 63.10(e)(3)(v) and be submitted quarterly. [40 CFR 63.850(d)(1)]
   ii. If there was a malfunction during the reporting period, the permittee shall submit a report that includes the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including actions taken to correct a malfunction. [40 CFR 63.850(d)(2)]

f. All reports required by 40 CFR 63, Subpart LL not subject to the requirements in 40 CFR 63.850(b) or (c) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.850(b) in paper format. [40 CFR 63.850(f)]

g. The Division will notify the permittee in writing of the need for additional time to review the submissions in 40 CFR 63.851(a)(1) through (a)(5) or of approval or intent to deny approval of the submissions in 40 CFR 63.851(a)(1) through (a)(5) within 60 calendar days after receipt of sufficient information to evaluate the submission. The 60-day period begins after the permittee has been notified that the submission is complete. [40 CFR 63.851(a)]
   i. The test plan in 40 CFR 63.847(b); [40 CFR 63.851(a)(1)]
   ii. Request to change limits for operating parameters in 40 CFR 63.847(h)(3); [40 CFR 63.851(a)(2)]

h. The Division will notify the permittee in writing whether the submission is complete within 30 calendar days of receipt of the original submission or within 30 days of receipt of any supplementary information that is submitted. When a submission is incomplete, the Division will specify the information needed to complete the submission and will give the permittee 30 calendar days after receipt of the notification to provide the information. [40 CFR 63.851(b)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. The permittee shall submit any revisions of the parametric monitoring plan to the Division for approval in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

j. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. ***Monitoring parameters for emission control devices.*** The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall submit for approval by the Division a description of the parameter(s) to be monitored, the operating limits, and the monitoring frequency to ensure that the control device is being properly operated and maintained. An explanation of the criteria used for selection of the parameter(s), the operating limits, and the monitoring frequency, including how these relate to emission control also shall be submitted to the Division. Except as provided in 40 CFR 63.848(l), the following monitoring devices shall be installed: [40 CFR 63.848(f)]
   i. For dry coke scrubbers, devices for the measurement of coke flow and air flow; [40 CFR 63.848(f)(2)]
   ii. For emission sources control device exhaust streams for which the permittee chooses to demonstrate continuous compliance through bag leak detection systems the permittee shall install and operate a bag leak detection system according to the requirements in 40 CFR 63.848(o), and the permittee shall set the operating limit such that the sum of the durations of bag leak detection system alarms does not exceed 5 percent of the process operating time during a 6-month period. [40 CFR 63.848(f)(6)]
   iii. For emission sources control device exhaust streams for which the permittee chooses to demonstrate continuous compliance through a PM CEMS, the permittee shall install and operate a PM CEMS according to the requirements in 40 CFR 63.848(p). The permittee shall determine continuous compliance averaged on a rolling 30 operating day basis, updated at the end of each new operating day. All valid hours of data from 30 successive operating days shall be included in the arithmetic average. Compliance is demonstrated when the 30 operating day PM emissions are equal to or less than the applicable emission limits in 40 CFR 63.843. [40 CFR 63.848(f)(7)]

b. The permittee of an existing affected source that is equipped with a control device and is subject to a PM limit shall: [40 CFR 63.848(g)]
   i. Install and operate a bag leak detection system in accordance with 40 CFR 63.848(f)(6); or [40 CFR 63.848(g)(1)]
   ii. Install and operate a PM CEMS in accordance with 40 CFR 63.848(f)(7); or [40 CFR 63.848(g)(2)]
   iii. Visually inspect the exhaust stack(s) using Method 22 on a twice daily basis (at least 4 hours apart) for evidence of any visible emissions indicating abnormal operations and, shall initiate corrective actions within 1 hour of a visible emissions inspection that indicates abnormal operation. Corrective actions shall include, at a minimum, isolating, shutting down and conducting an internal inspection of the compartment

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

that is the source of the visible emissions that indicate abnormal operations. [40 CFR 63.848(g)(3)]

c. ***Corrective action.*** If a monitoring device for a primary control device measures an operating parameter outside the limit(s) established pursuant to 40 CFR 63.847(h), or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during a daily inspection, the permittee shall initiate corrective action procedures within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation. [40 CFR 63.848(h)]

d. ***Exceedances.*** If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six times in any semiannual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period. [40 CFR 63.848(i)]

e. Refer to **SECTION E.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 6 REQUIREMENTS: Anode Bake Furnace

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity
Emission Group IV: Anode Bake Furnace						
N2	(EE)	8/4/1972; Refurbished 2007; Modified to duct to a single stack in 2026	Anode Bake Furnace ("261 Furnace")	A-446 Dry Alumina Scrubber/ Baghouse System	Green Anodes; Natural Gas	17.74 tons/hr*; 51.0 MMBtu/hr

*Based on an annual average.

APPLICABLE REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality*

401 KAR 53:010, *Ambient air quality standards*

401 KAR 59:010, *New process operations*

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants*

40 CFR 64, *Compliance Assurance Monitoring,* applicable to the Anode Bake Furnace with respect to PM/PM_{10}.

PRECLUDED REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality*

1. **Operating Limitations:**

   a. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source. [40 CFR 63.843(f)]

   b. ***Startup of anode bake furnaces.*** The permittee shall develop a written startup plan as described in 40 CFR 63.847(l)(1) through (4), to be followed during startup periods of bake furnaces. Compliance with the startup plan will be demonstrated through site inspection(s) and review of site records by the Division. The written startup plan must

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

contain specific procedures to be followed during startup periods of anode bake furnaces, including the following: [40 CFR 63.847(l)]

i. A requirement to develop an anode bake furnace startup schedule. [40 CFR 63.847(l)(1)]
ii. Records of time, date, duration of anode bake furnace startup and any nonroutine actions taken during startup of the furnaces. [40 CFR 63.847(l)(2)]
iii. A requirement that the associated emission control system be operating within normal parametric limits prior to startup of the anode bake furnace. [40 CFR 63.847(l)(3)]
iv. A requirement to take immediate actions to stop the startup process as soon as practicable and continue to comply with 40 CFR 63.843(f) if the associated emission control system is off line at any time during startup. The anode bake furnace restart may resume once the associated emission control system is back on line and operating within normal parametric limits. [40 CFR 63.847(l)(4)]

c. The permittee shall install and operate an advanced furnace firing and control system to minimize natural gas usage per unit of baked anode production and thus, CO emissions. [401 KAR 51:017]

d. The petroleum coke used to make green anodes shall not exceed 3.0 percent sulfur by weight and the pitch shall not exceed 0.80 percent sulfur by weight as measured by the standard ASTM method, an approved alternative method, or by vendor Certificate of Analysis (per shipment basis). [401 KAR 53:005, Section 1(3)]

e. The packing coke used as cover material in the ABF shall not exceed 3.0 percent sulfur by weight as measured by the standard ASTM method, an approved alternative method, or by vendor Certificate of Analysis (per shipment basis). [401 KAR 53:005, Section 1(3)]

Compliance Demonstration Method:
Refer to **3. Testing Requirements (i)** and **5. Specific Recordkeeping Requirements (f).**

f. The permittee shall install, operate, and maintain a combined single stack for the A-446 Dry Alumina Scrubber/Baghouse System that is 213.2 ft tall. [401 KAR 53:005, Section 1(3)]

2. Emission Limitations:

a. The permittee shall not discharge or cause to be discharged into the atmosphere any emissions of TF, POM, PM or mercury in excess of the following limits: [40 CFR 63.843(c)]

i. ***TF limit.*** Emissions of TF shall not exceed 0.20 lb/ton (0.10 kg/Mg) of green anode; [40 CFR 63.843(c)(1)]
ii. ***POM limit.*** Emissions of POM shall not exceed 0.18 lb/ton (0.09 kg/Mg) of green anode; [40 CFR 63.843(c)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. ***PM limit.*** Emissions of PM shall not exceed 0.20 lb/ton (0.10 kg/Mg) of green anode; and [40 CFR 63.843(c)(3)]

iv. ***Mercury limit.*** Emissions of mercury shall not exceed 1.7 µg/dscm. [40 CFR 63.843(c)(4)]

Compliance Demonstration Method:

The permittee shall determine compliance with the applicable TF, POM, PM or Hg emission limits using the following equations and procedures: [40 CFR 63.847(e)]

1. Compute the emission rate (E_b) of TF, POM or PM from each anode bake furnace using the following equation: [40 CFR 63.847(e)(3)]

$$E_b = \frac{(C_s \times Q_{sd})}{(P_b \times K)}$$

Where:
E_b = emission rate of TF, POM or PM, lb/ton (kg/mg) of green anodes;
C_s = concentration of TF, POM or PM, mg/dscf (mg/dscm);
Q_{sd} = volumetric flow rate of effluent gas, dscf/hr (dscm/hr);
P_b = quantity of green anode material placed in the furnace, ton/hr (mg/hr); and
K = conversion factor, 453,600 mg/lb (106 mg/kg).

2. Compliance with the anode bake furnace Hg emission standard is demonstrated if the Hg concentration of the exhaust from the anode bake furnace control device is equal to or less than the applicable concentration standard in 40 CFR 63.843(c)(4). [40 CFR 63.847(e)(4)]
3. Determine the weight of the green anode material placed in the anode bake furnace using the monitoring devices required in 40 CFR 63.848(j). [40 CFR 63.847(e)(5)]
4. Determine the rate of green anode material introduced into the furnace by dividing the number of operating hours in the calendar month into the weight of green anode material used during the calendar month in which the performance test was conducted. [40 CFR 63.847(e)(7)]

b. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]

Compliance Demonstration Method:

Refer to **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements.**

c. For emissions from a control device or stack the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]

i. For process weight rates ≤ 0.50 ton/hour: $E = 2.34$

ii. For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 3.59P^{0.62}$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where: E = rate of emission in lb/hr, and
P = process weight rate in tons/hr

Compliance Demonstration Method:
Compliance with the hourly particulate emission limits described above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}} \times \left(1 - CE_j\right)$$

Where:
i = month;
j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);
h_{ij} = actual total hours of operation for unit j during month i (hours/month); and
CE_j = overall control efficiency (%) of any air pollution control equipment associated with unit j.

d. The permittee shall not allow PM/PM_{10} emissions from the Anode Bake Furnace to exceed 5.14 lbs/hr based on a 3-hour average. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:
Refer to **3. Testing Requirements (k)** and **4. Specific Monitoring Requirements (d)**.

e. The permittee shall not allow the SO_2 emissions from the Anode Bake Furnace (EU N2) to exceed 237 lb/hr on a rolling 24-hr average basis. [401 KAR 53:005, Section 1(3)]

Compliance Demonstration Method:
The permittee shall use the data from the SO_2 CEMS to calculate the lb/hr emissions from the Anode Bake Furnace. Refer to **4. Specific Monitoring Requirements (h)** and **(i)**, and **5. Specific Recordkeeping Requirements (f)** and **(h)**. Refer to **SECTION I** for calculations to be performed to determine compliance until the CEMS is installed and data is available.

f. For group SO_2 standards, refer to **SECTION D 3, 6,** and **7.**

3. Testing Requirements:

a. ***Test plan.*** The permittee shall prepare a site-specific test plan prior to the initial performance test according to the requirements of 40 CFR 63.7(c). The test plan shall include procedures for conducting the initial performance test and for subsequent

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

performance tests required in 40 CFR 63.848 for emission monitoring. In addition to the information required by 40 CFR 63.7, the test plan shall include: [40 CFR 63.847(b)]

i. Procedures to ensure a minimum of three runs are performed annually for the primary control system for each source; [40 CFR 63.847(b)(1)]

b. Following approval of the site-specific test plan, the permittee shall conduct a performance test to demonstrate initial compliance according to the procedures in 40 CFR 63.847(d). If a performance test has been conducted on the primary control system for the anode bake furnaces within the 12 months prior to the compliance date, the results of that performance test may be used to demonstrate initial compliance. The permittee shall conduct the performance test: [40 CFR 63.847(c)]

i. For Anode Bake Furnaces #1, #2, and #3, during the first month following: [40 CFR 63.847(c)(1)]
   1) October 17, 2016 for PM testing. [40 CFR 63.847(a)(2)(ii)]
   2) October 16, 2017 for Mercury (Hg) testing. [40 CFR 63.847(a)(2)(iii)]
   3) October 7, 1999 for TF and POM testing. [40 CFR 63.847(a)(1)]

ii. For an anode bake furnace that was shut down at the time compliance would have otherwise been required and is subsequently restarted, by the 45th day from the start of the second anode bake cycle (but no later than the 180th day from the startup of the anode bake furnace). [40 CFR 63.847(c)(3)(ii)]

c. ***Performance test requirements.*** All performance tests shall be conducted in accordance with the applicable requirements of the general provisions in 40 CFR 63, Subpart A, the approved test plan, and the procedures in 40 CFR 63.847. Performance tests shall be conducted under such conditions as the Administrator specifies to the permittee based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.847(d)]

d. ***Previous control device tests.*** If the permittee has performed more than one test of primary emission control device(s) for a bake furnace during the previous consecutive 12 months, the average of all runs performed in the previous 12-month period shall be used to determine the contribution from the primary emission control system. [40 CFR 63.847(d)(3)]

e. ***TF, POM, PM and Hg emissions from anode bake furnaces.*** For each anode bake furnace, the permittee shall measure and record the emission rate of TF, POM, PM and Hg exiting the exhaust stacks(s) of the primary emission control system. In accordance with 40 CFR 63.847(e)(3) and (4), the permittee shall compute and record the average of at least three runs each year to determine compliance with the applicable emission limits for TF, POM, PM and Hg. Compliance is demonstrated when the emission rates of TF, POM, PM and Hg are equal to or less than the applicable TF, POM, PM and Hg emission limits in 40 CFR 63.843. [40 CFR 63.847(d)(4)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. ***TF, PM, Hg and POM emissions from anode bake furnaces.*** Using the procedures in 40 CFR 63.847 and in the approved test plan, the permittee shall determine TF, PM, Hg and POM emissions from each anode bake furnace on an annual basis. The permittee shall compute and record the annual average of TF, PM, Hg and POM emissions from at least three runs to determine compliance with the applicable emission limits. A minimum of four dscm per run must be collected for monitoring of Hg emissions. The permittee must include all valid runs in the annual average. [40 CFR 63.848(c)]

g. The permittee shall use the following reference methods to determine compliance with the applicable emission limits for TF, POM, PM, and conduct visible emissions observations: [40 CFR 63.849(a)]
   i. Method 1 in 40 CFR 60, Appendix A for sample and velocity traverses; [40 CFR 63.849(a)(1)]
   ii. Method 2 in 40 CFR 60, Appendix A for velocity and volumetric flow rate; [40 CFR 63.849(a)(2)]
   iii. Method 3 in 40 CFR 60, Appendix A for gas analysis; [40 CFR 63.849(a)(3)]
   iv. Method 13A or Method 13B in 40 CFR 60, Appendix A, or an approved alternative, for the concentration of TF where stack or duct emissions are sampled; [40 CFR 63.849(a)(4)]
   v. Method 315 in 40 CFR 63, Appendix A or an approved alternative method for the concentration of POM where stack or duct emissions are sampled; [40 CFR 63.849(a)(6)]
   vi. Method 5 in 40 CFR 60, Appendix A or an approved alternative method for the concentration of PM where stack or duct emissions are sampled; [40 CFR 63.849(a)(8)]
   vii. Method 29 in 40 CFR 60, Appendix A or an approved alternative method for the concentration of mercury, nickel and arsenic where stack or duct emissions are sampled; [40 CFR 63.849(a)(10)]
   viii. Method 22 in 40 CFR 60, Appendix A or an approved alternative method for determination of visual emissions; [40 CFR 63.849(a)(12)]

h. The permittee may use an alternative test method for TF or POM emissions providing: [40 CFR 63.849(e)]
   i. The permittee has already demonstrated the equivalency of the alternative method for a specific plant and has received previous approval from the U.S. EPA or the Division for TF or POM measurements using the alternative method; or [40 CFR 63.849(e)(1)]
   ii. The permittee demonstrates to the satisfaction of the Division that the results from the alternative method meet the criteria specified in 40 CFR 63.848(d)(1) and (d)(3) through (d)(6). The results from the alternative method shall be based on simultaneous sampling using the alternative method and the following reference methods: [40 CFR 63.849(e)(2)]
      1) For TF, Methods 13 and 14 or Method 14A in 40 CFR 60, Appendix A; or [40 CFR 63.849(e)(2)(i)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2) For POM, Method 315 in 40 CFR 63, Appendix A and Method 14 in 40 CFR 60, Appendix A. [40 CFR 63.849(e)(2)(ii)]

i. Sulfur Content Sampling & Testing:
   i. A sample of green anode paste (normally from the conveyor downstream of the mixers and upstream of the anode press block) shall be collected at least once daily on days the Paste Plant is operating, except in the case of equipment malfunction.
      1) The green anode paste samples shall be analyzed using ASTM Method D6376 or an approved alternative method to determine the sulfur content.
      2) On days when samples cannot be obtained or analyzed due to a malfunction, the sulfur content for that day shall be set to the average of the values from the most recent day and next following day samples are obtained.
   ii. Core samples shall be extracted from baked anode blocks removed from the Anode Bake Furnace at least once per day on days the Furnace is in operation, except in the case of equipment malfunction.
      1) The daily core samples shall be extracted from a distribution of no less than four baked anodes and the sulfur content averages shall be attributed to anodes for the day the blocks were removed from the Furnace.
      2) The samples shall be analyzed using ASTM Method D6376 or an approved alternative method to determine the sulfur content. On days when core samples cannot be obtained due to a malfunction or other situation in which the core drilling sampling equipment is inoperable, the sulfur content for that day shall be set to the average of the values from the most recent day and next following day samples are obtained.
   iii. A sample of packing coke used in the Anode Bake Furnace as cover material shall be collected and analyzed at least once per month using ASTM Method D6376 or an approved alternative method to determine the sulfur content. If raw petroleum coke as received is used for packing coke, the permittee may alternatively use the average of sulfur content from certificate of analysis data provided by the supplier for shipments received in the prior month in lieu of conducting on-site analyses.

j. The following compliance tests shall be performed to demonstrate compliance with the emission limitations listed above and to develop emission factors:
   i. The permittee shall perform testing according to U.S. EPA Reference Method 10 for CO emissions within 180 days of the issuance of permit V-26-005.
   ii. The permittee shall perform testing according to U.S. EPA Reference Method 6 for SO_2 emissions within 180 days of the issuance of permit V-26-005. Method 6 reference-method measurements conducted as part of a Performance Specification 2 relative accuracy test of the SO_2 CEMS may be used to satisfy this testing requirement.
   iii. The permittee shall conduct a performance test for particulate emissions (filterable PM, $PM_{10,}$ $PM_{2.5}$ and Condensable Particulate) from each stack within 180 days of the issuance of permit V-26-005 and every 5 years thereafter. The tests shall be

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

performed according to Reference Method 5 and Reference Method 201A/202 for particulate emissions (filterable PM, $PM_{10,}$ $PM_{2.5}$ and Condensable Particulate).

iv. The permittee may use other test methods as approved by the Division.

k. The amount of green anodes baked, the amount of packing coke used, and the total operating hours during the calendar month of the performance test shall be determined and recorded for each performance test of the anode bake furnaces to determine the hourly average process rates. Emission rates measured during the test shall be normalized to production to calculate lb/ton of green anode emission factors.

l. Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. ***Selection of monitoring parameters.*** The permittee shall determine the operating limits and monitoring frequency for each control device that is to be monitored as required in 40 CFR 63.848(f). [40 CFR 63.847(h)]

i. For anode bake furnaces, the permittee shall determine upper and/or lower operating limits, as appropriate, for each monitoring device for the emission control system from the values recorded during each of the runs performed during the initial performance test and from historical data from previous performance tests conducted by the methods specified in 40 CFR 63, Subpart LL. [40 CFR 63.847(h)(1)]

ii. The permittee may redetermine the upper and/or lower operating limits, as appropriate, based on historical data or other information and submit an application to the Division to change the applicable limit(s). The redetermined limits shall become effective upon approval by the Division. [40 CFR 63.847(h)(3)]

b. ***Weight of green anodes.*** The permittee shall install, operate, and maintain a monitoring device to determine the daily weight of green anode material placed in the anode bake furnace. The weight of green anode material may be determined by monitoring the weight of all anodes or by monitoring the number of anodes placed in the furnace and determining an average weight from measurements of a representative sample of anodes. [40 CFR 63.848(j)]

c. The permittee shall perform a qualitative visual observation of the opacity of emissions at the stack twice daily while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). The Method 22 observations performed for 40 CFR 63; Subpart LL may also be used to meet the qualitative requirement. [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly particulate emission rates, calculated monthly.
   iv. The number of green anodes and total mass of green anodes (tons) placed in the anode bake furnace per month;
   v. Number of baked anodes and total mass of baked anodes (tons) removed from the anode bake furnace per month, including baked anodes or baked anode pieces scrapped for quality or other reasons;
   vi. Monthly mass of packing coke (tons) added to anode bake furnace;
   vii. 12-month rolling actual packing coke usage rate;
   viii. Monthly and 12-month rolling anode consumption rate.

e. Upon detecting an excursion or exceedance (as defined in the appropriate CAM plan), the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. [40 CFR 64.7(d)(1)]

f. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance (as defined in the CAM plan) will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process. [40 CFR 64.7(d)(2)]

g. For the Anode Bake Furnace, refer to Appendix A for CAM requirements pursuant to 40 CFR 64.

h. The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) for SO_2 emissions from the Anode Bake Furnace. The SO_2 CEMS must meet the requirements of 401 KAR 59:005, Section 4 and other provisions as the Cabinet deems necessary. [401 KAR 51:005, Section 2(3)]

i. The SO_2 CEMS shall be installed and operated in compliance with Performance Specification 2, as contained in 40 CFR Part 60, Appendix B. The span values for the CEMS shall be 50 ppm for SO_2. The CEMS shall be calibrated as specified in Performance Specification 2 for SO_2 as contained in 40 CFR Part 60 Appendix B. The

