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

Final

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Logan Aluminum, Inc.**
Mailing Address:	**P.O. Box 3000, 6920 Lewisburg Rd., Russellville, KY 42276**
Source Name:	**Logan Aluminum, Inc.**
Mailing Address:	**6920 Lewisburg Rd. Russellville, KY 42276**
Source Location:	**Logan County**
Permit:	**V-20-004 R4**
Agency Interest:	**2761**
Activity:	**APE20240007**