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

quality assurance shall follow the requirements of 40 CFR Part 60 Appendix F. [401 KAR 51:005, Section 2(3)]

j. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.10(b) and by 40 CFR 63, Subpart LL. [40 CFR 63.850(e)]

b. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained offsite; [40 CFR 63.850(e)(1)]

c. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; [40 CFR 63.850(e)(2)]

d. The permittee may report required information on paper or on a labeled computer disc using commonly available and compatible computer software; and [40 CFR 63.850(e)(3)]

e. In addition to the general records required by 40 CFR 63.10(b), the permittee shall maintain records of the following information: [40 CFR 63.850(e)(4)]
   i. Daily production rate of green anode material placed in the anode bake furnace; [40 CFR 63.850(e)(4)(ii)]
   ii. Records, such as a checklist or the equivalent, demonstrating that the daily visual inspection of the exhaust stack for each control device has been performed as required in 40 CFR 63.848(g), including the results of each inspection; [40 CFR 63.850(e)(4)(xi)]
   iii. Records documenting the corrective actions taken when the limit(s) for an operating parameter established under 40 CFR 63.847(h) were exceeded or when visible emissions indicating abnormal operation were observed from a control device stack during a daily inspection required under 40 CFR 63.848(g). [40 CFR 63.850(e)(4)(xiii)]
   iv. Records documenting the portion of TF that is measured as particulate matter and the portion that is measured as gaseous when the particulate and gaseous fractions are quantified separately using an approved test method; [40 CFR 63.850(e)(4)(xv)]
   v. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment; and [40 CFR 63.850(e)(4)(xvi)]
   vi. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.850(e)(4)(xvii)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. The permittee shall maintain the following records:
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Hourly particulate emission rates, calculated monthly;
   iv. The number of green anodes and total mass of green anodes (tons) placed in the anode bake furnace per month;
   v. Number of baked anodes and total mass of baked anodes (tons) removed from the anode bake furnace per month, including baked anodes or baked anode pieces scrapped for quality or other reasons;
   vi. Monthly mass of packing coke (tons) added to anode bake furnace;
   vii. 12-month rolling actual packing coke usage rate;
   viii. Monthly and 12-month rolling anode consumption rate;
   ix. Records of sulfur content measurements of green anode paste, baked anodes, and packing coke;
   x. Records of the occurrence, duration, and corrective actions taken for malfunctions of the green and baked anode sampling equipment.
   xi. Records of calibration for all monitoring devices;
   xii. The qualitative visual observations required by **4. Specific Monitoring Requirements (c),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any corrective action taken, and any U.S. EPA Reference Method 9 readings conducted.
   xiii. 24-hr rolling SO_2 emissions in lb/hr;
   xiv. Monthly and 12-month rolling SO_2 emissions in tons.

g. The permittee shall maintain records of the current parametric monitoring plan submitted to the Division in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

h. The permittee shall maintain records of the SO_2 concentration recorded from the CEMS and all other data related to proper operation of the CEMS. [401 KAR 52:020, Section 10]

i. For the Anode Bake Furnace:
   i. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR 64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). [40 CFR 64.9(b)(1)]
   ii. Instead of paper records, the permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements. [40 CFR 64.9(b)(1)]

j. Refer to **SECTION F** for general recordkeeping requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

a. ***Accuracy and calibration.*** The permittee shall submit recommended accuracy requirements to the Division for review and approval. All monitoring devices required by 40 CFR 63.848 must be certified by the permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848(k)]

b. ***Alternative operating parameters.*** The permittee may monitor alternative control device operating parameters subject to prior written approval by the Division. [40 CFR 63.848(l)]

c. The permittee shall submit a one-time notification of startup of an existing anode bake furnace that was shut down for a long period and subsequently restarted. The permittee must provide written notice to the Administrator at least 30 days before the startup. [40 CFR 63.850(a)(9)]

d. ***Performance test reports*****.** Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart LL, the permittee shall submit the results of the performance tests following the procedure specified in either 40 CFR 63.850(b)(1) or (b)(2). [40 CFR 63.850(b)]

   i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www.epa.gov/ert) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/epa_home.asp). Performance test data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, the permittee may submit performance test data in an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site once the XML schema is available. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.850(b)(1)]

   ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. For data collected which requires summation of results from both ERT and non-ERT supported test methods in order to demonstrate compliance with an emission limit, the permittee must submit the results of the performance test(s) used to demonstrate compliance with that emission limit to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(3)]

e. ***Reporting*.** In addition to the information required under 40 CFR 63.10 of the General Provisions, the permittee shall provide semiannual reports containing the information specified in 40 CFR 63.850(d)(1) and (2) to the Division. [40 CFR 63.850(d)]
   i. Excess emissions report. As required by 40 CFR 63.10(e)(3), the permittee shall submit a report (or a summary report) if measured emissions are in excess of the applicable standard. The report shall contain the information specified in 40 CFR 63.10(e)(3)(v) and be submitted quarterly. [40 CFR 63.850(d)(1)]
   ii. If there was a malfunction during the reporting period, the permittee shall submit a report that includes the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including actions taken to correct a malfunction. [40 CFR 63.850(d)(2)]

f. All reports required by 40 CFR 63, Subpart LL not subject to the requirements in 40 CFR 63.850(b) or (c) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.850(b) in paper format. [40 CFR 63.850(f)]

g. The Division will notify the permittee in writing of the need for additional time to review the submissions in 40 CFR 63.851(a)(1) through (a)(5) or of approval or intent to deny approval of the submissions in 40 CFR 63.851(a)(1) through (a)(5) within 60 calendar days after receipt of sufficient information to evaluate the submission. The 60-day period begins after the permittee has been notified that the submission is complete. [40 CFR 63.851(a)]
   i. The test plan in 40 CFR 63.847(b); [40 CFR 63.851(a)(1)]
   ii. Request to change limits for operating parameters in 40 CFR 63.847(h)(3); [40 CFR 63.851(a)(2)]
   iii. Request for an alternative method in 40 CFR 63.849(e)(2). [40 CFR 63.851(a)(5)]

h. The Division will notify the permittee in writing whether the submission is complete within 30 calendar days of receipt of the original submission or within 30 days of receipt of any supplementary information that is submitted. When a submission is incomplete, the Division will specify the information needed to complete the submission and will give the permittee 30 calendar days after receipt of the notification to provide the information. [40 CFR 63.851(b)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. The permittee shall submit any revisions of the parametric monitoring plan to the Division for approval in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

j. For the Anode Bake Furnace:
   i. On and after the date specified in 40 CFR 64.7(a) by which the permittee must use monitoring that meets the requirements of 40 CFR 64, the permittee shall submit monitoring reports to the Division in accordance with **SECTION F**. [40 CFR 64.9(a)(1)]
   ii. A report for monitoring under 40 CFR 64 shall include, at a minimum, the information required under 40 CFR 70.6(a)(3)(iii) and the following information, as applicable: [40 CFR 64.9(a)(2)]
      1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
      2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
      3) A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. [40 CFR 64.9(a)(2)(iii)]
      4) The threshold for requiring the implementation of a QIP is an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a semiannual reporting period. [40 CFR 64.8(a)]
   iii. Refer to **Appendix A** for reporting requirements under 40 CFR 64.

k. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. ***Monitoring parameters for emission control devices.*** The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall submit for approval by the Division a description of the parameter(s) to be monitored, the operating limits, and the monitoring frequency to ensure that the control device is being properly operated and maintained. An explanation of the criteria used for selection of the parameter(s), the operating limits, and the monitoring frequency, including how these relate to emission control also shall be submitted to the Division. Except as provided in 40 CFR 63.848(l), the following monitoring devices shall be installed: [40 CFR 63.848(f)]
   i. For dry alumina scrubbers, devices for the measurement of alumina flow and air flow; [40 CFR 63.848(f)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. For emission sources control device exhaust streams for which the permittee chooses to demonstrate continuous compliance through bag leak detection systems the permittee shall install and operate a bag leak detection system according to the requirements in 40 CFR 63.848(o), and the permittee shall set the operating limit such that the sum of the durations of bag leak detection system alarms does not exceed 5 percent of the process operating time during a 6-month period. [40 CFR 63.848(f)(6)]

iii. For emission sources control device exhaust streams for which the permittee chooses to demonstrate continuous compliance through a PM CEMS, the permittee shall install and operate a PM CEMS according to the requirements in 40 CFR 63.848(p). The permittee shall determine continuous compliance averaged on a rolling 30 operating day basis, updated at the end of each new operating day. All valid hours of data from 30 successive operating days shall be included in the arithmetic average. Compliance is demonstrated when the 30 operating day PM emissions are equal to or less than the applicable emission limits in 40 CFR 63.843. [40 CFR 63.848(f)(7)]

b. The permittee of an existing affected source that is equipped with a control device and is subject to a PM limit shall: [40 CFR 63.848(g)]

i. Install and operate a bag leak detection system in accordance with 40 CFR 63.848(f)(6); or [40 CFR 63.848(g)(1)]

ii. Install and operate a PM CEMS in accordance with 40 CFR 63.848(f)(7); or [40 CFR 63.848(g)(2)]

iii. Visually inspect the exhaust stack(s) using Method 22 on a twice daily basis (at least 4 hours apart) for evidence of any visible emissions indicating abnormal operations and, shall initiate corrective actions within 1 hour of a visible emissions inspection that indicates abnormal operation. Corrective actions shall include, at a minimum, isolating, shutting down and conducting an internal inspection of the compartment that is the source of the visible emissions that indicate abnormal operations. [40 CFR 63.848(g)(3)]

c. ***Corrective action.*** If a monitoring device for a primary control device measures an operating parameter outside the limit(s) established pursuant to 40 CFR 63.847(h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during a daily inspection, the permittee shall initiate corrective action procedures within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation. [40 CFR 63.848(h)]

d. ***Exceedances.*** If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six times in any semiannual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period. [40 CFR 63.848(i)]

e. Refer to **SECTION E**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

8. Compliance Schedule:
Refer to **SECTION I.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 7 REQUIREMENTS: Holding Furnaces

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity
Emission Group X: Casthouse Operations						
F1	(I3-I6)	8/4/1972	Holding Furnaces (4) with In-Line Degassers	None	Aluminum; Natural Gas	17.17 tons/hr*; 60.8 MMBtu/hr (combined)
F2	(I7, I8)	8/4/1979	Holding Furnaces (2) with In-Line Degassers	None	Aluminum; Natural Gas	8.58 tons/hr*; 30.4 MMBtu/hr (combined)

*Based on an annual average.

Under 40 CFR 63, Subpart RRR, these Holding Furnaces are classified as existing Group 1 Furnaces without add-on pollution control devices. Reactive flux is used as needed in both the holding furnaces and their associated in-line fluxers and the furnaces process only "clean charge".

APPLICABLE REGULATIONS:

401 KAR 53:010, *Ambient air quality standards* for HF

401 KAR 59:010, *New process operations* for unit F2

401 KAR 61:020, *Existing process operations* for unit F1

401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 through 63.1519, Tables 1 through 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*

1. **Operating Limitations:**

   a. At all times, the permittee 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 which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.1506(a)(5)]

   b. ***Labeling.*** The permittee must provide and maintain easily visible labels posted at each group 1 furnace and in-line fluxer that identifies the applicable emission limits and means of compliance, including: [40 CFR 63.1506(b)]
      i. The type of affected source or emission unit (e.g., Group 1 Furnace, In-Line Fluxer). [40 CFR 63.1506(b)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. The applicable operational standards and control methods (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan. [40 CFR 63.1506(b)(2)]

c. ***Feed/charge weight.*** The permittee must: [40 CFR 63.1506(d)]
   i. Except as provided in 40 CFR 63.1506(d)(3), install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and [40 CFR 63.1506(d)(1)]
   ii. Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan. [40 CFR 63.1506(d)(2)]
   iii. The permittee may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that: [40 CFR 63.1506(d)(3)]
      1) The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and [40 CFR 63.1506(d)(3)(i)]
      2) All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight. [40 CFR 63.1506(d)(3)(ii)]

d. ***Group 1 furnace without add-on air pollution control devices.*** The permittee must: [40 CFR 63.1506(n)]
   i. Maintain the total reactive chlorine flux injection rate and fluorine flux injection rate for each operating cycle or time period used in the performance test, at or below the average rate established during the performance test. [40 CFR 63.1506(n)(1)]
   ii. Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan. [40 CFR 63.1506(n)(2)]
   iii. Operate each group 1 melting/holding furnace subject to the emission standards in 40 CFR 63.1505(i)(2) using only clean charge as the feedstock. [40 CFR 63.1506(n)(3)]

e. ***Corrective action.*** When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation. [40 CFR 63.1506(p)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. Prior to changing furnace classifications to those not already authorized in **Section B** or **Section H**, the permittee shall submit a permit application to incorporate the applicable standards from 40 CFR 63, Subpart RRR regarding changes in furnace classification along with any other applicable requirements. [401 KAR 52:020, Section 7]

2. Emission Limitations:

a. ***Group 1 furnace.*** The permittee of a group 1 furnace shall use the limits in 40 CFR 63.1505(i) to determine the emission standards for a SAPU: [40 CFR 63.1505(i)]
   i. 0.80 lb of PM per ton (0.40 kg of PM per Mg) of feed/charge. [40 CFR 63.1505(i)(2)]
   ii. 0.40 lb of HF per ton (0.20 kg of HF per Mg) of feed/charge. [40 CFR 63.1505(i)(4)]
   iii. 0.40 lb of HCl per ton (0.20 kg of HCl per Mg) of feed/charge. [40 CFR 63.1505(i)(4)]
   iv. The permittee may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge. [40 CFR 63.1505(i)(6)]

b. ***In-line fluxer.*** Except as provided in 40 CFR 63.1505(j)(3) for an in-line fluxer using no reactive flux material, the permittee of an in-line fluxer shall use the limits in 40 CFR 63.1505(j) to determine the emission standards for a SAPU. [40 CFR 63.1505(j)]
   i. 0.04 lb of HCl per ton (0.02 kg of HCl per Mg) of feed/charge; [40 CFR 63.1505(j)(1)]
   ii. 0.01 lb of PM per ton (0.005 kg of PM per Mg) of feed/charge. [40 CFR 63.1505(j)(2)]
   iii. The permittee may determine the emission standards for a SAPU by applying the in-line fluxer limits on the basis of the aluminum production weight in each in-line fluxer, rather than on the basis of feed/charge. [40 CFR 63.1505(j)(5)]

Compliance Demonstration Method:

1. The permittee must comply with the emission limits calculated using the equations for PM, HCl and HF in 40 CFR 63.1505(k)(1) and (2) for each secondary aluminum processing unit (SAPU). [40 CFR 63.1505(k)]
   A. The permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM, HCl, or HF in excess of: [40 CFR 63.1505(k)(1) and (2)]

$$L_{c_{PM/HCl/HF}} = \frac{\sum_{i=1}^{n}(L_{ti_{PM/HCl/HF}} \times T_{ti})}{\sum_{i=1}^{n} T_{ti}}$$

Where:

$L_{ti_{PM/HCl/HF}}$ = The PM, HCl, or HF emission limit for individual emission unit *i* in 40 CFR 63.1505(i) for a group 1 furnace or in 40 CFR 63.1505(j) for an in-line fluxer;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

T_{ti} = The mass of feed/charge for 24 hours for individual emission unit *i*; and

$L_{c_{PM/HCl/HF}}$ = The daily PM, HCl, or HF emission limit for the secondary aluminum processing unit which is used to calculate the 3-day, 24-hour PM, HCl, or HF emission limit applicable to the SAPU.

Note for PM calculation: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit. [40 CFR 63.1505(k)(1)]

Note for HCl or HF calculation: Only uncontrolled group 1 furnaces are included in this HF limit calculation. In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl or HF limit. [40 CFR 63.1505(k)(2)]

B. The permittee of a SAPU at a secondary aluminum production facility may demonstrate compliance with the emission limits of 40 CFR 63.1505(k)(1) through (3) by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits of 40 CFR 63.1505(i) and (j). [40 CFR 63.1505(k)(4)]

C. With the prior approval of the Division, the permittee may redesignate any existing group 1 furnace or in-line fluxer at a secondary aluminum production facility as a new emission unit. Any emission unit so redesignated may thereafter be included in a new SAPU at that facility. Any such redesignation will be solely for the purpose of 40 CFR 63, Subpart RRR and will be irreversible. [40 CFR 63.1505(k)(6)]

2. ***Periods of startup and shutdown*.** The permittee must demonstrate compliance during periods of startup and shutdown in accordance with 40 CFR 63.1513(f)(1) or determine the emissions per unit of feed/charge during periods of startup and shutdown in accordance with 40 CFR 63.1513(f)(2). Startup and shutdown emissions for group 1 furnaces and in-line fluxers must be calculated individually, and not on the basis of a SAPU. Periods of startup and shutdown are excluded from the calculation of SAPU emission limits in 40 CFR 63.1505(k), the SAPU monitoring requirements in 40 CFR 63.1510(t) and the SAPU emissions calculations in 40 CFR 63.1513(e). [40 CFR 63.1513(f)]

   A. For periods of startup and shutdown, records establishing a feed/charge rate of zero, a flux rate of zero, and that the affected source or emission unit was either heated with electricity, propane or natural gas as the sole sources of heat or was not heated, may be used to demonstrate compliance with the emission limit, or [40 CFR 63.1513(f)(1)]

   B. For periods of startup and shutdown, divide the measured emissions in lb/hr or µg/hr or ng/hr by the feed/charge rate in tons/hr or Mg/hr from the most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data is available. [40 CFR 63.1513(f)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. For Emission Unit F2:
   i. The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]
   ii. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]
      1) For process weight rates ≤ 0.50 ton/hour: $E = 2.34$
      2) For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 3.59P^{0.62}$
      Where: E = rate of emission in lb/hr, and
      P = process weight rate in tons/hr

d. For Emission Unit F1:
   i. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than forty (40) percent opacity. [401 KAR 61:020, Section 3(1)(a)]
   ii. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 61:020, Appendix A. [401 KAR 61:020, Section 3(2)(a)]
      1) For process weight rates ≤ 0.50 ton/hour: $E = 2.58$
      2) For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 4.10P^{0.67}$
      Where: E = rate of emission in lb/hr, and
      P = process weight rate in tons/hr.

Compliance Demonstration Method:

1. For compliance with the opacity limits identified above, refer to **4. Specific Monitoring Requirements (t)** and **5. Specific Recordkeeping Requirements (f).**
2. Compliance with the hourly particulate emission limits identified above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}}$$

Where:
i = month;
j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

h_{ij} = actual total hours of operation for unit *j* during month *i* (hours/month)

e. For HF standards, refer to **SECTION D 4.**

3. Testing Requirements:

a. ***Site-specific test plan.*** Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in 40 CFR 63.7. Performance tests shall be conducted under such conditions as the Administrator specifies to the permittee based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.1511(a)]

b. ***Initial performance test.*** Following approval of the site-specific test plan, the permittee must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit, and report the results in the notification of compliance status report as described in 40 CFR 63.1515(b). The permittee shall conduct the initial performance tests no later than the date for compliance established by 40 CFR 63.1501. The permittee shall conduct each performance test in accordance with the requirements and procedures set forth in 40 CFR 63.7(c). [40 CFR 63.1511(b)]

i. The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the Division. These new parametric settings shall be used to demonstrate compliance for the period being tested. [40 CFR 63.1511(b)(1)]

ii. Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in appendix A to part 60, use the following procedure to ensure that sampling is conducted over the entire process operating cycle: [40 CFR 63.1511(b)(3)]

1) Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (e.g., if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

divide the sampling time evenly between the required number of traverse points); [40 CFR 63.1511(b)(3)(i)]

2) After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of appendix A to part 60, must be sampled at least once during each test run; [40 CFR 63.1511(b)(3)(ii)]
3) In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (e.g., if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.) [40 CFR 63.1511(b)(3)(iii)]

iii. Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter. [40 CFR 63.1511(b)(4)]
iv. Initial compliance with an applicable emission limit or standard is demonstrated if the average of three runs conducted during the performance test is less than or equal to the applicable emission limit or standard. [40 CFR 63.1511(b)(5)]
v. Apply 40 CFR 63.1511(b)(1) through (5), for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant. [40 CFR 63.1511(b)(6)]
vi. The permittee shall not conduct performance tests during periods of malfunction. [40 CFR 63.1511(b)(7)]

c. ***Test methods.*** The permittee must use the following methods in 40 CFR 60, Appendix A, to determine compliance with the applicable emission limits or standards: [40 CFR 63.1511(c)]
   i. Method 1 for sample and velocity traverses. [40 CFR 63.1511(c)(1)]
   ii. Method 2 for velocity and volumetric flow rate. [40 CFR 63.1511(c)(2)]
   iii. Method 3 for gas analysis. [40 CFR 63.1511(c)(3)]
   iv. Method 4 for moisture content of the stack gas. [40 CFR 63.1511(c)(4)]
   v. Method 5 for the concentration of PM. [40 CFR 63.1511(c)(5)]
   vi. Method 9 for visible emission observations. [40 CFR 63.1511(c)(6)]
   vii. Method 26A for the concentration of HCl and HF. Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. [40 CFR 63.1511(c)(9)]

d. ***Alternative methods.*** The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3): The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

e. ***Repeat tests.*** The permittee must conduct a performance test every 5 years following the initial performance test. [40 CFR 63.1511(e)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. ***Testing of representative emission units.*** With the prior approval of the Division, the permittee may utilize emission rates obtained by testing a particular type of group 1 furnace that does not have an add-on control device, or by testing an in-line flux box that does not have an add-on air pollution control device, to determine the emission rate for other units of the same type at the same facility. Such emission test results may only be considered to be representative of other units if all of the following criteria are satisfied: [40 CFR 63.1511(f)]

i. The tested emission unit must use feed materials and charge rates which are comparable to the emission units that it represents; [40 CFR 63.1511(f)(1)]

ii. The tested emission unit must use the same type of flux materials in the same proportions as the emission units it represents; [40 CFR 63.1511(f)(2)]

iii. The tested emission unit must be operated utilizing the same work practices as the emission units that it represents; [40 CFR 63.1511(f)(3)]

iv. The tested emission unit must be of the same design as the emission units that it represents; and [40 CFR 63.1511(f)(4)]

v. The tested emission unit must be tested under the highest load or capacity reasonably expected to occur for any of the emission units that it represents. [40 CFR 63.1511(f)(5)]

vi. All 3 separate runs of a performance test must be conducted on the same emission unit. [40 CFR 63.1511(f)(6)]

g. ***Establishment of monitoring and operating parameter values.*** The permittee must establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit or standard. To establish the minimum or maximum value or range, the permittee must use the appropriate procedures in 40 CFR 63.1511 and submit the information required by 40 CFR 63.1515(b)(4) in the notification of compliance status report. The permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the Division: [40 CFR 63.1511(g)]

i. The complete emission test report(s) used as the basis of the parameter(s) is submitted. [40 CFR 63.1511(g)(1)]

ii. The same test methods and procedures as required by 40 CFR 63, Subpart RRR were used in the test. [40 CFR 63.1511(g)(2)]

iii. The permittee certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report. [40 CFR 63.1511(g)(3)]

iv. All process and control equipment operating parameters required to be monitored were monitored as required in 40 CFR 63, Subpart RRR and documented in the test report. [40 CFR 63.1511(g)(4)]

v. If the permittee wants to conduct a new performance test and establish different operating parameter values, a revised site specific test plan must be submitted and the permittee shall receive approval from the Division in accordance with 40 CFR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

63.1511(a). In addition, if the permittee wants to use existing data in addition to the results of the new performance test to establish operating parameter values, the requirements in 40 CFR 63.1511(g)(1) through (4) must be met. [40 CFR 63.1511(g)(5)]

h. ***Group 1 furnace (including melting holding furnaces) without add-on air pollution control devices.*** In the site-specific monitoring plan required by 40 CFR 63.1510(o), the permittee of a group 1 furnace (including a melting/holding furnace) without add-on air pollution control devices must include data and information demonstrating compliance with the applicable emission limits. [40 CFR 63.1512(e)]

i. If the group 1 furnaces process only clean charge, the permittee must conduct emission tests to simultaneously measure emissions of PM, HCl and HF. A D/F test is not required. Each test must be conducted while the group 1 furnace (including a melting/holding furnace) processes only clean charge. [40 CFR 63.1512(e)(2)]

j. The permittee may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine and fluorine contained in reactive flux added to the group 1 furnace is emitted as HCl and HF. Under these circumstances, the permittee is not required to conduct an emission test for HCl or HF. [40 CFR 63.1512(e)(3)]

k. When testing an existing uncontrolled furnace, the permittee must comply with the requirements of either 40 CFR 63.1512(e)(4)(i), (ii) or (iii) at the next required performance test required by 40 CFR 63.1511(e). [40 CFR 63.1512(e)(4)]
   i. Install hooding that meets ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14), or [40 CFR 63.1512(e)(4)(i)]
   ii. At least 180 days prior to testing, petition the Division that such hoods are impractical under the provisions of 40 CFR 63.1512(e)(6) and propose testing procedures that will minimize unmeasured emissions during the performance test according to 40 CFR 63.1512(e)(7), or [40 CFR 63.1512(e)(4)(ii)]
   iii. Assume an 80-percent capture efficiency for the furnace exhaust (i.e., multiply emissions measured at the furnace exhaust outlet by 1.25). If the permittee fails to demonstrate compliance using the 80-percent capture efficiency assumption, the permittee shall re-test with a hood that meets the ACGIH Guidelines within 180 days, or petition the Division, within 180 days, that such hoods are impractical under the provisions of 40 CFR 63.1512(e)(6) and propose testing procedures that will minimize unmeasured emissions during the performance test according to 40 CFR 63.1512(e)(7). [40 CFR 63.1512(e)(4)(iii)]
   iv. The 80-percent capture efficiency assumption is not applicable in the event of testing conducted under an approved petition submitted pursuant to 40 CFR 63.1512(e)(4)(ii) or (iii). [40 CFR 63.1512(e)(4)(iv)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

l. The installation of hooding that meets ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14) is considered impractical if any of the following conditions exist: [40 CFR 63.1512(e)(6)]
   i. Building or equipment obstructions (for example, wall, ceiling, roof, structural beams, utilities, overhead crane or other obstructions) are present such that the temporary hood cannot be located consistent with acceptable hood design and installation practices; [40 CFR 63.1512(e)(6)(i)]
   ii. Space limitations or work area constraints exist such that the temporary hood cannot be supported or located to prevent interference with normal furnace operations or avoid unsafe working conditions for the furnace operator; or [40 CFR 63.1512(e)(6)(ii)]
   iii. Other obstructions and limitations subject to agreement of the Division. [40 CFR 63.1512(e)(6)(iii)]

m. Testing procedures that will minimize unmeasured emissions may include, but are not limited to the following: [40 CFR 63.1512(e)(7)]
   i. Installing a hood that does not entirely meet ACGIH guidelines; [40 CFR 63.1512(e)(7)(i)]
   ii. Using the building as an enclosure, and measuring emissions exhausted from the building if there are no other furnaces or other significant sources in the building of the pollutants to be measured; [40 CFR 63.1512(e)(7)(ii)]
   iii. Installing temporary baffles on those sides or top of furnace opening if it is practical to do so where they will not interfere with material handling or with the furnace door opening and closing; [40 CFR 63.1512(e)(7)(iii)]
   iv. Minimizing the time the furnace doors are open; [40 CFR 63.1512(e)(7)(iv)]
   v. Delaying gaseous reactive fluxing until charging doors are closed; [40 CFR 63.1512(e)(7)(v)]
   vi. Agitating or stirring molten metal as soon as practicable after salt flux addition and closing doors as soon as possible after solid fluxing operations, including mixing and dross removal; [40 CFR 63.1512(e)(7)(vi)]
   vii. Keeping building doors and other openings closed to the greatest extent possible to minimize drafts that would divert emissions from being drawn into the furnace; [40 CFR 63.1512(e)(7)(vii)]
   viii. Maintaining burners on low-fire or pilot operation while the doors are open; [40 CFR 63.1512(e)(7)(viii)]
   ix. Use of fans or other device to direct flow into a furnace when door is open; or [40 CFR 63.1512(e)(7)(ix)]
   x. Removing the furnace cover one time in order to add a smaller but representative charge and then replacing the cover. [40 CFR 63.1512(e)(7)(x)]

n. ***In-line fluxer.*** The permittee of an in-line fluxer that uses reactive flux materials must conduct a performance test to measure emissions of HCl and PM or otherwise demonstrate compliance in accordance with 40 CFR 63.1512(h)(2). [40 CFR 63.1512(h)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

o. The permittee may choose to limit the rate at which reactive flux is added to an in-line fluxer and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line fluxer is emitted as HCl. Under these circumstances, the permittee is not required to conduct an emission test for HCl. If the permittee of any in-line flux box that has no ventilation ductwork manifolded to any outlet or emission control device chooses to demonstrate compliance with the emission limits for HCl by limiting use of reactive flux and assuming that all chlorine in the flux is emitted as HCl, compliance with the HCl limit shall also constitute compliance with the emission limit for PM and no separate emission test for PM is required. In this case, the permittee of the unvented in-line flux box must use the maximum permissible PM emission rate for the in-line flux boxes when determining the total emissions for any SAPU which includes the flux box. [40 CFR 63.1512(h)(2)]

p. ***Secondary aluminum processing unit.*** The permittee must conduct performance tests as described in 40 CFR 63.1512(j)(1) through (3). The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, HCl, and HF from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR 63.1510(t). A performance test is required for: [40 CFR 63.1512(j)]
   i. Each group 1 furnace processing only clean charge to measure emissions of PM and emissions of HF and HCl (for determining the emission limit). [40 CFR 63.1512(j)(1)(i)]
   ii. Each in-line fluxer to measure emissions of PM and HCl. [40 CFR 62.1512(j)(3)]

q. ***Feed/charge weight measurement.*** During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the permittee must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. A permittee that chooses to demonstrate compliance on the basis of the aluminum production weight shall measure the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight. [40 CFR 63.1512(k)]

r. ***Flux injection rate.*** The permittee must use these procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate and, for uncontrolled furnaces, the total reactive fluorine flux injection rate. [40 CFR 63.1512(o)]
   i. Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15-minute period during the HCl and HF tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs; [40 CFR 63.1512(o)(1)]
   ii. Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs; [40 CFR 63.1512(o)(2)]
   iii. Determine the total reactive chlorine flux injection rate and, for uncontrolled furnaces, the total reactive fluorine flux injection rate by adding the recorded measurement of the total weight of chlorine and, for uncontrolled furnaces, fluorine in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the gaseous or liquid reactive flux injected and the total weight of chlorine and, for uncontrolled furnaces, fluorine in the solid reactive flux using the equation below. [40 CFR 63.1512(o)(3)]

$$W_t = F_1 W_1 + F_2 W_2$$

Where:

W_t = Total chlorine or fluorine usage, by weight;
F_1 = Fraction of gaseous or liquid flux that is chlorine or fluorine;
W_1 = Weight of reactive flux gas injected;
F_2 = Fraction of solid reactive chloride flux that is chlorine (*e.g.*, F = 0.75 for magnesium chloride) or fraction of solid reactive flux that is fluorine (e.g., F = 0.33 for potassium fluoride); and
W_2 = Weight of solid reactive flux

iv. Divide the weight of total chlorine or fluorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and [40 CFR 63.1512(o)(4)]

v. If a solid reactive flux other than magnesium chloride or potassium fluoride is used, the permittee shall derive the appropriate proportion factor subject to approval by the Division. [40 CFR 63.1512(o)(5)]

s. ***PM, HCl, and HF emission limits*.** Use the following equation to determine compliance with an emission limit for PM, HCl, or HF: [40 CFR 63.1513(b)(1)]

$$E = \frac{C \times Q \times K_1}{P}$$

Where:

E = Emission rate of PM, HCl or HF, in lb/ton (kg/Mg) of feed;
C = Concentration of PM, HCl or HF, in gr/dscf (g/dscm);
Q = Volumetric flow rate of exhaust gases, in dscf/hr (dscm/hr);
K_1 = Conversion factor, 1 lb/7,000 gr (1 kg/1,000 g); and
P = Production rate, in ton/hr (Mg/hr).

t. ***Secondary aluminum processing unit.*** The permittee shall use the procedures in 40 CFR 63.1513(e)(1) and (2) or the procedure in 40 CFR 63.1513(e)(4) to determine compliance with emission limits for a secondary aluminum processing unit (SAPU). [40 CFR 63.1513(e)]

i. Use the following equation to compute the mass-weighted PM, HCl, or HF emissions for a secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit ($E_{cPM/HCl/HF}$) is less than or equal to the emission limit for the secondary aluminum processing unit ($L_{cPM/HCl/HF}$) calculated using the equations in 40 CFR 63.1505(k). [40 CFR 63.1513(e)(1) and (2)]

$$E_{C_{PM/HCl/HF}} = \frac{\sum_{i=1}^{n}(E_{ti_{PM/HCl/HF}} \times T_{ti})}{\sum_{i=1}^{n} T_{ti}}$$

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Where:

$E_{C_{PM/HCl/HF}}$ = The mass-weighted PM, HCl, or HF emissions for the secondary aluminum processing unit;

$E_{ti_{PM/HCl/HF}}$ = Measured PM, HCl, or HF emissions for individual emission unit, or group of co-controlled emission units, *i*;

T_{ti} = The average feed rate for individual emission unit *i* during the operating cycle or performance test period, or the sum of the average feed rates for all emission units in the group of co-controlled emission units *i*; and

n = The number of emission units, and groups of co-controlled emission units in the secondary aluminum processing unit.

ii. As an alternative to using the equations in 40 CFR 63.1513(e)(1) and (2), the permittee may demonstrate compliance for a secondary aluminum processing unit by demonstrating that each existing group 1 furnace is in compliance with the emission limits for a new group 1 furnace in 40 CFR 63.1505(i) and that each existing in-line fluxer is in compliance with the emission limits for a new in-line fluxer in 40 CFR 63.1505(j). [40 CFR 63.1513(e)(4)]

u. Pursuant to 401 KAR 59:005, Section 2(2), 61:005, Section 2(1), and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. The permittee shall prepare and implement for each affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements**, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. ***Labeling.*** The permittee must inspect equipment labels for each group 1 furnace and in-line fluxer at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible. [40 CFR 63.1510(c)]

c. ***Feed/charge weight.*** The permittee must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the affected source or emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the permittee may use a procedure acceptable to the Division to determine the total weight of feed/charge or aluminum production to the affected source or emission unit. [40 CFR 63.1510(e)]

i. The accuracy of the weight measurement device or procedure must be ±1 percent of the weight being measured. The permittee may apply to the Division for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the permittee provides assurance through data and information that the affected source will meet the relevant emission standard. [40 CFR 63.1510(e)(1)]

ii. The permittee must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. [40 CFR 63.1510(e)(2)]

d. ***Total reactive flux injection rate.*** The permittee must:

i. Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit: [40 CFR 63.1510(j)(1)]

1) The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. [40 CFR 63.1510(j)(1)(i)]

2) The accuracy of the weight measurement device shall be ±1 percent of the weight of the reactive component of the flux being measured. The permittee may apply to the Division for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ±1 percent impracticable. A device of alternative accuracy will not be approved unless the permittee provides assurance through data and information that the affected source will meet the relevant emission standards. [40 CFR 63.1510(j)(1)(ii)]

3) The permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months. [40 CFR 63.1510(j)(1)(iii)]

ii. Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o). [40 CFR 63.1510(j)(2)]

iii. Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of: [40 CFR 63.1510(j)(3)]

1) Gaseous or liquid reactive flux other than chlorine; and [40 CFR 63.1510(j)(3)(i)]

2) Solid reactive flux. [40 CFR 63.1510(j)(3)(ii)]

iv. Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedures in 40 CFR 63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the performance test using the procedures in 40 CFR 63.1512(o). [40 CFR 63.1510(j)(4)]

v. The permittee may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the permittee provides assurance through data and information

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that the affected source will meet the relevant emission standards on a continuous basis. [40 CFR 63.1510(j)(5)]

e. ***Group 1 furnace without add-on air pollution control devices.*** The permittee must develop, in consultation with the Division, a written site-specific monitoring plan. The site-specific monitoring plan must be submitted to the Division as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and shall demonstrate, based on documented test results, the relationship between emissions of PM, HCl, and HF, and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and HF that will be emitted from the furnace in accordance with 40 CFR 63.1511(b)(1). If the Division determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of 40 CFR 63.1510 or 40 CFR 63, Subpart RRR, the permittee must promptly make all necessary revisions and resubmit the revised plan. [40 CFR 63.1510(o)(1)]
   i. The permittee of an existing affected source must submit the site-specific monitoring plan to the Division for review at least 6 months prior to the compliance date. [40 CFR 63.1510(o)(1)(i)]
   ii. The Division will review and approve or disapprove a proposed plan, or request changes to a plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limits and demonstrates, based on documented test results, the relationship between emissions of PM, HCl, and HF and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and HF that will be emitted from the furnace. Subject to approval of the OM&M plan, the highest levels may be determined by conducting performance tests and monitoring operating parameters in accordance with 40 CFR 63.1511(b)(1). [40 CFR 63.1510(o)(1)(ii)]

f. Each site-specific monitoring plan must document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards. [40 CFR 63.1510(o)(2)]

g. Each site-specific monitoring plan must include provisions for unit labeling as required in 40 CFR 63.1510(c), feed/charge weight measurement (or production weight measurement) as required in 40 CFR 63.1510(e), and flux weight measurement as required in 40 CFR 63.1510(j). [40 CFR 63.1510(o)(3)]

h. Each site-specific monitoring plan for a melting/holding furnace subject to the clean charge emission standard in 40 CFR 63.1505(i)(3) must include these requirements: [40 CFR 63.1510(o)(4)]
   i. The permittee shall record the type of feed/charge (e.g., ingot, thermally dried chips, dried scrap, etc.) for each operating cycle or time period used in the performance test; and [40 CFR 63.1510(o)(4)(i)]
   ii. The permittee shall submit a certification of compliance with the applicable operational standard for clean charge materials in 40 CFR 63.1506(n)(3) for each 6-

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(iv). [40 CFR 63.1510(o)(4)(ii)]

i. If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in 40 CFR 63, Subpart A. [40 CFR 63.1510(o)(5)]

j. If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(o)(6)]

k. If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 40 CFR 63.1510(p). [40 CFR 63.1510(o)(7)]
   i. ***Scrap inspection program for group 1 furnace without add-on air pollution control devices.*** A scrap inspection program must include: [40 CFR 63.1510(p)]
      1) A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples; [40 CFR 63.1510(p)(1)]
      2) A scrap inspector training program; [40 CFR 63.1510(p)(2)]
      3) An established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples; [40 CFR 63.1510(p)(3)]
      4) Periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results; [40 CFR 63.1510(p)(4)]
      5) A system for assuring that only acceptable scrap is charged to an affected group 1 furnace; and [40 CFR 63.1510(p)(5)]
      6) Recordkeeping requirements to document conformance with plan requirements. [40 CFR 63.1510(p)(6)]

l. If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 40 CFR 63.1510(q). [40 CFR 63.1510(o)(8)]
   i. ***Monitoring of scrap contamination level by calculation method for group 1 furnace without add-on air pollution control devices.*** The permittee of a group 1 furnace dedicated to processing a distinct type of furnace feed/charge composed of scrap with a uniform composition (such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented) may include a program in the site-specific monitoring plan for determining, monitoring, and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method must include: [40 CFR 63.1510(q)]

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1) Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test. [40 CFR 63.1510(q)(1)]
2) Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test. [40 CFR 63.1510(q)(2)]
3) Operating, monitoring, recordkeeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace. [40 CFR 63.1510(q)(3)]

m. ***Secondary aluminum processing unit.*** Except as provided in 40 CFR 63.1510(u), the permittee must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and HF for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the permittee must: [40 CFR 63.1510(t)]
   i. Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required in 40 CFR 63.1510(e). If the permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis. [40 CFR 63.1510(t)(1)]
   ii. Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the performance test) to provide emissions for each emission unit for the 24-hour period, in pounds. [40 CFR 63.1510(t)(2)]
      1) Where no performance test has been conducted, for a particular emission unit, because the permittee has, with the approval of the Division, chosen to determine the emission rate of an emission unit by testing a representative unit, in accordance with 40 CFR 63.1511(f), the permittee shall use the emission rate determined from the representative unit in the SAPU emission rate calculation required in 40 CFR 63.1510(t)(4). [40 CFR 63.1510(t)(2)(i)]
      2) If the permittee has not conducted performance tests for HCl and HF or for HCl for an in-line fluxer, in accordance with the provisions of 40 CFR 63.1512(e)(3) or (h)(2), the calculation required in 40 CFR 63.1510(t)(4) to determine SAPU-wide HCl and HF emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl and all fluorine contained in reactive flux added to the emission unit is emitted as HF. [40 CFR 63.1510(t)(2)(ii)]
   iii. Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU. [40 CFR 63.1510(t)(3)]

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iv. Compute the 24-hour daily emission rate using the following equation: [40 CFR 63.1510(t)(4)]

$$E_{day} = \frac{\sum_{i=1}^{n}(T_i \times ER_i)}{\sum_{i=1}^{n} T_i}$$

Where:

E_{day} = The daily PM, HCl, and HF emission rate for the secondary aluminum processing unit for the 24-hour period;

T_i = The total amount of feed, or aluminum produced, for emission unit *i* for the 24-hour period (tons or Mg);

ER_i = The measured emission rate for emission unit *i* as determined in the performance test (lb/ton or µg/Mg of feed/charge); and

n = The number of emission units in the secondary aluminum processing unit.

v. Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with 40 CFR 63.1505(k)(1)-(3). [40 CFR 63.1510(t)(5)]

n. ***Secondary aluminum processing unit compliance by individual emission unit demonstration.*** As an alternative to the procedures of 40 CFR 63.1510(t), the permittee may demonstrate, through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit. [40 CFR 63.1510(u)]

o. ***Alternative monitoring methods.*** If the permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR 63.1510(j)(5), the permittee may submit an application to the Administrator. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6). [40 CFR 63.1510(w)]

p. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

q. For each emission unit listed above, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;

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ii. Monthly process weight;
iii. Monthly fuel usage in MMscf;
iv. Hourly PM emission rates, calculated monthly.

r. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR 63, Subpart RRR. [40 CFR 63.1517(a)]
   i. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)(1)]
   ii. The permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and [40 CFR 63.1517(a)(2)]
   iii. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software. [40 CFR 63.1517(a)(3)]

b. In addition to the general records required by 40 CFR 63.10(b), the permittee must maintain records of: [40 CFR 63.1517(b)]
   i. For each group 1 furnace (with or without add-on air pollution control devices) or in-line fluxer, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken. [40 CFR 63.1517(b)(5)]
   ii. For each continuous monitoring system, records required by 40 CFR 63.10(c). [40 CFR 63.1517(b)(6)]
   iii. For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test. [40 CFR 63.1517(b)(7)]
   iv. Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan. [40 CFR 63.1517(b)(8)]
   v. Records of all charge materials for each group 1 melting/holding furnaces without air pollution control devices processing only clean charge. [40 CFR 63.1517(b)(9)]
   vi. Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements. [40 CFR 63.1517(b)(13)]
   vii. Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-

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duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate. [40 CFR 63.1517(b)(14)]

viii. Records for any approved alternative monitoring or test procedure. [40 CFR 63.1517(b)(15)]

ix. Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including: [40 CFR 63.1517(b)(16)]
   1) OM&M plan; and [40 CFR 63.1517(b)(16)(ii)]
   2) Site-specific secondary aluminum processing unit emission plan (if applicable). [40 CFR 63.1517(b)(16)(iii)]

x. For each secondary aluminum processing unit, records of total charge weight, or if the permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions. [40 CFR 63.1517(b)(17)]

c. For any failure to meet an applicable standard, the permittee must maintain the following records; [40 CFR 63.1517(b)(18)]
   i. Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken. [40 CFR 63.1517(b)(18)(i)]
   ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.1517(b)(18)(ii)]

d. For each period of startup or shutdown for which the permittee chooses to demonstrate compliance for an affected source, the permittee must comply with 40 CFR 63.1517(b)(19)(i) or (ii). [40 CFR 63.1517(b)(19)]
   i. To demonstrate compliance based on a feed/charge rate of zero, a flux rate of zero and the use of electricity, propane or natural gas as the sole sources of heating or the lack of heating, the permittee must submit a semiannual report in accordance with 40 CFR 63.1516(b)(2)(vii) or maintain the following records: [40 CFR 63.1517(b)(19)(i)]
      1) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(i)(A)]
      2) The quantities of feed/charge and flux introduced during each startup and shutdown; and [40 CFR 63.1517(b)(19)(i)(B)]
      3) The types of fuel used to heat the unit, or that no fuel was used, during startup and shutdown; or [40 CFR 63.1517(b)(19)(i)(C)]
   ii. To demonstrate compliance based on performance tests, the permittee must maintain the following records: [40 CFR 63.1517(b)(19)(ii)]
      1) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(ii)(A)]
      2) The measured emissions in lb/hr or µg/hr or ng/hr; [40 CFR 63.1517(b)(19)(ii)(B)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3) The measured feed/charge rate in tons/hr or Mg/hr from the most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data is available; and[40 CFR 63.1517(b)(19)(ii)(C)]
4) An explanation to support that such conditions are considered representative startup and shutdown operations. [40 CFR 63.1517(b)(19)(ii)(D)]

e. If the permittee chooses to change furnace operating modes, the following records must be maintained: [40 CFR 63.1517(b)(20)]
   i. The date and time of each change in furnace operating mode, and [40 CFR 63.1517(b)(20)(i)]
   ii. The nature of the change in operating mode (for example, group 1 uncontrolled furnace processing clean charge to group 2). [40 CFR 63.1517(b)(20)(ii)]

f. For each emission unit listed above, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Monthly fuel usage in MMscf;
   iv. Hourly pollutant emission rates, calculated monthly;
   v. The qualitative visual observations required by **4. Specific Monitoring Requirements (p),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any Method 9 readings taken, and any corrective action taken including results due to observed emissions;
   vi. Preventative maintenance and/or equipment inspections performed;
   vii. Parameters used to determine fluxing rate;
   viii. Weight measurement device calibrations.

g. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee must prepare and implement for each new or existing affected source and emission unit, a written OM&M plan. The permittee must submit the OM&M plan to the Division no later than the compliance date established by 40 CFR 63.1501. The plan must be accompanied by a written certification by the permittee that the OM&M plan satisfies all requirements of 40 CFR 63.1510 and is otherwise consistent with the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(b)]

b. The permittee must comply with all of the provisions of the OM&M plan as submitted to the Division, unless and until the plan is revised in accordance with the following procedures. [40 CFR 63.1510(b)]
   i. If the Division determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 40 CFR 63.1510 or

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40 CFR 63, Subpart RRR, the permittee must promptly make all necessary revisions and resubmit the revised plan.

ii. If the permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the permittee submits a description of the changes and a revised plan incorporating them to the Division.

c. Each OM&M plan must contain the following information: [40 CFR 63.1510(b)]

i. Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device. [40 CFR 63.1510(b)(1)]

ii. A monitoring schedule for each affected source and emission unit. [40 CFR 63.1510(b)(2)]

iii. Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR 63.1505. [40 CFR 63.1510(b)(3)]

iv. Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including: [40 CFR 63.1510(b)(4)]

1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and [40 CFR 63.1510(b)(4)(i)]

2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A. [40 CFR 63.1510(b)(4)(ii)]

v. Procedures for monitoring process parameters, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used. [40 CFR 63.1510(b)(5)]

vi. Corrective actions to be taken when process or operating parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including: [40 CFR 63.1510(b)(6)]

1) Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and [40 CFR 63.1510(b)(6)(i)]

2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed. [40 CFR 63.1510(b)(6)(ii)]

vii. A maintenance schedule for each process that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

viii. Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in 40 CFR 63.1510(o) for each group 1 furnace not equipped with an add-on air pollution control device. [40 CFR 63.1510(b)(8)]

ix. Procedures to be followed when changing furnace classifications under the provisions of 40 CFR 63.1514. [40 CFR 63.1510(b)(9)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. ***Site-specific requirements for secondary aluminum processing units.*** For a secondary aluminum processing unit at a facility, the permittee must include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information: [40 CFR 63.1510(s)(1)]
   i. The identification of each emission unit in the secondary aluminum processing unit; [40 CFR 63.1510(s)(1)(i)]
   ii. The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application; [40 CFR 63.1510(s)(1)(ii)]
   iii. The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit; [40 CFR 63.1510(s)(1)(iii)]
   iv. Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of 40 CFR 63, Subpart RRR; and [40 CFR 63.1510(s)(1)(iv)]
   v. The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t). [40 CFR 63.1510(s)(1)(v)]

e. The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions: [40 CFR 63.1510(s)(2)]
   i. Any averaging among emissions of differing pollutants; [40 CFR 63.1510(s)(2)(i)]
   ii. The inclusion of any affected sources other than emission units in a secondary aluminum processing unit; [40 CFR 63.1510(s)(2)(ii)]
   iii. The inclusion of any emission unit while it is shutdown; or [40 CFR 63.1510(s)(2)(iii)]
   iv. The inclusion of any periods of startup or shutdown in emission calculations. [40 CFR 63.1510(s)(2)(iv)]

f. To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the permittee must submit a request to the Division containing the information required by 40 CFR 63.1510(s)(1) and obtain approval of the Division prior to implementing any revisions. [40 CFR 63.1510(s)(3)]

g. ***Excess emissions/summary report.*** The permittee must submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **SECTION F.5**. Except, the permittee must submit the semiannual reports within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in 40 CFR 63.10(e)(3)(v). When no deviations of parameters have occurred, the permittee must submit a report stating that no excess emissions occurred during the reporting period. [40 CFR 63.1516(b)]

h. A report must be submitted if any of these conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
ii. An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1516(b)(i)(vi)]
iii. A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit. [40 CFR 63.1516(b)(vii)]

i. Each report must include each of these certifications, as applicable: [40 CFR 63.1516(b)(2)]
   i. For each group 1 melting/holding furnace without add-on air pollution control devices and using pollution prevention measures that processes only clean charge material: “Each group 1 furnace without add-on air pollution control devices subject to emission limits in 40 CFR 63.1505(i)(2) processed only clean charge during this reporting period.” [40 CFR 63.1516(b)(2)(iv)]
   ii. For each affected source choosing to demonstrate compliance during periods of startup and shutdown in accordance with 40 CFR 63.1513(f)(1): “During each startup and shutdown, no flux and no feed/charge were added to the emission unit, and electricity, propane or natural gas were used as the sole source of heat or the emission unit was not heated.” [40 CFR 63.1516(b)(2)(vii)]

j. The permittee must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested. [40 CFR 63.1516(b)(3)]
   i. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart RRR, the permittee must submit the results of the performance tests, including any associated fuel analyses, following the procedure specified in either 40 CFR 63.1516(b)(3)(i)(A) or (B). [40 CFR 63.1516(b)(3)(i)]
      1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chiefert/ert_info.html), the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.1516(b)(3)(i)(A)]

2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.1516(b)(3)(i)(B)]

k. A malfunction report that is required under 40 CFR 63.1516(d) shall be submitted simultaneously with the semiannual excess emissions/summary report required by 40 CFR 63.1516(b). [40 CFR 63.1516(b)(4)]

l. ***Annual compliance certifications.*** For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the permittee must certify continuing compliance based upon, but not limited to, the following conditions: [40 CFR 63.1516(c)]

i. Any period of excess emissions, as defined in 40 CFR 63.1516(b)(1), that occurred during the year were reported as required by 40 CFR 63, Subpart RRR; and [40 CFR 63.1516(c)(1)]

ii. All monitoring, recordkeeping, and reporting requirements were met during the year. [40 CFR 63.1516(c)(2)]

m. If there was a malfunction during the reporting period, the permittee must submit a report that includes the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must include a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions, including, but not limited to, product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1506(a)(5). [40 CFR 63.1516(d)]

n. All reports required by 40 CFR 63, Subpart RRR not subject to the requirements in 40 CFR 63.1516(b) must be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.1516(b) in paper format. [40 CFR 63.1516(e)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

o. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:
None.

8. Alternate Operating Scenario:
The permittee may choose to operate the holding furnaces in either Group 1 (uncontrolled) or Group 2 mode, as defined in 40 CFR 63.1503. For provisions that apply during operating mode changes and after the change is complete, refer to **SECTION H.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 8 REQUIREMENTS: Fugitive Emission Sources

EU	Equip. Designation	Const. Date	Description	Controls	Capacity
Emission Group XI: Miscellaneous Emission Sources					
Z1	(EP)	1972	Haul Roads (Paved & Unpaved)	Water	35,128 VMT/yr
K10-A	---	2021	Bath Screening Operation	None	30,000 tons/yr

APPLICABLE REGULATIONS:
401 KAR 63:010, *Fugitive emissions*

1. Operating Limitations:

a. The permittee shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
   i. Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land; [401 KAR 63:010, Section 3(1)(a)]
   ii. Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts; [401 KAR 63:010, Section 3(1)(b)]
   iii. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations. [401 KAR 63:010, Section 3(1)(c)]
   iv. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
   v. The maintenance of paved roadways in a clean condition; or [401 KAR 63:010, Section 3(1)(e)]
   vi. The prompt removal of earth or other material from a paved street to which earth or other material has been transported by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]

b. If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]

c. At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]

d. The permittee shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

Compliance Demonstration Method:
Refer to **4**. **Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2. Emission Limitations:
The permittee shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

a. More than five (5) minutes of emission time during any sixty (60) minute observation period; or [401 KAR 63:010, Section 3(2)(a)]

b. More than twenty (20) minutes of emission time during any twenty-four (24) hour period. [401 KAR 63:010, Section 3(2)(b)]

Compliance Demonstration Method:
Refer to **4**. **Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b).**

3. Testing Requirements:
Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

a. The permittee shall monitor the reasonable precautions taken to prevent particulate matter from becoming airborne on a daily basis. [401 KAR 52:020, Section 10]

b. If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct U.S. EPA Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log. [401 KAR 52:020, Section 10]

b. The permittee shall maintain a log of the following: [401 KAR 52:020, Section 10]
   i. Any U.S. EPA Reference Method 22 performed and field records identified in U.S. EPA Reference Method 22.
   ii. Any corrective action taken and the results.

c. For EU Z1, the permittee shall maintain records of annual VMT. [401 KAR 52:020, Section 10]

d. For EU K10-A, the permittee shall maintain records of annual bath processed in tons. [401 KAR 52:020, Section 10]

e. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:
Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:
Refer to **SECTION E.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 9 REQUIREMENTS: Homogenizing Furnaces

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity (MMBtu/hr)
Emission Group X: Casthouse Operations						
H1	(1I)	3/1990	Homogenizing Furnace #1	None	Natural Gas	13.5
H2	(2I)	3/1990	Homogenizing Furnace #2	None	Natural Gas	13.5
H3	(3I)	3/1990	Homogenizing Furnace #3	None	Natural Gas	13.5
H4	(I3I)	12/21/2000	Homogenizing Furnace #4	None	Natural Gas	14.0

The homogenizing furnaces meet the definition of metal process furnaces and units designed to burn Gas 1 fuels as defined in 40 CFR 63.7575.

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

1. **Operating Limitations:**

   a. The permittee must meet each emission limit and work practice standard in Tables 1 through 3 and 11 through 15 to 40 CFR 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. [40 CFR 63.7500(a)(1)]

   b. At all times, the permittee shall operate and maintain any affected source (as defined in 40 CFR 63.7490), 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 63.7500(a)(3)]

   c. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to 40 CFR 63, Subpart DDDDD, or the operating limits in Table 4 to 40 CFR 63, Subpart DDDDD. [40 CFR 63.7500(e)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee must be in compliance with the emission limits, work practice standards, and operating limits in 40 CFR 63, Subpart DDDDD. These emission and operating limits apply at all times the affected unit is operating except for the periods noted in 40 CFR 63.7500(f). [40 CFR 63.7505(a)]

e. The permittee must conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10). Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. [40 CFR 63.7515(d)]

f. The permittee must conduct an annual tune-up of each process heater to demonstrate continuous compliance as specified in 40 CFR 63.7540(a)(10)(i) through (vi). The permittee shall conduct the tune-up while burning the type of fuel that provided the majority of the heat input to the process heater over the 12 months prior to the tune-up. [40 CFR 63.7540(a)(10) and 40 CFR 63, Subpart DDDDD, Table 3(3)]
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment; [40 CFR 63.7540(a)(10)(i)]
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available; [40 CFR 63.7540(a)(10)(ii)]
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). [40 CFR 63.7540(a)(10)(iii)]
   iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; [40 CFR 63.7540(a)(10)(iv)]
   v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and [40 CFR 63.7540(a)(10)(v)]
   vi. Maintain on-site and submit, if requested by the Administrator, a report containing the information in 40 CFR 63.7540(a)(10)(vi)(A) through (C), [40 CFR 63.7540(a)(10)(vi)]
      1) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater; [40 CFR 63.7540(a)(10)(vi)(A)]
      2) A description of any corrective actions taken as a part of the tune-up; [40 CFR 63.7540(a)(10)(vi)(B)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

g. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [40 CFR 63.7540(a)(13)]

2. Emission Limitations:

a. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]

b. For emissions from a control device or stack the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]

i. For process weight rates ≤ 0.50 ton/hour: $E = 2.34$

ii. For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 3.59P^{0.62}$

Where: E = rate of emission in lb/hr, and
P = process weight rate in tons/hr

Compliance Demonstration Method:
Compliance with the 401 KAR 59:010 emission standards is assumed. [401 KAR 50:045, Section 4(3)(c)1.]

3. Testing Requirements:
Performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet. [401 KAR 50:045, Section 1, and 401 KAR 59:005, Section 2(2)]

4. Specific Monitoring Requirements:

a. For each emission unit listed above, the permittee shall monitor the amount of natural gas combusted annually, in MMscf. [401 KAR 52:020, Section 10]

b. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee must keep records according to 40 CFR 63.7555(a)(1) and (2). [40 CFR 63.7555(a)]

i. A copy of each notification and report that the permittee submitted to comply with 40 CFR 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.7555(a)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.7555(a)(2)]

b. Records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560(a)]

c. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560(b)]

d. The permittee must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3 years. [40 CFR 63.7560(c)]

e. For each emission unit listed above, the permittee shall maintain records of the amount of natural gas combusted annually, in MMscf. [401 KAR 52:020, Section 10]

f. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee must report each instance in which the permittee did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to 40 CFR 63, Subpart DDDDD that applies. These instances are deviations from the emission limits or operating limits, respectively, in 40 CFR 63, Subpart DDDDD. These deviations must be reported according to the requirements in 40 CFR 63.7550. [40 CFR 63.7540(b)]

b. The permittee shall submit each report in Table 9 to 40 CFR 63, Subpart DDDDD that applies. [40 CFR 63.7550(a)]

c. The permittee shall submit each report, according to 40 CFR 63.7550(h), by the date in Table 9 to 40 CFR 63, Subpart DDDDD and according to the requirements in 40 CFR 63.7550(b)(1) through (4). For the emission units listed above, the permittee may submit only an annual compliance report, as applicable, as specified in 40 CFR 63.7550(b)(1) through (4), instead of a semi-annual compliance report. [40 CFR 63.7550(b)]
   i. The first annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within 1 year after the compliance date that is specified for the source in 40 CFR 63.7495. [40 CFR 63.7550(b)(1)]
   ii. The first annual compliance report must be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(2)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. Each subsequent annual compliance report must cover the applicable 1-year period from January 1 to December 31. [40 CFR 63.7550(b)(3)]
iv. Each subsequent annual compliance report must be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(4)]
v. The permittee may submit the first and subsequent compliance reports according to the dates the Division has established in **SECTION F** instead of according to the dates in 40 CFR 63.7550(b)(1) through (4). [40 CFR 63.7550(b)(5)]

d. A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in 40 CFR 63, Subpart DDDDD. [40 CFR 63.7550(c)]
i. If the facility is subject to the requirements of a tune up the permittee shall submit a compliance report with the information in 40 CFR 63.7550(c)(5)(i) through (iii), (xiv) and (xvii). [40 CFR 63.7550(c)(1)]
ii. Company and Facility name and address. [40 CFR 63.7550(c)(5)(i)]
iii. Process unit information, emissions limitations, and operating parameter limitations. [40 CFR 63.7550(c)(5)(ii)]
iv. Date of report and beginning and ending dates of the reporting period. [40 CFR 63.7550(c)(5)(iii)]
v. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10). Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown. [40 CFR 63.7550(c)(5)(xiv)]
vi. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. [40 CFR 63.7550(c)(5)(xvii)]

e. For each deviation from an emission limit or operating limit in 40 CFR 63, Subpart DDDDD that occurs at an individual boiler or process heater, or from the work practice standards for periods of startup and shutdown, the compliance report must additionally contain the information required in 40 CFR 63.7550(d)(1) through (3). [40 CFR 63.7550(d)]
i. A description of the deviation and which emission limit, operating limit, or work practice standard from which the permittee deviated. [40 CFR 63.7550(d)(1)]
ii. Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken. [40 CFR 63.7550(d)(2)]

f. The permittee shall submit the reports according to the procedures specified in 40 CFR 63.7550(h)(1) through (3). [40 CFR 63.7550(h)]
i. The permittee must submit all reports required by Table 9 of 40 CFR 63, Subpart DDDDD electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) The permittee must use the appropriate electronic report in CEDRI for 40 CFR 63, Subpart DDDDD. Instead of using the electronic report in CEDRI for

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63, Subpart DDDDD, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to 40 CFR 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [40 CFR 63.7550(h)(3)]

g. Refer to **SECTION F** for general reporting requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 10 REQUIREMENTS: New Emergency SI Stationary RICE ≤ 500HP

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
Z5	(Z5)	9/5/2012	Building 001 Emergency Engine	None	Natural Gas	32 HP
Z6	(Z6)	9/19/2012	Rock House Emergency Engine	None	Natural Gas	48 HP
Z8	(Z8)	2/2015	Building 044 Emergency Engine	None	Natural Gas	30 HP
Z9	(Z9)	2021	001 IT Back-up Emergency Generator	None	Natural Gas	32 HP

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

1. **Operating Limitations:**

   a. The permittee must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR part 63. [40 CFR 63.6590(c)(6)]

   b. The permittee must operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. [40 CFR 60.4234]

   c. The permittee must operate the emergency stationary ICE according to the requirements in 40 CFR 60.4243(d)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4243(d)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 60.4243(d)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60, Subpart JJJJ and must meet all requirements for non-emergency engines. [40 CFR 60.4243(d)]
      i. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4243(d)(1)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. The permittee may operate the emergency stationary ICE for the purpose specified in 40 CFR 60.4243(d)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4243(d)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4243(d)(2). [40 CFR 60.4243(d)(2)]
   1) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4243(d)(2)(i)]

iii. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 60.4243(d)(2). Except as provided in 40 CFR 60.4243(d)(3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 CFR 60.4243(d)(3)(i)]
   1) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 CFR 60.4243(d)(3)(i)(A)]
   2) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [40 CFR 60.4243(d)(3)(i)(B)]
   3) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [40 CFR 60.4243(d)(3)(i)(C)]
   4) The power is provided only to the facility itself or to support the local transmission and distribution system. [40 CFR 60.4243(d)(3)(i)(D)]
   5) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [40 CFR 60.4243(d)(3)(i)(E)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a. The permittee must comply with the emission standards in Table 1 to 40 CFR 60, Subpart JJJJ for the emergency stationary SI ICE: [40 CFR 60.4233(d)]

Pollutant	Emission Standard g/HP-hr
NOx + HC	10
CO	387

Compliance Demonstration Method:

1. The permittee must demonstrate compliance by purchasing an engine certified according to the procedures in 40 CFR 60, Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(a). [40 CFR 60.4243(b)(1)]
2. If the permittee operates and maintains the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the permittee must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The permittee must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply. If the permittee adjusts engine settings according to and consistent with the manufacturer's instructions, the stationary SI internal combustion engine will not be considered out of compliance. [40 CFR 60.4243(a)(1)]
3. If the permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the permittee must demonstrate compliance according to 40 CFR 60.4243(a)(2)(i) through (iii), as appropriate. [40 CFR 60.4243(a)(2)]
   A. The permittee must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required. [40 CFR 60.4243(a)(2)(i)]

3. Testing Requirements:

a. If the permittee does not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, the permittee is required to perform initial performance testing as indicated in 40 CFR 60.4243, but is not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a). [40 CFR 60.4243(f)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. The permittee must install a non-resettable hour meter upon startup of each emergency engine. [40 CFR 60.4237(c)]

b. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee must keep records of the information in 40 CFR 60.4245(a)(1) through (4). [40 CFR 60.4245(a)]
   i. All notifications submitted to comply with 40 CFR 60, Subpart JJJJ and all documentation supporting any notification. [40 CFR 60.4245(a)(1)]
   ii. Maintenance conducted on the engine. [40 CFR 60.4245(a)(2)]
   iii. Documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable. [40 CFR 60.4245(a)(3)]
   iv. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)]

b. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 60.4245(b)]

c. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

Refer to **SECTION F** for general reporting requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 11 REQUIREMENTS: Existing Emergency Stationary RICE ≤ 500HP

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
Z2	(Z2)	2002	Caterpillar Emergency Generator	None	Natural Gas	308 HP
Z4	(Z4)	1973	Detroit Diesel Fire Pump Engine	None	Diesel	85 HP

APPLICABLE REGULATIONS:
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

1. **Operating Limitations:**

   a. The permittee must comply with the emission limitations and other requirements in Table 2c to 40 CFR 63, Subpart ZZZZ which apply. [40 CFR 63.6602]

   b. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63, Subpart ZZZZ that apply at all times. [40 CFR 63.6605(a)]

   c. At all times the permittee 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 which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

   d. The permittee must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 63.6625(e)(2)]

   e. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in 40 CFR 63, Subpart ZZZZ, Tables 1a, 2a, 2c, and 2d apply. [40 CFR 63.6625(h)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. For EU Z4, the permittee has the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in table 2c to 40 CFR 63, Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c to 40 CFR 63, Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil and filter. If any of the limits are exceeded, the permittee must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil and filter within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(h)]

g. For EU Z2, the permittee has the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in tables 2c to 40 CFR 63, Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c to 40 CFR 63, Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil and filter. If any of the limits are exceeded, the permittee must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil and filter within 2 business days or before commencing operation, whichever is later. The permittee must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

h. The permittee must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40 CFR 63, Subpart ZZZZ that apply according to methods specified in Table 6. [40 CFR 63.6640(a)]

i. The permittee must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under 40 CFR 63, Subpart ZZZZ and must meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

i. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]

ii. The permittee may operate the emergency stationary RICE for the purpose specified in 40 CFR 63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2). [40 CFR 63.6640(f)(2)]

1) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]

iii. Emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 63.6640(f)(2). The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

j. For each emergency stationary CI RICE: [40 CFR 63, Subpart ZZZZ, Table 2c(1)]

i. The permittee must meet the following requirements except during periods of startup:

1) Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; [40 CFR 63, Subpart ZZZZ, Table 2c(1)(a)]

2) Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; [40 CFR 63, Subpart ZZZZ, Table 2c(1)(b)]

3) Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ, Table 2c(1)(c)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. During periods of startup, the permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63, Subpart ZZZZ, Table 2c(1)]

k. For each emergency stationary SI RICE: [40 CFR 63, Subpart ZZZZ, Table 2c(6)]
   i. The permittee must meet the following requirements except during periods of startup:
      1) Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; [40 CFR 63, Subpart ZZZZ, Table 2c(6)(a)]
      2) Inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; [40 CFR 63, Subpart ZZZZ, Table 2c(6)(b)]
      3) Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ, Table 2c(6)(c)]
   ii. During periods of startup, the permittee must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. [40 CFR 63, Subpart ZZZZ, Table 2c(6)]

l. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of 40 CFR 63, Subpart ZZZZ, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. [40 CFR 63, Subpart ZZZZ, Table 2c, Footnote 1]

m. Sources have the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of 40 CFR 63, Subpart ZZZZ. [40 CFR 63, Subpart ZZZZ, Table 2c, Footnote 2]

2. Emission Limitations:
None.

3. Testing Requirements:
Pursuant to 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. The permittee must install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

b. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee must keep the records described in 40 CFR 63.6655(a)(1) through (a)(5). [40 CFR 63.6655(a)]
   i. A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
   ii. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
   iii. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.6655(a)(3)]
   iv. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
   v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]

b. The permittee must keep the records required in Table 6 of 40 CFR 63, Subpart ZZZZ to show continuous compliance with each emission or operating limitation that applies. [40 CFR 63.6655(d)]

c. The permittee must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the permittee's own maintenance plan. [40 CFR 63.6655(e)]

d. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 63.6655(f)]

e. The records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]

g. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]

h. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee must report each instance in which each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40 CFR 63, Subpart ZZZZ that apply were not met. These instances are deviations from the emission and operating limitations in 40 CFR 63, Subpart ZZZZ. These deviations must be reported according to the requirements in 40 CFR 63.6650. [40 CFR 63.6640(b)]

b. Refer to **SECTION F** for general reporting requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 12 REQUIREMENTS: Emergency Propane Fired Generators ≤ 500HP, Constructed on or After June 12, 2006

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
Z3	(Z3)	11/2008	Cummins Emergency Generator	None	Propane	66 HP
Z7	(Z7)	2007	Lift Station Emergency Generator	None	Propane	30 HP

APPLICABLE REGULATIONS:
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

NON-APPLICABLE REGULATIONS:
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. These engines were constructed after June 12, 2006; however, they were manufactured prior to January 1, 2009, and are therefore exempt from this regulation. [40 CFR 60.4230(a)(4)(iv)] (Note: This regulation will become applicable should either of these engines be modified or reconstructed in the future as defined under the Federal Regulation)

1. **Operating Limitations:**

   a. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63, Subpart ZZZZ that apply at all times. [40 CFR 63.6605(a)]

   b. At all times the permittee 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 which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.6605(b)]

   c. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63.6625(h)]

   d. The permittee must operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, any operation other than

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under 40 CFR 63, Subpart ZZZZ and must meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

i. There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]

ii. The permittee may operate the emergency stationary RICE for the purpose specified in 40 CFR 63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2). [40 CFR 63.6640(f)(2)]

1) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2)(i)]

iii. Emergency stationary RICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in 40 CFR 63.6640(f)(2). The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

2. Emission Limitations:
None.

3. Testing Requirements:
Pursuant to 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the hours of operation and purpose of operation of each engine. [401 KAR 52:020, Section 10]

b. Refer to **SECTION F** for general monitoring requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

a. The permittee must keep the records described in 40 CFR 63.6655(a)(1) through (a)(5). [40 CFR 63.6655(a)]
   i. A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv). [40 CFR 63.6655(a)(1)]
   ii. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(2)]
   iii. Records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.6655(a)(3)]
   iv. Records of all required maintenance performed on the air pollution control and monitoring equipment. [40 CFR 63.6655(a)(4)]
   v. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)(5)]

b. The records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(a)]

c. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.6660(b)]

d. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). [40 CFR 63.6660(c)]

e. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:
Refer to **SECTION F** for general reporting requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 15 REQUIREMENTS: Pitch Storage Tanks

EP	Equip. Designation	Const. Date	Description	Controls	Material	Combined Capacity
Emission Group III: Green Carbon Wet						
U5	(EO72, EO73)	7/28/1977	Pitch Storage Tanks	DL-DC; Carbon Adsorber	Coal Tar	29.50 tons/hr*; 225,000 gallons total storage capacity

*Loading rate.

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 to 63.855, Tables 1 to 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants,* applicable with respect to each pitch storage tank associated with primary aluminum production and located at a major source as defined in 40 CFR 63.2.

1. **Operating Limitations:**

   a. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records and inspection of the source. [40 CFR 63.843(f)]

   b. The permittee shall operate according to the monitoring plan submitted to the Division according to **4. Specific Monitoring Requirements (b).**

2. **Emission Limitations:**

   Pitch storage tanks. Each pitch storage tank shall be equipped with an emission control system designed and operated to reduce inlet emissions of POM by 95 percent or greater. [40 CFR 63.843(d)]

   Compliance Demonstration Method:
   Refer to **2. Testing Requirements.**

3. **Testing Requirements:**

   a. ***Test plan.*** If a performance test is chosen as the method of demonstrating compliance with the emission limits in 40 CFR 63.843(d), the permittee shall prepare a site-specific test plan prior to the initial performance test according to the requirements of 40 CFR 63.7(c). The test plan shall include procedures for conducting the initial performance test and for subsequent performance tests required in 40 CFR 63.848 for emission

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

monitoring. In addition to the information required by 40 CFR 63.7, the test plan shall include: [40 CFR 63.847(b)]

i. Procedures to ensure a minimum of three runs are performed annually for the primary control system for each source; [40 CFR 63.847(b)(1)]

b. The permittee shall conduct the performance test: For an existing pitch storage tank that was shut down at the time compliance would have otherwise been required and is subsequently restarted, by the 30th day following startup of a pitch storage tank. The 30-day period starts when the tank is first used to store pitch. [40 CFR 63.847(c)(3)(iv)]

c. ***Performance test requirements.*** All performance tests shall be conducted in accordance with the applicable requirements of the general provisions in 40 CFR 63, Subpart A, the approved test plan and the procedures in 40 CFR 63.847. Performance tests shall be conducted under such conditions as the Division specifies to the permittee based on representative performance of the affected source for the period being tested. Upon request, the permittee shall make available to the Division such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.847(d)]

d. ***Pitch storage tanks.*** The permittee shall demonstrate initial compliance with the standard for pitch storage tanks in 40 CFR 63.843(d) by preparing a design evaluation or by conducting a performance test. The permittee must submit for approval by the Division the information specified in 40 CFR 63.847(g)(1), along with the information specified in 40 CFR 63.847(g)(2) where a design evaluation is performed or the information specified in 40 CFR 63.847(g)(3) where a performance test is conducted. [40 CFR 63.847(g)]

i. A description of the parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed; and [40 CFR 63.847(g)(1)]

ii. Where a design evaluation is performed, documentation demonstrating that the control device used achieves the required control efficiency during reasonably expected maximum filling rate. The documentation shall include a description of the gas stream that enters the control device, including flow and POM content under varying liquid level conditions, and the information specified in 40 CFR 63.847(g)(2)(i) through (g)(2)(vi), as applicable. [40 CFR 63.847(g)(2)]

1) If the control device receives vapors, gases, or liquids, other than fuels, from emission points other than pitch storage tanks, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device; [40 CFR 63.847(g)(2)(i)]

2) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 degrees C (1,400 degrees F) is used to meet the emission reduction requirement specified in 40 CFR 63.843(d), documentation that those conditions exist is sufficient to meet the requirements of 40 CFR 63.843(d); [40 CFR 63.847(g)(2)(ii)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3) Except as provided in 40 CFR 63.847(g)(2)(ii), for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature; [40 CFR 63.847(g)(2)(iii)]
4) If the pitch storage tank is vented to the emission control system installed for control of emissions from the paste production plant pursuant to 40 CFR 63.843(b) or 40 CFR 63.844(b)(1), documentation of compliance with the requirements of 40 CFR 63.843(b) is sufficient to meet the requirements of 40 CFR 63.843(d) or 63.844(d); [40 CFR 63.847(g)(2)(iv]
5) For carbon adsorbers, the design evaluation shall include the affinity of the organic vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, and if applicable, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, the pressure drop shall be included; and [40 CFR 63.847(g)(2)(v)]
6) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream. [40 CFR 63.847(g)(2)(vi)]

iii. If a performance test is conducted, the permittee shall determine the control efficiency for POM during tank loading using Method 315 in appendix A to 40 CFR 63. The permittee shall include the following information: [40 CFR 63.847(g)(3)]
1) Identification of the pitch storage tank and control device for which the performance test will be submitted; and [40 CFR 63.847(g)(3)(i)]
2) Identification of the emission point(s) that share the control device with the pitch storage tank and for which the performance test will be conducted. [40 CFR 63.847(g)(3)(ii)]

e. The permittee shall use the following reference methods to determine compliance with the applicable emission limits for POM and conduct visible emissions observations: [40 CFR 63.849(a)]
i. Method 1 in 40 CFR 60, Appendix A for sample and velocity traverses; [40 CFR 63.849(a)(1)]
ii. Method 2 in 40 CFR 60, Appendix A for velocity and volumetric flow rate; [40 CFR 63.849(a)(2)]
iii. Method 3 in 40 CFR 60, Appendix A for gas analysis; [40 CFR 63.849(a)(3)]
iv. Method 315 in appendix A to 40 CFR 63 or an approved alternative method for the concentration of POM where stack or duct emissions are sampled; [40 CFR 63.849(a)(6)]

f. Pursuant to 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. ***Selection of monitoring parameters.*** The permittee shall determine the operating limits and monitoring frequency for each control device that is to be monitored as required in 40 CFR 63.848(f). The permittee may redetermine the upper and/or lower operating limits, as appropriate, based on historical data or other information and submit an application to the Division to change the applicable limit(s). The redetermined limits shall become effective upon approval by the Division. [40 CFR 63.847(h)(3)]

b. ***Monitoring parameters for emission control devices.*** The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall submit for approval by the Division a description of the parameter(s) to be monitored, the operating limits, and the monitoring frequency to ensure that the control device is being properly operated and maintained, in accordance with the requirements of 40 CFR 63.848(f). Refer to **7. Specific Control Device Requirements (a).** [40 CFR 63.848(f)]

c. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation; and
   ii. Monthly throughput.

d. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.10(b) and by 40 CFR 63, Subpart LL. [40 CFR 63.850(e)]

b. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained offsite; [40 CFR 63.850(e)(1)]

c. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; [40 CFR 63.850(e)(2)]

d. The permittee may report required information on paper or on a labeled computer disc using commonly available and compatible computer software; and [40 CFR 63.850(e)(3)]

e. In addition to the general records required by 40 CFR 63.10(b), the permittee shall maintain records of the following information: [40 CFR 63.850(e)(4)]
   i. Records documenting the corrective actions taken when the limit(s) for an operating parameter established under 40 CFR 63.847(h) were exceeded or when visible emissions indicating abnormal operation were observed from a control device stack

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

during a daily inspection required under 40 CFR 63.848(g). [40 CFR 63.850(e)(4)(xiii)]

ii. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control equipment and monitoring equipment; and [40 CFR 63.850(e)(4)(xvi)]

iii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.850(e)(4)(xvii)]

f. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly throughput; and
   iii. Records of calibration for all monitoring devices.

g. The permittee shall maintain records of the current parametric monitoring plan submitted to the Division in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

h. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. ***Accuracy and calibration.*** The permittee shall submit recommended accuracy requirements to the Division for review and approval. All monitoring devices required by 40 CFR 63.848 shall be certified by the permittee to meet the accuracy requirements and shall be calibrated in accordance with the manufacturer's instructions. [40 CFR 63.848(k)]

b. ***Alternative operating parameters.*** The permittee may monitor alternative control device operating parameters subject to prior written approval by the Division. [40 CFR 63.848(l)]

c. ***Performance test reports*****.** Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart LL, the permittee shall submit the results of the performance tests following the procedure specified in either 40 CFR 63.850(b)(1) or (b)(2). [40 CFR 63.850(b)]
   i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (http://www.epa.gov/ttn/chief/ert/index.html) at the time of the test, the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/epa_home.asp). Performance test data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, the permittee may submit performance test data in an electronic file format consistent with the extensible markup language (XML) schema

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

listed on the EPA's ERT Web site once the XML schema is available. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.850(b)(1)]

ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(2)]

iii. For data collected which requires summation of results from both ERT and non-ERT supported test methods in order to demonstrate compliance with an emission limit, the permittee must submit the results of the performance test(s) used to demonstrate compliance with that emission limit to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.850(b)(3)]

d. ***Reporting.*** In addition to the information required under 40 CFR 63.10 of the General Provisions, the permittee shall provide semiannual reports containing the information specified in 40 CFR 63.850(d)(1) and (2) to the Division. [40 CFR 63.850(d)]

i. Excess emissions report. As required by 40 CFR 63.10(e)(3), the permittee shall submit a report (or a summary report) if measured emissions are in excess of the applicable standard. The report shall contain the information specified in 40 CFR 63.10(e)(3)(v) and be submitted semiannually unless quarterly reports are required as a result of excess emissions. [40 CFR 63.850(d)(1)]

ii. If there was a malfunction during the reporting period, the permittee shall submit a report that includes the number, duration and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.843(f) and 63.844(f), including actions taken to correct a malfunction. [40 CFR 63.850(d)(2)]

e. All reports required by 40 CFR 63, Subpart LL not subject to the requirements in 40 CFR 63.850(b) or (c) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.850(b) in paper format. [40 CFR 63.850(f)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. The Division will notify the permittee in writing of the need for additional time to review the submissions in 40 CFR 63.851(a)(1) through (a)(5) or of approval or intent to deny approval of the submissions in 40 CFR 63.851(a)(1) through (a)(5) within 60 calendar days after receipt of sufficient information to evaluate the submission. The 60-day period begins after the permittee has been notified that the submission is complete. [40 CFR 63.851(a)]
   i. The test plan in 40 CFR 63.847(b); [40 CFR 63.851(a)(1)]
   ii. Request to change limits for operating parameters in 40 CFR 63.847(h)(3); [40 CFR 63.851(a)(2)]

g. The Division will notify the permittee in writing whether the submission is complete within 30 calendar days of receipt of the original submission or within 30 days of receipt of any supplementary information that is submitted. When a submission is incomplete, the Division will specify the information needed to complete the submission and will give the permittee 30 calendar days after receipt of the notification to provide the information. [40 CFR 63.851(b)]

h. The permittee shall submit any revisions of the parametric monitoring plan to the Division for approval in accordance with 40 CFR 63.848(f). [401 KAR 52:020, Section 10]

i. Refer to **SECTION F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. ***Monitoring parameters for emission control devices.*** The permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for each emission control device. The permittee shall submit for approval by the Division a description of the parameter(s) to be monitored, the operating limits, and the monitoring frequency to ensure that the control device is being properly operated and maintained. An explanation of the criteria used for selection of the parameter(s), the operating limits, and the monitoring frequency, including how these relate to emission control also shall be submitted to the Division. [40 CFR 63.848(f)]

b. ***Corrective action.*** If a monitoring device for a primary control device measures an operating parameter outside the limit(s) established pursuant to 40 CFR 63.847(h) or if visible emissions indicating abnormal operation are observed from the exhaust stack of a control device during a daily inspection, the permittee shall initiate corrective action procedures within 1 hour. Failure to initiate the corrective action procedures within 1 hour or to take the necessary corrective actions to remedy the problem is a violation. [40 CFR 63.848(h)]

c. ***Exceedances.*** If the limit for a given operating parameter associated with monitoring a specific control device is exceeded six (6) times in any semiannual reporting period, then any subsequent exceedance in that reporting period is a violation. For the purpose of

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

determining the number of exceedances, no more than one exceedance shall be attributed in any given 24-hour period. [40 CFR 63.848(i)]

d. Refer to **SECTION E.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SUBJECT ITEM 16 REQUIREMENTS: New Stationary CI RICE

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
K10-B	---	2021	Powerscreen Engine	None	Diesel	110 HP

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

1. **Operating Limitations:**

   a. The permittee must meet the requirements of 40 CFR Part 63 by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under 40 CFR part 63. [40 CFR 63.6590(c)(3)]

   b. The permittee must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel. [40 CFR 60.4207]

   c. The permittee must do all of the following, except as permitted under 40 CFR 60.4211(g): [40 CFR 60.4211(a)]
      i. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [40 CFR 60.4211(a)(1)]
      ii. Change only those emission-related settings that are permitted by the manufacturer; and [40 CFR 60.4211(a)(2)]
      iii. Meet the requirements of 40 CFR part 1068, as they apply. [40 CFR 60.4211(a)(3)]

2. **Emission Limitations:**

   a. The permittee must comply with the emission standards for new CI engines in 40 CFR 60.4201 for the 2007 model year and later stationary CI ICE, as applicable [40 CFR 60.4204(b)]

      Compliance Demonstration Method:

      1. The permittee must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]

2. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows: [40 CFR 60.4211(g)]
   A. The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. [40 CFR 60.4211(g)(2)]

3. Testing Requirements:

Pursuant to 401 KAR 50:045, Section 1, performance testing using the reference methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee must maintain the following records: [401 KAR 52:020, Section 10]
   i. Maintenance conducted on the engine.
   ii. Documentation from the manufacturer that the engine is certified to meet the emission standards.
   iii. Annual fuel usage in Mgal.

b. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

Refer to **SECTION F** for general reporting requirements.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Description	Generally Applicable Regulation
1. Anode Cover Storage T34 (DC), T35 (DC)	401 KAR 59:010
2. Chip Handling System (5I)	None
3. Electrostatic Stub Handling (EK)	401 KAR 59:010
4. Maintenance Area 046 – Wood/Refractory Saw (AI)	401 KAR 61:020
5. Gasoline Storage Tank – 2,000 gal	None
6. Diesel Storage Tank – 6,000 gal	None
7. A446 Day Tank Vent Filter	401 KAR 59:010
8. Flex-Kleen Dust Collector	401 KAR 59:010
9. Raw Material Lab Dust Collector	401 KAR 59:010
10. Parts Washer (non-VOC solution)	None
11. Portable Welders for Maintenance	401 KAR 59:010 401 KAR 63:020
12. Used Oil Tank #1 – 5,000 gal	None
13. Used Oil Tank #2 – 5,000 gal	None
14. Anode Bar Ink Stamping Station	None
15. Small Form Oven #1 (2.24 MMBtu/hr)	401 KAR 59:010 401 KAR 63:020
16. Small Form Oven #2 (2.24 MMBtu/hr)	401 KAR 59:010 401 KAR 63:020
17. Small Form Oven #3 (2.24 MMBtu/hr)	401 KAR 59:010 401 KAR 63:020
18. Oversized Anode Butt Crushing Operations	401 KAR 63:010
19. Burn-Off Anode Butt Crushing Operations	401 KAR 63:010
20. Five Crucible Pre-Heater Stations (<1 MMBtu/hr each)	401 KAR 63:020
21. Building 136 Auto Sow Casting System, With 4 Pre-Heaters (0.5 MMBtu/hr each)	401 KAR 63:020
22. Parts Washers #1 & #2 (non-VOC solution)	None
23. Anode Rod Brush System	401 KAR 59:010
24. Portable Anode Crusher (30 tph)	401 KAR 63:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. *CO, COS, D/F, HCl, HF, Mercury, Opacity, NO_x, PM, PM_{10}, $PM_{2.5}$, POM, SO_2,* and *TF* emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. Sulfur dioxide (SO_2) emissions shall not exceed 5,853 total tons per year, on a rolling 12-month basis, from the production of primary aluminum by electrolysis (potline operations) and anode bake furnace operations. [401 KAR 51:017]

   Compliance Demonstration Method: Compliance with the annual SO_2 emission limit established under PSD shall be demonstrated by complying with **SECTION D(6)**.

4. Source-wide gaseous fluorides shall not exceed the amounts that violate, or interfere with the attainment or maintenance of, ambient air quality standards as specified in 401 KAR 53:010 and the following concentrations: [401 KAR 53:005, Section 1(3)]

Primary Standards:	Annual Average:	400 µg/m^3 (0.5 ppm)
	Maximum 24 Hour Average:	800 µg/m^3 (1.0 ppm)
Secondary Standards:	Maximum monthly average:	0.82 µg/m^3 (1.0 ppb)
	Maximum weekly average:	1.64 µg/m^3 (2.0 ppb)
	Maximum 24-hour average:	2.86 µg/m^3 (3.5 ppb)
	Maximum 12-hour average:	3.68 µg/m^3 (4.5 ppb)

   Gaseous Fluoride (HF) Compliance Demonstration Method:
   To provide reasonable assurance that HF emission limits are being met, the source shall demonstrate compliance by the following methods or other Division approved method:

   A. The permittee shall comply with the terms in 401 KAR 61:165, in addition to **SECTION B, Subject Item 4, 1. Operating Limitations (e)**, **4. Specific Monitoring Requirements (c)**, **5. Recordkeeping Requirements (f)**, and **6. Specific Reporting Requirements (k).**
   B. The permittee shall submit to the Division quarterly ambient monitoring data reports. If either the maximum 24-hour average primary standard or any of the secondary standards for HF listed above and defined in 401 KAR 53:010, Appendix A, are exceeded more than once annually, than any subsequent exceedance is a violation. The reports shall clearly identify any exceedances of the ambient standards.
   C. Ambient air modeling for HF shall be performed and submitted as part of the renewal application for permit V-26-005, and based on the modeled maximum impact area and in consideration of common siting criteria (e.g., Appendix E to 40 CFR 58, Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring), the Division may

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

require relocation of the ambient air monitoring equipment as provided for in **SECTION B, Subject Item 4, 4. Specific Monitoring Requirements (c).**

D. In the event of a recorded violation of the HF standard as listed above and defined in 401 KAR 53:010, Appendix A, the Division shall require that remedial measures be initiated from the source(s) responsible for causing said violation. [401 KAR 61:165, Section 4(2)] This includes, but is not limited to:
   i. A corrective action plan, identifying possible causes for the exceedances and remedies initiated; and
   ii. A follow-up testing plan to ensure that the exceedance of the standard has been remedied.

E. Major modifications triggering a significant permit revision under 401 KAR 52:020, or changes that can increase emissions of HF above the projected emission rate that exceeds the Kentucky Ambient Air Quality Standard for HF, will require additional air dispersion modeling be completed with the revision application.

5. Source-wide total fluorides emissions shall not exceed the amounts that violate, or interfere with the attainment or maintenance of, ambient air quality standards as specified in 401 KAR 53:010 and the following concentrations: [401 KAR 53:005, Section 1(3)]

Dry weight basis (as fluoride ion) in and on forage for consumption by grazing ruminants:

Secondary Standards:	Growing Season:	40 ppm
	Two-Month Average:	60 ppm
	One-month average:	80 ppm

Total Fluoride (TF) Compliance Demonstration Method:
To provide reasonable assurance that TF emission limits are being met, the source shall demonstrate compliance by the following methods or other Division approved method:

A. The permittee shall comply with the terms in 401 KAR 61:165, in addition to **SECTION B, Subject Item 4, 1. Operating Limitations (e)**, **4. Specific Monitoring Requirements (c)**, **5. Recordkeeping Requirements (f)**, and **6. Specific Reporting Requirements (k).**

B. Major modifications triggering a significant permit revision under 401 KAR 52:020, or changes that can increase emissions of TF above the projected emission rate that exceeds the Kentucky Ambient Air Quality Standard for TF, will require additional air dispersion modeling be completed with the revision application. Continued compliance for TF is demonstrated if the model shows compliance with the primary standards for gaseous fluorides.

6. The permittee shall not allow the combined total SO_2 emissions from Potlines #1-#3 (EUs E1, E3, and E5 – combined roof monitor and stack emissions) and the Anode Bake Furnace (EU N2) to exceed 4,946 tons per year, on a rolling 12-month basis. [401 KAR 53:005, Section 1(3)]

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Compliance Demonstration Method:

Compliance with the annual tpy SO_2 emission limit shall be determined each month by calculating the combined SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace using the following equations:

A. Monthly SO_2 emissions from the potlines during the previous calendar month shall be calculated using the following equation:

$$E_{SO_2 Potlines_i} = A_i \times \%S_{BA_i} \times 93.75\% \times \frac{64}{32}$$

Where:

$E_{SO_2 Potlines_i}$ = SO_2 emissions from Potlines #1 - #3 during calendar month *i* in tons;
i = month
A_i = Total anode consumption in the potlines during month *i* (ton/month); based on the potline production rate during month *i* (ton aluminum/month) multiplied by the average anode consumption rate during month *i* (ton anode/ton aluminum).
$\%S_{BA_i}$ = Average baked anode core samples sulfur content (weight %) for month *i* based on all daily samples tested;
93.75% = Assumed conversion of sulfur to SO_2 with the balance being COS (6.25%);
$64/32$ = Ratio of mass of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2 = 1 lbmole S;

B. Monthly SO_2 emissions from the Anode Bake Furnace during the previous calendar month shall be calculated using the following equation:

$$E_{SO_2 ABF_i} = \sum_{n=1}^{x} \frac{E_{SO_2 n}}{2000}$$

Where:

$E_{SO_2 ABF_i}$ = SO_2 emissions from the Anode Bake Furnace during calendar month *i* in tons;
x = total number of hours in the month;
i = month;
n = hour;
$E_{SO_2 n}$ = SO_2 emissions measured by the CEMS during hour *n* in lbs;
2000 = Conversion of lbs to ton (2,000 lb/ton)

C. Total combined SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace in tpy shall be calculated each month using the following equation:

$$T_{SO_2} = \sum_{i}^{12} E_{SO_2 Potlines_i} + E_{SO_2 ABF_i}$$

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Where:

T_{SO_2} = Total combined SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace in tons/year;

$E_{SO_2Potlines_i}$ = SO_2 emissions from Potlines #1 - #3 during calendar month *i* in tons;

$E_{SO_2ABF_i}$ = SO_2 emissions from the Anode Bake Furnace during calendar month *i* in tons

7. The permittee shall not allow the combined total SO_2 emissions from Potlines #1-#3 (EUs E1, E3, and E5 – combined roof monitor and stack emissions) and the Anode Bake Furnace (EU N2) to exceed 1,129 lb/hr on a calendar month average basis. [401 KAR 53:005, Section 1(3)]

Compliance Demonstration Method:

Compliance with the monthly average lb/hr SO_2 emission limit shall be determined each month by calculating the combined SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace using the following equations:

A. Monthly SO_2 emissions from the potlines during the previous calendar month shall be calculated using the following equation:

$$E_{SO_2Potlines} = \frac{A \times \%S_{BA}}{H} \times 93.75\% \times \frac{64}{32} \times 2000$$

Where:

$E_{SO_2Potlines}$ = Calendar month average SO_2 emissions from Potlines #1 - #3 in lb/hr;

A = Total anode consumption in the potlines during month (ton/month); based on the potline production rate (ton aluminum/month) multiplied by the monthly average anode consumption rate (ton anode/ton aluminum).

$\%S_{BA}$ = Average baked anode core samples sulfur content (weight %) for month based on all daily samples tested;

H = Operating hours in the month (hr/month);

93.75% = Assumed conversion of sulfur to SO_2 with the balance being COS (6.25%);

$64/32$ = Ratio of mass of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2 = 1 lbmole S;

2000 = Conversion of tons to lb (2,000 lb/ton)

B. Monthly average SO_2 emissions from the Anode Bake Furnace during the previous calendar month shall be calculated using the following equation:

$$E_{SO_2ABF} = \sum_{n=1}^{x} E_{SO_{2n}}$$

Where:

$E_{SO_2ABF_i}$ = SO_2 emissions from the Anode Bake Furnace during the calendar month in lb/hr;

x = total number of hours in the month;

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

n = hour;
$E_{SO_2 n}$ = SO_2 emissions measured by the CEMS during hour *n* in lb;

C. Total combined hourly average SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace in lb/hr shall be calculated each month using the following equation:

$$H_{SO_2} = E_{SO_2 Potlines} + E_{SO_2 ABF}$$

Where:
H_{SO_2} = Total combined SO_2 emissions from Potlines #1 - #3 and the Anode Bake Furnace in lb/hr;
$E_{SO_2 Potlines}$ = Calendar month average SO_2 emissions from Potlines #1 - #3 in lb/hr;
$E_{SO_2 ABF}$ = Calendar month average SO_2 emissions from the Anode Bake Furnace in lb/hr

8. The permittee shall maintain, and repair as necessary, the permanent fence sections on the western and southern property boundary. The fencing must meet the following requirements: [401 KAR 53:005, Section 1(3)]
   a. The permittee shall maintain a permanent fence between the main plan entrance and the southwest tip of the property boundary allowing controlled access openings as needed for the existing Big Rivers coal road.
   b. The permittee shall maintain a permanent fence along the southern property boundary running north-northeast from the southwest tip along the north edge of the rail spur link approximately 580 feet to the edge of a stream where there is a deep gully that provides a barrier to entering the property.
   c. At a minimum, the fence sections shall possess the following characteristics:
      i. The fence shall be a permanent continuous physical structure approximately 5 feet tall that prevents easy access to the property.
      ii. The fence shall be comprised of durable materials that can withstand weather conditions and attempts at entry (e.g., chain link, barbed wire, metal, wood, etc.).
      iii. The fence shall be clearly visible and recognizable as a boundary with appropriate signage (e.g., “No Trespassing” or “Private Property”) at regular intervals along the fence.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. The facility shall maintain all control device equipment in accordance with a maintenance management system that reflects the manufacturer's recommendations and ensures the continuing control capability of pollution control devices in use at the facility. This maintenance management system shall include inspection and maintenance work orders on a defined schedule determined by technical, engineering, operations personnel which follow manufacturer's guidelines for operation and maintenance. Excursion from the requirements of the maintenance management system shall be corrected in a timely manner per 401 KAR 50:055, Section 1(4). [401 KAR 51:017]

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction, or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
   a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
   b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
   c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

c. Whether compliance was continuous or intermittent;
d. The method used for determining the compliance status for the source, currently and over the reporting period.
e. For an emissions unit that was still under construction, or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
Owensboro Regional Office
3032 Alvey Park Drive W., Suite 700
Owensboro, KY 42303-7304

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the 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;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

   No construction authorized by this permit, V-26-005.

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;
      (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
      (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
      (5) This requirement does not relieve the source of other local, state or federal notification requirements.

   b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

   c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

   a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
      (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
      (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
      (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
      (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.155.
      (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

The alternate operating scenarios set forth below have been approved by the Division based on information supplied with the application and during the application review process. The terms and conditions of each alternate operating scenario have been developed to ensure compliance with the applicable regulations. The permittee, when making a change from one operating scenario to another, shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. The permit shield, as provided in Section G shall extend to each alternate operating scenario set forth in this Section. All conditions not specified under an alternate operating scenario shall remain unchanged from their permit values or requirements.

ALTERNATE OPERATING SCENARIO 1

In permittee may choose to operate the Holding Furnaces as group 2 (clean charge/no reactive fluxing) furnaces under 40 CFR 63, Subpart RRR.

The requirements of 40 CFR 63.1514 are in addition to the other requirements of 40 CFR 63, Subpart RRR that apply to group 1 and group 2 furnaces.

SUBJECT ITEM 7 REQUIREMENTS: Holding Furnaces (Alternate Operating Scenario)

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity
F1	(I3-I6)	8/4/1972	Holding Furnaces (4) with In-Line Degassers	None	Aluminum; Natural Gas	17.17 tons/hr*; 60.8 MMBtu/hr (combined)
F2	(I7, I8)	8/4/1979	Holding Furnaces (2) with In-Line Degassers	None	Aluminum; Natural Gas	8.58 tons/hr*; 30.4 MMBtu/hr (combined)

*Based on an annual average.

The Holding Furnaces are permitted to operate only as group 2 furnaces, and the in-line fluxers shall use only non-reactive flux, pursuant to Subpart RRR, in this alternative operating scenario.

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations* for unit F2

401 KAR 61:020, *Existing process operations* for unit F1

401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 through 63.1519, Tables 1 through 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*.

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

1. Operating Limitations:

a. At all times, the permittee 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 which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.1506(a)(5)]

b. ***Labeling.*** The permittee must provide and maintain easily visible labels posted at each group 2 furnace and in-line fluxer that identifies the applicable emission limits and means of compliance, including: [40 CFR 63.1506(b)]
   i. The type of affected source or emission unit (e.g., Group 2 Furnace, In-Line Fluxer). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standards and control methods (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan. [40 CFR 63.1506(b)(2)]

c. ***In-line fluxer using no reactive flux material.*** The permittee of an in-line fluxer using no reactive flux materials must operate each in-line fluxer using no reactive flux materials. [40 CFR 63.1506(l)]

d. ***Group 2 furnace.*** The permittee must: [40 CFR 63.1506(o)]
   i. Operate each furnace using only clean charge as the feedstock. [40 CFR 63.1506(o)(1)]
   ii. Operate each furnace using no reactive flux. [40 CFR 63.1506(o)(2)]

e. ***Corrective action.*** When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the permittee must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation. [40 CFR 63.1506(p)]

f. ***Changing from a group 2 furnace to a group 1 uncontrolled furnace.*** To change modes of operation from a group 2 furnace to a group 1 furnace, the permittee must perform the following before adding other than clean charge and before adding reactive flux to the furnace: [40 CFR 63.1514(c)(5)]

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

i. Change the label on the furnace to reflect group 1 operation; [40 CFR 63.1514(c)(5)(i)]

g. ***Changing from a group 1 uncontrolled furnace to a group 2 furnace.*** To change mode of operation from a group 1 furnace to group 2 furnace, the permittee must perform the following: [40 CFR 63.1514(c)(6)]
   i. Change the label on the furnace to reflect group 2 operation; [40 CFR 63.1514(c)(6)(i)]
   ii. Charge clean charge for the number of tap-to-tap cycles that elapsed (or, for continuously operated furnaces, the time elapsed) before the group 2 performance test was conducted; and [40 CFR 63.1514(c)(6)(ii)]
   iii. Use no reactive flux. [40 CFR 63.1514(c)(6)(iii)]

h. ***Limit on frequency of changing furnace operating mode.*** A change in furnace operating mode, which consists of changing from one furnace operating mode to another and subsequently back to the initial operating mode, as provided in 40 CFR 63.1514(a) through (d), may not be done more frequently than 4 times in any 6-month period unless the permittee receives approval from the Division for additional changes pursuant 40 CFR 63.1514(e)(2). [40 CFR 63.1514(e)(1)]

i. If additional changes are needed, the permittee must apply in advance to the Division for approval of the additional changes in operating mode. [40 CFR 63.1514(e)(2)]

j. Prior to changing furnace classifications to those not already authorized in **Section B** or **Section H**, the permittee shall submit a permit application to incorporate the applicable standards from 40 CFR 63, Subpart RRR regarding changes in furnace classification along with any other applicable requirements. [401 KAR 52:020, Section 7]

2. <u>Emission Limitations:</u>

a. For Emission Unit F2:
   i. The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]
   ii. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 59:010, Appendix A: [401 KAR 59:010, Section 3(2)]
      1) For process weight rates $\leq$ 0.50 ton/hour: $E = 2.34$
      2) For process weight rates > 0.50 ton/hr and $\leq$ 30 tons/hr: $E = 3.59P^{0.62}$
      Where: E = rate of emission in lb/hr, and
      P = process weight rate in tons/hr

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

b. For Emission Unit F1:
   i. The permittee shall not cause, suffer, allow or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than forty (40) percent opacity. [401 KAR 61:020, Section 3(1)(a)]
   ii. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility which is in excess of the quantity specified in 401 KAR 61:020, Appendix A. [401 KAR 61:020, Section 3(2)(a)]
      1) For process weight rates ≤ 0.50 ton/hour: $E = 2.58$
      2) For process weight rates > 0.50 ton/hr and ≤ 30 tons/hr: $E = 4.10P^{0.67}$
         Where: E = rate of emission in lb/hr, and
         P = process weight rate in tons/hr.

Compliance Demonstration Method:

1. For compliance with the opacity limits identified above, refer to **4. Specific Monitoring Requirements (d)** and **5. Specific Recordkeeping Requirements (g).**
2. Compliance with the hourly particulate emission limits identified above shall be determined by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{ij}} = \frac{P_{ij} \times EF_{PM_j}}{h_{ij}}$$

Where:
i = month;
j = unit;
E_{PMij} = actual average hourly particulate emission rate from unit j during month i (pounds/hour);
P_{ij} = actual specific operating parameter for month i (units/month);
EF_{PMj} = overall uncontrolled particulate emission factor as determined from the most recent performance test or approved by the Division for unit j (pounds/unit);
h_{ij} = actual total hours of operation for unit j during month i (hours/month)

3. Testing Requirements:

a. ***Changing from a group 1 uncontrolled furnace to a group 2 furnace.*** If the permittee wishes to change operating modes, the permittee must conduct performance tests in accordance with 40 CFR 63.1511 and 63.1512 to demonstrate to the Division that compliance can be achieved under both modes and establish the number of cycles (or time) of operation with clean charge and no reactive flux addition necessary before changing to group 2 mode. Operating parameters relevant to group 1 operation shall be established during the performance test. [40 CFR 63.1514(c)]

b. The permittee must conduct performance tests for PM, HCl and D/F (and HF for uncontrolled group 1 furnaces) according to the procedures in 40 CFR 63.1512 if compliance has not been previously demonstrated for the operating mode. Controlled

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

group 1 furnaces shall conduct performance tests according to the procedures in 40 CFR 63.1512(d) with the capture system and control device operating normally. Uncontrolled group 1 furnaces shall conduct performance tests according to the procedures in 40 CFR 63.1512(e) without operating a control device. Performance tests shall be repeated at least once every 5 years to demonstrate compliance for each operating mode. [40 CFR 63.1514(c)(1)]

i. Testing under this paragraph shall be conducted in accordance with 40 CFR 63.1511(b)(1) in both modes. [40 CFR 63.1514(c)(1)(i)]
ii. Operating parameters shall be established during these tests, as required by 40 CFR 63.1511(g). [40 CFR 63.1514(c)(1)(ii)]
iii. The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in 40 CFR 63.1505(k) shall be determined. [40 CFR 63.1514(c)(1)(iii)]

c. While in compliance with the operating requirements of 40 CFR 63.1506(o) for group 2 furnaces, the permittee shall conduct performance tests for PM, HCl, HF and D/F, according to the procedures in 40 CFR 63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode. Performance tests shall be repeated at least once every 5 years to demonstrate compliance for each operating mode. [40 CFR 63.1514(c)(2)]

i. Testing under this paragraph may be conducted at any time after the furnace has commenced operation with clean charge and without reactive flux addition. [40 CFR 63.1514(c)(2)(i)]
ii. Testing under this paragraph shall be conducted with furnace emissions captured in accordance with the provisions of 40 CFR 63.1506(c) and directed to the stack or vent tested. [40 CFR 63.1514(c)(2)(ii)]
iii. The permittee must demonstrate that emissions are no greater than: [40 CFR 63.1514(c)(2)(iii)]
    1) 1.5 µg D/F (TEQ) per Mg of feed/charge; [40 CFR 63.1514(c)(2)(iii)(A)]
    2) 0.040 lb HCl or HF per ton of feed/charge; and [40 CFR 63.1514(c)(2)(iii)(B)]
    3) 0.040 lb PM per ton of feed/charge. [40 CFR 63.1514(c)(2)(iii)(C)]
iv. The number of tap-to-tap cycles, or time elapsed between starting operation with clean charge and no reactive flux addition and the group 2 furnace performance test shall be established as an operating parameter to be met before changing to group 2 mode. [40 CFR 63.1514(c)(2)(iv)]

d. Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Cabinet.

4. Specific Monitoring Requirements:

a. The permittee shall prepare and implement for each affected source and emission unit, a written operation, maintenance, and monitoring (OM&M) plan that includes this alternate operating scenario. Refer to **6. Specific Reporting Requirements**, for OM&M plan requirements. [40 CFR 63.1510(b)]

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

b. ***Labeling.*** The permittee shall inspect equipment labels for each group 2 furnace and in-line fluxer at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible. [40 CFR 63.1510(c)]

c. ***Alternative monitoring methods.*** If the permittee wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in 40 CFR 63, Subpart RRR, other than those alternative monitoring methods which may be authorized pursuant to 40 CFR 63.1510(j)(5), the permittee may submit an application to the Administrator. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6). [40 CFR 63.1510(w)]

d. The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than weekly while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]

e. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. Monthly hours of operation;
   ii. Monthly process weight;
   iii. Monthly fuel usage in MMscf;
   iv. Hourly PM emission rates, calculated monthly.

f. Refer to **SECTION F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. ***Group 2 furnace.*** The permittee shall record a description of the materials charged to each furnace, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. [40 CFR 63.1510(r)(1)]

b. In addition to the recordkeeping requirements of 40 CFR 63.1517, the permittee must maintain records of the nature of each mode change (controlled or uncontrolled group 1 to group 2), and the time the change is initiated. [40 CFR 63.1514(c)(7)]

c. As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and 40 CFR 63, Subpart RRR. [40 CFR 63.1517(a)]
   i. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)(1)]
   ii. The permittee may retain records on microfilm, computer disks, magnetic tape, or

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

microfiche; and [40 CFR 63.1517(a)(2)]

iii. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software. [40 CFR 63.1517(a)(3)]

d. In addition to the general records required by 40 CFR 63.10(b), the permittee must maintain records of: [40 CFR 63.1517(b)]
   i. For each continuous monitoring system, records required by 40 CFR 63.10(c). [40 CFR 63.1517(b)(6)]
   ii. For each in-line fluxer for which the permittee has certified that no reactive flux was used: [40 CFR 63.1517(b)(11)]
      1) Operating logs which establish that no source of reactive flux was present at the in-line fluxer; [40 CFR 63.1517(b)(11)(i)]
      2) Labels required pursuant to 40 CFR 63.1506(b) which establish that no reactive flux may be used at the in-line fluxer; or [40 CFR 63.1517(b)(11)(ii)]
      3) Operating logs which document each flux gas, agent, or material used during each operating cycle. [40 CFR 63.1517(b)(11)(iii)]
   iii. Records of all charge materials and fluxing materials or agents for a group 2 furnace. [40 CFR 63.1517(b)(12)]
   iv. Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements. [40 CFR 63.1517(b)(13)]
   v. Records for any approved alternative monitoring or test procedure. [40 CFR 63.1517(b)(15)]
   vi. Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including the OM&M plan. [40 CFR 63.1517(b)(16)(ii)]

e. For any failure to meet an applicable standard, the permittee must maintain the following records; [40 CFR 63.1517(b)(18)]
   i. Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken. [40 CFR 63.1517(b)(18)(i)]
   ii. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.1517(b)(18)(ii)]

f. If the permittee chooses to change furnace operating modes, the following records must be maintained: [40 CFR 63.1517(b)(20)]
   i. The date and time of each change in furnace operating mode, and [40 CFR 63.1517(b)(20)(i)]
   ii. The nature of the change in operating mode (for example, group 1 controlled furnace processing other than clean charge to group 2). [40 CFR 63.1517(b)(20)(ii)]

g. For each emission unit listed above, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

i. Monthly hours of operation;
ii. Monthly process weight;
iii. Monthly fuel usage in MMscf;
iv. Hourly PM emission rates, calculated monthly.
v. The qualitative visual observations required by **4. Specific Monitoring Requirements (d),** including the date, time, initials of observer, whether any emissions were observed (yes/no), any Method 9 readings taken, and any corrective action taken including results due to observed emissions;

h. Refer to **SECTION F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee must prepare and implement for each new or existing affected source and emission unit, an updated OM&M plan that includes the furnace(s) and in-line fluxer(s) operating under this alternate operating scenario within ninety (90) days after implementation of this Alternate Operating Scenario. The plan must be accompanied by a written certification by the permittee that the OM&M plan satisfies all requirements of 40 CFR 63.1510(b) and is otherwise consistent with the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(b)]

b. The permittee must comply with all of the provisions of the OM&M plan as required, unless and until the plan is revised in accordance with the following procedures: [40 CFR 63.1510(b)]
   i. If the Division determines at any time after the receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 40 CFR 63, Subpart RRR, the permittee must promptly make all necessary revisions and resubmit the revised plan.
   ii. If the permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the permittee submits a description of the changes and a revised plan incorporating them to the Division.

c. The OM&M plan must meet all the requirements identified in **SECTION B**, **Subject Item 7, 4. Specific Reporting Requirements**.

d. ***Group 2 furnace.*** The permittee shall submit a certification of compliance with the applicable operational standard for charge materials in 40 CFR 63.1506(o) for each 6-month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(v). [40 CFR 63.1510(r)(2)]

e. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **SECTION F**. When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period. A report must be submitted if any of these conditions occur during a six (6) month reporting period: [40 CFR 63.1516(b)(1)]
   i. An excursion of a compliant process or operating parameter value or range.

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

[40 CFR 63.1516(b)(1)(iv)]

ii. An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the SSM plan. [40 CFR 63.1516(b)(1)(v)]

iii. The furnace was not operated according to the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]

iv. A deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. [40 CFR 63.1516(b)(1)(vii)]

f. Each report must include the following certification, as applicable: [40 CFR 63.1516(b)(2)]

i. For each group 2 furnace: "Only clean charge materials were processed in any group 2 furnace during this reporting period, and no fluxing was performed or all fluxing performed was conducted using only nonreactive, non-HAP-containing/non-HAP-generating fluxing gases or agents, except for cover fluxes, during this reporting period." [40 CFR 63.1516(b)(2)(v)]

ii. For each in-line fluxer using no reactive flux: "Only nonreactive, non-HAP-containing, non-HAP-generating flux gases, agents, or materials were used at any time during this reporting period." [40 CFR 63.1516(b)(2)(vi)]

g. The permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for the furnace. [40 CFR 63.1516(b)(3)]

i. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63, Subpart RRR, the permittee must submit the results of the performance tests, including any associated fuel analyses, following the procedure specified in either 40 CFR 63.1516(b)(3)(i)(A) or (B). [40 CFR 63.1516(b)(3)(i)]

1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chiefert/ert_info.html), the permittee must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.1516(b)(3)(i)(A)]

2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site, the permittee must submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.1516(b)(3)(i)(B)]

h. A malfunction report that is required under 40 CFR 63.1516(d) shall be submitted simultaneously with the semiannual excess emissions/summary report required by 40 CFR 63.1516(b). [40 CFR 63.1516(b)(4)]

i. ***Annual compliance certifications.*** For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the permittee must certify continuing compliance based upon, but not limited to, the following conditions: [40 CFR 63.1516(c)]

i. Any period of excess emissions, as defined in 40 CFR 63.1516(b)(1), that occurred during the year were reported as required by 40 CFR 63, Subpart RRR; and [40 CFR 63.1516(c)(1)]

ii. All monitoring, recordkeeping, and reporting requirements were met during the year. [40 CFR 63.1516(c)(2)]

j. If there was a malfunction during the reporting period, the permittee must submit a report that includes the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must include a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions, including, but not limited to, product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The report must also include a description of actions taken by the permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1506(a)(5). [40 CFR 63.1516(d)]

k. All reports required by 40 CFR 63, Subpart RRR not subject to the requirements in 40 CFR 63.1516(b) must be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.1516(b) in paper format. [40 CFR 63.1516(e)]

l. In each semiannual monitoring report, the permittee shall submit records indicating the periods during which the furnace was operated under the alternate operating scenario. [401 KAR 52:020, Section 10]

m. The permittee shall submit a notice of change in operating scenario to the Division’s

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

field office either contemporaneously with the change or preceding the change. [401 KAR 52:020, Section 10]

n. Refer to **SECTION F** for general reporting requirements.

SECTION I - COMPLIANCE SCHEDULE

This section contains compliance schedule requirements as specified by Section 1c of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26. Progress reports on this schedule must be submitted at least semiannually, or at more frequent intervals if required in the specific conditions outlined below. Reports shall include the following items: (a) Dates scheduled for achieving each milestone, and the actual date that compliance is achieved; and (b) An explanation of why dates in /the schedule of compliance were not or will not be met, and preventive or corrective measures adopted to ensure that compliance with future items will be brought back on schedule. Compliance certifications shall be mailed to the addresses listed in General Condition F.9.

The U.S. EPA promulgated the current 1-hour SO_2 National Ambient Air Quality Standards (NAAQS) at 75 parts per billion (ppb) on June 22, 2010. Based on SO_2 concentration data measured at the ambient monitoring station located southwest of the Sebree Plant operations area during the 2017-2019 period, which exceeded the NAAQS, portions of Henderson and Webster Counties in Kentucky surrounding the Sebree Plant were designated as nonattainment with respect to the 1-hour SO_2 NAAQS effective on April 30, 2021. The following requirements are intended to mitigate the impact of SO_2 emissions from the Sebree plant and return the area to attainment. [401 KAR 53:005, Section 1(3)]

1. The permittee shall install and make operational the SO_2 CEMS required by Section B, Subject Item 6, within 180 days after issuance of Permit V-26-005. The permittee shall complete the applicable initial performance evaluation/certification in accordance with Performance Specification 2 of 40 CFR Part 60, Appendix B, within 90 days after installation/startup of the SO_2 CEMS. Compliance with the rolling 24-hour SO_2 emission limitation in Section B, Subject Item 6, **2. Emission Limitations (e)** shall be demonstrated using quality-assured CEMS data following the completion of the initial performance evaluation/certification.
2. Until the SO_2 CEMS is installed, operational, and the initial performance evaluation/certification is complete, the permittee shall demonstrate compliance each month with the lb/hr SO_2 emission limitation in Section B, Subject Item 6, **2. Emission Limitations (e)** using the following equation:

$$E_{SO_2-ABF} = \frac{[(P_{GA} \times \%S_{GA}) + (P_{PC} \times \%S_{PC}) - (P_{BA} \times \%S_{BA})]}{H} (\frac{64}{32})(2000)$$

Where:

E_{SO_2-ABF} = Monthly average SO_2 emissions from ABF (lb/hr)

P_{GA} = Mass of green anode blocks baked during month (ton/month), set equal to P_{BA} divided by the current three-year average baked anode:green anode weight ratio

$\%S_{GA}$ = Average green anode paste sulfur content (weight %) for month based on all valid daily samples tested

P_{PC} = Packing coke consumed during month (ton/month), based on make-up rate of packing coke added to system during the month

$\%S_{PC}$ = Average packing coke sulfur content (weight %) for month based on all valid samples collected and tested in the month

SECTION I - COMPLIANCE SCHEDULE (CONTINUED)

P_{BA} = Measured mass of baked anode blocks removed from the furnace during month (ton/month)
$\%S_{BA}$ = Average baked anode core samples sulfur content (weight %) for month based on all valid daily samples tested.
H = Operating hours in the month (hr/month)
64/32 = Mass ratio of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2 = 1 lbmole S
2000 = Conversion of tons to lb (2,000 lb/ton)

Appendix A

COMPLIANCE ASSURANCE MONITORING (CAM) PLANS
40 CFR 64

1. CAM Plan for Potlines 1-3 – $PM/PM_{10}/PM_{2.5}$

1.1 Emission Units and Control Device Description

Emission Unit Name:	**Potlines 1-3**
KyEIS Equipment ID:	EQPT0000000014; EQPT0000000015; EQPT0000000016
KyEIS Source ID:	**E1; E3; E5**
KyEIS Process ID:	2; 2; 2
Control Device:	Dry Alumina Scrubbers (161S A-398, 161N A-398, 162S A-398, 162N A-398, 163S A-398, 163N A-398)

1.2 $PM/PM_{10}/PM_{2.5}$ CAM Plan

1.2.1 Applicable Regulations, $PM/PM_{10}/PM_{2.5}$ Emission Rates and Current Monitoring

Potlines 1-3 (E1, E3, E5)	
Pollutant:	$PM/PM_{10}/PM_{2.5}$
Regulation:	401 KAR 51:017 (BACT)
Emission Limit:	PM from the Potline 1-3 roof monitors and A-398 scrubber system stacks are limited to **4.88 lb/ton.** PM_{10} from the Potline 1-3 roof monitors and A-398 scrubber system stacks are limited to **2.1 lbs/ton**. $PM_{2.5}$ from the Potline 1-3 roof monitors and A-398 scrubber system stacks are limited to **2.1 lbs/ton.**
CAM Designation:	Small PSEU for $PM/PM_{10}/PM_{2.5}$

1.2.2 Monitoring Methods for $PM/PM_{10}/PM_{2.5}$

The proposed monitoring methods that provide on-going assurance of compliance with the permitted $PM/PM_{10}/PM_{2.5}$ limits and monitoring performance criteria for the indicators selected are detailed in Table 1-1. In accordance with 40 CFR 64.4(b), the rationale and justification for the monitoring method and indicator ranges are provided in the subsequent sections.

Table 1-1. $PM/PM_{10}/PM_{2.5}$ Monitoring Methods for Potlines 1-3

General Criteria		
Indicator	**Dry Alumina Scrubber Baghouse Differential Pressure**	**Visible emissions from the Dry Alumina Scrubber stack.**
Measurement Approach	The differential pressure across each dry alumina baghouse module is measured by Rosemount Model 1151DP3552B2 transmitters connected to each module on the dirty side and to the discharge plenum on the clean side.	A qualified observer will conduct a visual observation twice daily (at least 4 hours apart) when weather conditions allow using Method 22.
Indicator Range	**1 to 10 inches water** An excursion is defined as a 2-hour average differential pressure reading outside the indicator range. An excursion will trigger an investigation of the occurrence, corrective action, and a reporting requirement.	**Visible emissions seen during a visual observation.**
Means of Identifying Excursion	The continuous monitoring system provides an alarm notification to operators if the differential pressure reading falls outside the indicator range.	Direct viewing of the stacks by a qualified observer.
Corrective Actions	In response to an excursion, appropriate personnel will troubleshoot the dry alumina scrubber baghouse and conduct repairs or maintenance as deemed necessary. Corrective actions will be documented in the plant's maintenance tracking system.	In response to an excursion (i.e., presence of visible emissions), personnel will troubleshoot the problematic baghouse system and conduct repairs or maintenance as deemed necessary. Corrective action will be initiated within 1 hour of visible emission inspections that indicate abnormal operations. Corrective actions will be documented in the plant's maintenance tracking system.
Performance Criteria		
Data Representativeness	The pressure transmitters have a minimum accuracy of ± 0.075%.	It is assumed that the baghouses are functioning properly if there are no visible emissions from the respective stacks.
Verification of Operational Status	The differential pressure reading is displayed on the operator's control screen. The system continuously monitors the pressure and alarms if it falls outside the indicator range.	Observer will verify that Potlines 1-3 and the dry alumina scrubber systems are operational before conducting the visual evaluation of the stacks.
QA/QC Practices and Criteria	Preventative maintenance inspections are conducted monthly that include cleaning and checking of the monitoring instruments.	The baghouse modules will be maintained and operated in accordance with good air pollution control practices. Staff assigned to conduct visual observations will be provided training on Method 22 procedures to follow.

Monitoring Frequency	**Continuously** The differential pressure across each of the baghouse modules is monitored continuously and at least one data point is electronically saved every 15 minutes when the system is in operation.	**Twice Daily** Visual Observations will be conducted twice daily (at least 4 hours apart).
Data Collection Procedure	15-minute instantaneous readings are recorded. The programmable logic controller (PLC) then calculates and records the rolling 2-hour average value.	Trained staff will conduct qualitative visual observations of the opacity of emissions from the dry alumina scrubber system stacks on all three Potlines following Method 22 and maintain a log of the observations. The log shall note whether any air emissions were visible from a stack.
Averaging Period	2 hours	Instantaneous determination from visual observation.
QIP Threshold	Century will develop a quality improvement plan (QIP) if there are more than 883 excursions of the differential pressure indicator for any given A-398 scrubber system in a semi-annual reporting period. This corresponds to an excursion frequency of less than 5% of total data values collected in a semiannual period (184 days/period x 24 hr/day x 4 readings/hour).	Century will develop a quality improvement plan (QIP) if there are more than 18 excursions (i.e., visible emissions recorded) during a semi-annual reporting period for any set of A-398 scrubber system stacks. This would be the equivalent of an excursion taking place for roughly 5% of the observation events (184 days x 2 readings/day).
Recordkeeping	• Electronic archives of differential pressure 2-hr average readings. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log.	• Archives of visual observation logs. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log.
Reporting	Excursions will be summarized in Title V semiannual monitoring reports.	Excursions will be summarized in Title V semiannual monitoring reports.

1.2.3 Monitoring Method Justification– Alumina Scrubber Baghouse Differential Pressure

Rationale for Selection of Performance Indicator
PM control is provided by the dry alumina scrubber baghouse material and filter cake. Operation of the baghouse modules above the low end of the differential pressure range provides indication that there are no holes/tears, which would directly lead to reduced PM control. Operation below the high end of the differential pressure range provides indication that the baghouse is functioning normally and not constraining total air flow.

Rationale for Selection of Indicator Range
The emissions tested from Potline 3 in March 2015 were 28% of the limit for PM, 89% of the limit for PM_{10}, and 76% of the limit for $PM_{2.5}$ and thus there is a sufficient compliance margin. During the testing days, the daily average differential pressure values across all six baghouse modules averaged 4.83 in-H_2O and ranged from a low of 3.64 to a high of 5.63 in-H_2O. Century's review of differential pressure data shows that over a longer operating period, the differential pressure has a wider range. A lower threshold value of 1 in-H_2O is representative of pressures registered with new clean bags. The higher threshold value is a set point for triggering the baghouse cleaning cycle. Setting the trigger value too low results in over frequent cleaning cycles, which can prematurely wear out the bags. Conversely, setting the trigger value high could also result in decreased bag filter life due to high material load and pressure. Century has consulted with the current supplier of bag filters for the A-398 systems, and they have confirmed that the filters being supplied maintain their collection efficiency at differential pressures of 10 in-H_2O. Thus, this value has been set as the cleaning cycle trigger threshold for all the A-398 baghouse systems. Accordingly, a differential pressure range of 1 to 10 in-H_2O, over which the baghouse modules operate and function normally, is proposed as the indicator range.

1.2.4 Monitoring Method Justification– Visible Emissions Observations

Rationale for Selection of Performance Indicator
Visible emissions at the stacks for each of the A-398 scrubber systems on the Potlines would be directly related to particulate matter emissions. Opacity readings are commonly utilized as surrogate indicators of particulate matter emissions. When the baghouse modules associated with the dry alumina scrubber reactors are operating normally, there should be no routine visible emissions. An increase in opacity or changes in VE observations would indicate process changes, changes in baghouse efficiency, or possible leaks. Thus, observations confirming no visible emissions provide assurance that the baghouse is properly functioning. Further, monitoring visible emissions is required by 40 CFR 63.848(g) and thus, pursuant to 40 CFR 64.4(b), this method is presumptively acceptable for purposes of CAM.

Rationale for Selection of Indicator Range
Any visible emissions from the stack would indicate a possible problem with the operation of the baghouse modules and thus an emission rate of particulate matter that could potentially exceed the specified emission limit. Conversely, observation of no visible emissions provides evidence that the scrubber/baghouse system is functioning normally and thus assurance of compliance with the emission limit.

2. CAM Plan for Anode Bake Furnace – PM/PM_{10}

2.1 *Emission Units and Control Device Description*

Emission Unit Name:	**Anode Bake Furnace**
KyEIS Equipment ID:	COMB0000000006
KyEIS Source ID:	**N2**
KyEIS Process ID:	1
Control Device:	**Dry Alumina Scrubber (A-446)**

2.2 *PM/PM_{10} CAM Plan*

2.2.1 *Applicable Regulations, PM/PM_{10} Emission Rates and Current Monitoring*

Anode Bake Furnace (N2)	
Pollutant:	PM/PM_{10}
Regulation:	401 KAR 59:010 (New Process Operations); Self-imposed limit to preclude 401 KAR 51:017 applicability
Emission Limit:	PM is limited to less than $3.59 \times P_j^{0.62}$ lb/hr where P_j is tons of green anode processed per hour. Visible emissions are limited to less than 20% opacity on a six-minute average basis. At the maximum rated capacity (17.74 tons/hr of green anode), the equivalent mass emission limit is **21.35 lb/hr**. PM/PM_{10} is limited to **5.14 lb/hr** (3-hour average) as a PSD avoidance limit.
CAM Designation:	Small PSEU for PM/PM_{10}

2.2.2 *Monitoring Methods for PM/PM_{10}*

The proposed monitoring methods that provide on-going assurance of compliance with the permitted PM/PM_{10} emission limit and monitoring performance criteria for the indicators selected are detailed in Table 2-1. In accordance with 40 CFR 64.4(b), the rationale and justification for the monitoring method and indicator ranges are provided in the subsequent sections.

Table 2-1. PM/PM_{10} Monitoring Methods for Anode Bake Furnace

General Criteria		
Indicator	**Dry Scrubber Baghouse Differential Pressure**	**Visible emissions from the Dry Scrubber stack.**
Measurement Approach	The differential pressure across each dry alumina baghouse module is measured by Rosemount Model 1151DP3552B2 transmitters connected to each module on the dirty side and to the discharge plenum on the clean side.	A qualified observer will conduct a visual observation twice daily (at least 4 hours apart) when weather conditions allow using Method 22.
Indicator Range	**0.5 to 6 inches water** An excursion is defined as a 2-hour average differential pressure reading outside the indicator range. An excursion will trigger an investigation of the occurrence, corrective action, and a reporting requirement.	**Visible emissions seen during a visual observation.**
Means of Identifying Excursion	The continuous monitoring system provides an alarm notification to operators if the differential pressure reading falls outside the indicator range.	Direct viewing of the stack by a qualified observer.
Corrective Actions	In response to an excursion, appropriate personnel will troubleshoot the dry alumina scrubber baghouse and conduct repairs or maintenance as deemed necessary. Corrective actions will be documented in the plant's maintenance tracking system.	In response to an excursion (i.e., presence of visible emissions), personnel will troubleshoot the baghouse system and conduct repairs or maintenance as deemed necessary. Corrective action will be initiated within 1 hour of visible emission inspections that indicate abnormal operations. Corrective actions will be documented in the plant's maintenance tracking system.
Performance Criteria		
Data Representativeness	The pressure transmitters have a minimum accuracy of ± 0.075%.	It is assumed that the baghouse is functioning properly if there are no visible emissions from the stack.
Verification of Operational Status	The differential pressure reading is displayed on the operator's control screen. The system continuously monitors the pressure and alarms if it falls outside the indicator range.	Observer will verify that the anode bake furnace and the dry scrubber system are operational before conducting the visual evaluation of the stack.
QA/QC Practices and Criteria	Preventative maintenance inspections are conducted monthly that include cleaning and checking of the monitoring instruments.	The baghouse modules will be maintained and operated in accordance with good air pollution control practices. Staff assigned to conduct visual observations will be provided training on Method 22 procedures to follow.

Monitoring Frequency	**Continuously** The differential pressure across each of the baghouse modules is monitored continuously and at least one data point is electronically saved every 15 minutes when the system is in operation.	**Twice Daily** Visual Observations will be conducted twice daily (at least 4 hours apart).
Data Collection Procedure	15-minute instantaneous readings are recorded. The programmable logic controller (PLC) then calculates and records the rolling 2-hour average value.	Trained staff will conduct a qualitative visual observation of the opacity of emissions from the Anode Bake Furnace dry scrubber stacks following Method 22 and maintain a log of the observations. The log shall note whether any air emissions were visible from the stack.
Averaging Period	2 hours	Instantaneous determination from visual observation.
QIP Threshold	Century will develop a quality improvement plan (QIP) if there are more than 883 excursions of the differential pressure indicator in a semi-annual reporting period for any of the three A-446 scrubber reactors. This corresponds to an excursion frequency of less than 5% of total data values collected in a semiannual period (184 days/period x 24 hr/day x 4 readings/hour).	Century will develop a quality improvement plan (QIP) if there are more than 18 excursions (i.e., visible emissions recorded) during a semi-annual reporting period. This would be the equivalent of an excursion taking place for roughly 5% of the observation events (184 days x 2 readings/day).
Recordkeeping	• Electronic archives of differential pressure 2-hr average readings. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log.	• Archives of visual observation logs. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log.
Reporting	Excursions will be summarized in Title V semiannual monitoring reports.	Excursions will be summarized in Title V semiannual monitoring reports.

2.2.3 Monitoring Method Justification– Baghouse Differential Pressure

Rationale for Selection of Performance Indicator
PM control is provided by the dry alumina scrubber baghouse material and filter cake. Operation of the baghouse modules above the low end of the differential pressure range provides indication that there are no holes/tears, which would directly lead to reduced PM control. Operation below the high end of the differential pressure range provides indication that the baghouse is functioning normally and not constraining total air flow.

Rationale for Selection of Indicator Range
The performance test conducted prior to the development of this CAM plan for PM/PM_{10} was conducted on September 10, 2015. The tested emissions were 33% of the limit for PM and 18% of the limit for PM_{10}, thus there is a sufficient compliance margin. During the testing day, the daily average differential pressure values across all the baghouse modules averaged 1.84 in-H_2O and ranged from a low of 1.50 to a high of 2.23 in-H_2O. Century's review of differential pressure data from January 2015 through December 2016, shows that over a longer operating period, the differential pressure has a wider range of approximately 0.5 to 6 in-H_2O. This wider range, during which the baghouse modules were operating and functioning normally, is proposed as the indicator range.

2.2.4 Monitoring Method Justification– Visible Emissions Observations

Rationale for Selection of Performance Indicator
Visible emissions at the dry scrubber stacks would be directly related to particulate matter emissions. Opacity readings are commonly utilized as surrogate indicators of particulate matter emissions. When the baghouse modules associated with the dry alumina scrubber is operating normally, there should be no routine visible emissions. An increase in opacity or changes in VE observations would indicate process changes, changes in baghouse efficiency, or possible leaks. Thus, observations confirming no visible emissions provide assurance that the baghouse is properly functioning. Further, monitoring visible emissions is required by 40 CFR 63.848(g) and thus, pursuant to 40 CFR 64.4(b), this method is presumptively acceptable for purposes of CAM.

Rationale for Selection of Indicator Range
Although the presence of visible emissions does not in itself constitute a violation of the PM/PM_{10} emission limit or 20% opacity standard, any visible emissions from the stack would indicate a possible problem with the operation of the baghouse modules and thus an emission rate of particulate matter that could potentially exceed the specified emission limit. Conversely, observation of no visible emissions provides evidence that the scrubber/baghouse system is functioning normally and thus assurance of compliance with the emission limit.

3. CAM Plan for Material Handling and Transfer (Existing Sources)

A CAM Plan for PM for the material handling emission units subject to a PM standard under 401 KAR 61:020 for Existing Sources is provided in this section.

3.1 Emission Units and Control Device Descriptions

Emission Unit Name:	**Material Transfer Rail Car (T5)**
KyEIS Equipment ID:	EQPT0000000009
KyEIS Source ID:	**C1**
KyEIS Process ID:	**1**
Control Device:	**Railcar Station Dust Collector (140Y-DC)**

Emission Unit C1 encompasses the material transfer operations at the railcar unloading station. Particulate matter emissions generated from these unloading operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 6,800 acfm.

Emission Unit Name:	**Coke Crushing (E6)**
KyEIS Equipment ID:	EQPT0000000029
KyEIS Source ID:	**K7**
KyEIS Process ID:	**1**
Control Device:	**Coke Hammermill Dust Collector (CCD-2-DC)**

Emission Unit K7 encompasses coke crushing operations as shown on Figure 3 of submitted process flow diagrams. Particulate matter emissions generated from these crushing operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 7,088 acfm.

Emission Unit Name:	**Coke Ball Mill (E7)**
KyEIS Equipment ID:	EQPT0000000030
KyEIS Source ID:	**L1**
KyEIS Process ID:	**1**
Control Device:	**Coke Ball Mill Dust Collector (CF-13-DC)**

Emission Unit L1 encompasses the coke ball mill process as shown on Figure 3 submitted process flow diagrams. Particulate matter emissions generated from these grinding operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 5,000 acfm.

Emission Unit Name:	**Coke Fines Handling (E8)**
KyEIS Equipment ID:	EQPT0000000031
KyEIS Source ID:	**L3**
KyEIS Process ID:	**1**
Control Device:	**Coke Fines Handling Dust Collector (CFD-2-DC)**

Emission Unit L3 encompasses the coke fines handling process as shown on Figure 3 of submitted process flow diagrams. Particulate matter emissions generated from these material handling operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 7,088 acfm.

Emission Unit Name:	**Anode Butt Cleaning (E2)**
KyEIS Equipment ID:	EQPT0000000024
KyEIS Source ID:	**J2**
KyEIS Process ID:	**1**
Control Device:	**South Wheelabrator Dust Collector (SW-DC)**

Emission Unit J2 encompasses the anode butt cleaning process as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these shot blasting operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 12,000 acfm.

Emission Unit Name:	**Butt Impactor (E5)**
KyEIS Equipment ID:	EQPT0000000028
KyEIS Source ID:	**K5**
KyEIS Process ID:	**1**
Control Device:	**Butts Impactor Dust Collector (BD-6-DC)**

Emission Unit K5 encompasses the anode butt impactor process as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these impactor operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 10,000 acfm.

Emission Unit Name:	**Bath Crush/Crucible Cleaning [P1(23)]**
KyEIS Equipment ID:	EQPT0000000026
KyEIS Source ID:	**K1**
KyEIS Process ID:	**1**
Control Device:	**RB10 Crusher Dust Collector (RB10-DC)**

Emission Unit K1 encompasses the bath crush/crucible cleaning process as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these cleaning operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 23,866 acfm baghouse.

Emission Unit Name:	**Bath Transfer to Storage Processing (5P)**
KyEIS Equipment ID:	EQPT0000000046
KyEIS Source ID:	**U1**
KyEIS Process ID:	**1**
Control Device:	**Bath Salvage Dust Collector (104H-BS-DC)**

Emission Unit U1 encompasses the bath transfer to storage processing operation as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these material handling operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 51,064 acfm.

Emission Unit Name:	**Anode Rod Cleaning (EG)**
KyEIS Equipment ID:	EQPT0000000041
KyEIS Source ID:	**Q4**
KyEIS Process ID:	**1**
Control Device:	**North Wheelabrator Dust Collector (NW-DC)**

Emission Unit Q4 encompasses the anode rod cleaning process (North Wheelabrator). Particulate matter emissions generated from these shot blasting operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 6,000 acfm.

Emission Unit Name:	**Ingot Casting Dross Loading (I9)**
KyEIS Equipment ID:	EQPT0000000022
KyEIS Source ID:	**G8**
KyEIS Process ID:	**1**
Control Device:	**Dross Loading East & West Baghouse (DL-DC)**

Emission Unit G8 encompasses the ingot casting dross loading process as shown on Figure 9 of submitted process flow diagrams. Particulate matter emissions generated from these loading operations are controlled using a baghouse. The current system was installed in 1972. Air is drawn through the baghouse system at a rate of approximately 45,000 acfm.

3.2 PM CAM Plan

3.2.1 Applicable Regulations, PM Emission Rates, and Current Monitoring

All Units Identified in Section 3.1	
Pollutant:	PM
Regulation:	401 KAR 61:020 (Existing Process Operations)
Emission Limit:	PM is limited to less than $(4.1 \times P_j^{0.67})$ lb/hr where P_j is tons of material processed per hour (assuming a process rate less than 30 tons/hr). PM is limited to less than $((55.0 \times P_j^{0.11}) - 40)$ lb/hr where P_j is tons of material processed per hour (assuming a process rate greater than 30 tons/hr). Visible emissions are limited to less than 40% opacity on a six-minute average basis.
CAM Designation:	Small PSEU for PM

Material Transfer Rail Car (C1)	
Emission Limit:	At the maximum rated capacity (75.0 tons/hr), the equivalent mass emission limit is **48.4 lb/hr**.

Coke Crushing (K7)	
Emission Limit:	At the maximum rated capacity (24.0 tons/hr), the equivalent mass emission limit is **34.5 lb/hr**.

Coke Ball Mill (L1)	
Emission Limit:	At the maximum rated capacity (18.3 tons/hr), the equivalent mass emission limit is **28.8 lb/hr**.

Coke Fines Handling (L3)	
Emission Limit:	At the maximum rated capacity (20.0 tons/hr), the equivalent mass emission limit is **30.5 lb/hr**.

Anode Butt Cleaning (J2)	
Emission Limit:	At the maximum rated capacity (2.6 tons/hr), the equivalent mass emission limit is **7.8 lb/hr**.

Butt Impactor (K5)	
Emission Limit:	At the maximum rated capacity (30 tons/hr), the equivalent mass emission limit is **40.0 lb/hr**.

Bath Crush/Crucible Cleaning (K1)	
Emission Limit:	The emission limit is **0.02 gr/scf** and **97% control efficiency**.

Bath Transfer to Storage Processing (U1)	
Emission Limit:	The emission limit is **0.02 gr/scf** and **97% control efficiency**.

Anode Rod Cleaning (Q4)	
Emission Limit:	At the maximum rated capacity (17.6 tons/hr), the equivalent mass emission limit is **28.0 lb/hr**.

Ingot Casting Dross Loading (G8)	
Emission Limit:	At the maximum rated capacity (9.8 tons/hr), the equivalent mass emission limit is **18.85 lb/hr**.

3.2.2 Monitoring Methods for PM

The proposed monitoring methods that provide on-going assurance of compliance with the permitted PM limits and monitoring performance criteria for the indicators selected are detailed in Table 3-1. In accordance with 40 CFR 64.4(b), the rationale and justification for the monitoring methods and indicator ranges are provided in the subsequent sections.

Table 3-1. PM Monitoring Methods

General Criteria	
Indicator	**Visible emissions from the baghouse stack.**
Measurement Approach	A qualified observer will conduct a visual observation daily when the unit is operating and when weather conditions allow.
Indicator Range	**Visible emissions seen during a visual observation.**
Means of Identifying Excursion	Direct viewing of the stack by a qualified observer.
Corrective Actions	In response to an excursion (i.e., presence of visible emissions), a certified opacity reader will conduct a Method 9 observation to measure the opacity. Personnel will troubleshoot the emission unit and baghouse system and conduct repairs or maintenance as deemed necessary in the most expedient manner possible. Corrective actions will be documented in the plant's maintenance tracking system.
Performance Criteria	
Data Representativeness	It is assumed that the baghouse is functioning properly and thus the emissions unit is in compliance with the PM limit if there are no visible emissions from the stack and if the baghouse is operated and properly maintained.
Verification of Operational Status	Observer will verify the emission unit operations are operational before conducting the visual evaluation of the stack.
QA/QC Practices and Criteria	The baghouse and emission unit equipment will be maintained and operated in accordance with good air pollution control practices. Staff assigned to conduct visual observations will be provided training on procedures to follow at least once a year.
Monitoring Frequency	Visual observations will be conducted at least once daily during daylight hours, weather permitting.
Data Collection Procedure	Trained staff will conduct a qualitative visual observation of the opacity of emissions from the stack serving each baghouse and maintain a log of the observations. The log shall note whether any air emissions (except for water vapor) were visible from the stack. If performed, the results from each Method 9 reading shall also be recorded.
Averaging Period	Instantaneous determination from visual observation.
QIP Threshold	Century will develop a quality improvement plan (QIP) if there are more than nine excursions (i.e., visible emissions recorded) during a semi-annual reporting period. This would be the equivalent of an excursion taking place for roughly 5% of the observation events.
Recordkeeping	• Archives of visual observation logs. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log. • Training records for personnel conducting visual observations.
Reporting	Excursions will be summarized in Title V semiannual monitoring reports.

3.2.3 Monitoring Method Justification– Visible Emissions Observations

Rationale for Selection of Performance Indicator
The visible emissions are directly related to the particulate matter emissions from the stack. Opacity readings are commonly utilized as surrogate indicators of particulate matter emissions. When the baghouses controlling the emission unit operations identified in this section are operating normally, there should be no routine visible emissions. Thus, observations confirming no visible emissions provide assurance that the baghouse is properly functioning.

Rationale for Selection of Indicator Range
Although the presence of visible emissions does not in itself constitute a violation of the PM emission limit or 40% opacity standard, it may indicate that corrective action should be initiated so that any possible exceedance of the particulate standard can be prevented. The excursion threshold of any visible emissions was selected based on operating experience. A visible plume, although not necessarily in excess of the 40% opacity standard, would be present if emissions were in excess of the allowable rate. Thus, a more prescriptive or exact method of monitoring emissions is not necessary. Conversely, observation of no visible emissions provides evidence that the baghouse system is functioning normally and thus assurance of compliance with the emission limit.

4. CAM Plan for Material Handling and Transfer (New Sources)

A CAM Plan for PM for the material handling emission units subject to a PM standard under 401 KAR 59:010 for New Sources is provided in this section.

4.1 Emission Units and Control Device Description

Emission Unit Name:	**Anode Saw Dust Collector (EQ1)**
KyEIS Equipment ID:	EQPT0000000053
KyEIS Source ID:	**U4**
KyEIS Process ID:	**1**
Control Device:	**Anode Saw Dust Collector (270AS-DC)**

Emission Unit U4 encompasses the anode saw dust collector process as shown on Figure 5 of submitted process flow diagrams. Particulate matter emissions generated from these operations are controlled using a baghouse. The current system was installed in 2004. Air is drawn through the baghouse system at a rate of approximately 8,541 acfm.

Emission Unit Name:	**Central Anode Butts Cleaning (EJ)**
KyEIS Equipment ID:	EQPT0000000052
KyEIS Source ID:	**U3**
KyEIS Process ID:	**1**
Control Device:	**Butts Cleaning Station Dust Collector (CB-DC)**

Emission Unit U3 encompasses the central anode butts cleaning process (North Wheelabrator) as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these shot blasting operations are controlled using a baghouse. The current system was installed in 1990. Air is drawn through the baghouse system at a rate of approximately 16,011 acfm.

Emission Unit Name:	**Butt Stripping/Crushing (E3)**
KyEIS Equipment ID:	EQPT0000000025
KyEIS Source ID:	**J3**
KyEIS Process ID:	**1**
Control Device:	**Butt Stripping Dust Collector (232H-DC)**

Emission Unit J3 encompasses the butt stripping/crushing process as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these crushing operations are controlled using a baghouse. The current system was installed in 1977. Air is drawn through the baghouse system at a rate of approximately 19,000 acfm.

Emission Unit Name:	**Butt Dust Collector (E4)**
KyEIS Equipment ID:	EQPT0000000027
KyEIS Source ID:	**K3**
KyEIS Process ID:	**1**
Control Device:	**254A Butts System Dust Collector (254A-DC)**

Emission Unit K3 encompasses the butt dust collector process as shown on Figure 6 of submitted process flow diagrams. Particulate matter emissions generated from these operations are controlled using a baghouse. The current system was installed in 1979. Air is drawn through the baghouse system at a rate of approximately 8,686 acfm.

Emission Unit Name:	**Transloading Spent Potliner & Sandblasting Operations**
KyEIS Equipment ID:	EQPT0000000017
KyEIS Source ID:	**E6**
KyEIS Process ID:	**1**
Control Device:	**Potliner Sandblasting Dust Collector (138AW-DC)**

Emission Unit E6 encompasses the transloading spent potliner and sandblasting operations as shown on Figure 8 of submitted process flow diagrams. This system uses an air wall filter system (138AW-DC) to control PM emissions from transloading spent potliner and shot blasting pot shells. The air wall filter system, which was installed in 1995, contains three separate units. Air is drawn through the air wall system at a total rate of approximately 30,000 acfm (10,000 acfm per air wall filter). The exhaust from each air wall filter is then vented through individual filter vents to the interior of Building 138.

4.2 PM CAM Plan

4.2.1 Applicable Regulations, PM Emission Rates, and Current Monitoring

All Units Identified in Section 4.1	
Pollutant:	PM
Regulation:	401 KAR 59:010 (New Process Operations)
Emission Limit:	PM is limited to less than ($3.59 \times P_j^{0.62}$) lb/hr where P_j is tons of material processed per hour (assuming a process rate less than 30 tons/hr). PM is limited to less than ($17.3 \times P_j^{0.16}$) lb/hr where P_j is tons of material processed per hour (assuming a process rate greater than 30 tons/hr). Visible emissions are limited to less than 20% opacity on a six-minute average basis.
CAM Designation:	Small PSEU for PM

Anode Saw Dust Collector (U4)	
Emission Limit:	At the maximum rated capacity (20.5 tons/hr), the equivalent mass emission limit is **23.4 lb/hr**.

Central Anode Butts Cleaning (U3)	
Emission Limit:	At the maximum rated capacity (9.1 tons/hr), the equivalent mass emission limit is **14.2 lb/hr**.

Butt Stripping/Crushing (J3)	
Emission Limit:	At the maximum rated capacity (15.8 tons/hr), the equivalent mass emission limit is **19.83 lb/hr**.

Butt Dust Collector (K3)	
Emission Limit:	At the maximum rated capacity (30.0 tons/hr), the equivalent mass emission limit is **29.8 lb/hr**.

Transloading Spent Potliner & Sandblasting Operations (E6)	
Emission Limit:	At the maximum rated capacity (20.6 tons/hr), the equivalent mass emission limit is **23.4 lb/hr**.

4.2.2 Monitoring Methods for PM

The proposed monitoring methods that provide on-going assurance of compliance with the permitted PM limit and monitoring performance criteria for the indicators selected are detailed in Table 4-1. In accordance with 40 CFR 64.4(b), the rationale and justification for the monitoring methods and indicator ranges are provided in the subsequent sections.

Table 4-1. PM Monitoring Methods

General Criteria	
Indicator	**Visible emissions from the baghouse stack.**
Measurement Approach	A qualified observer will conduct a visual observation daily when the unit is operating and when weather conditions allow.
Indicator Range	**Visible emissions seen during a visual observation.**
Means of Identifying Excursion	Direct viewing of the stack by a qualified observer.
Corrective Actions	In response to an excursion, an inspection (i.e., presence of visible emissions), a certified opacity reader will conduct a Method 9 observation to measure the opacity. Personnel will troubleshoot the emission unit and baghouse system and conduct repairs or maintenance as deemed necessary in the most expedient manner possible. Corrective actions will be documented in the plant's maintenance tracking system.
Performance Criteria	
Data Representativeness	It is assumed that the baghouse is functioning properly and thus the emissions unit is in compliance with the PM limit if there are no visible emissions from the stack and if the baghouse is operated and properly maintained.
Verification of Operational Status	Observer will verify the emission unit operations are operational before conducting the visual evaluation of the stack.
QA/QC Practices and Criteria	The baghouse and emission unit equipment will be maintained and operated in accordance with good air pollution control practices. Staff assigned to conduct visual observations will be provided training on procedures to follow at least once a year.
Monitoring Frequency	Visual observations will be conducted at least once daily during daylight hours, weather permitting.
Data Collection Procedure	Trained staff will conduct a qualitative visual observation of the opacity of emissions from the stack serving each baghouse and maintain a log of the observations. The log shall note whether any air emissions (except for water vapor) were visible from the stack. If performed, the results from each Method 9 reading shall also be recorded.
Averaging Period	Instantaneous determination from visual observation.
QIP Threshold	Century will develop a quality improvement plan (QIP) if there are more than nine excursions (i.e., visible emissions recorded) during a semi-annual reporting period. This would be the equivalent of an excursion taking place for roughly 5% of the observation events.
Recordkeeping	• Archives of visual observation logs. • Causes and corrective actions taken associated with any excursions, noted in the maintenance log. • Training records for personnel conducting visual observations.
Reporting	Excursions will be summarized in Title V semiannual monitoring reports.

4.2.3 Monitoring Method Justification– Visible Emissions Observations

Rationale for Selection of Performance Indicator
The visible emissions are directly related to the particulate matter emissions from the stack. Opacity readings are commonly utilized as surrogate indicators of particulate matter emissions. When the baghouses controlling the emission unit operations identified in this section are operating normally, there should be no routine visible emissions. Thus, observations confirming no visible emissions provide assurance that the baghouse is properly functioning.

Rationale for Selection of Indicator Range
Although the presence of visible emissions does not in itself constitute a violation of the PM emission limit or 20% opacity standard, it may indicate that corrective action should be initiated so that any possible exceedance of the particulate standard can be prevented. The excursion threshold of any visible emissions was selected based on operating experience. A visible plume, although not necessarily in excess of the 20% opacity standard, would be present if emissions were in excess of the allowable rate. Thus, a more prescriptive or exact method of monitoring emissions is not necessary. Conversely, observation of no visible emissions provides evidence that the baghouse system is functioning normally and thus assurance of compliance with the emission limit.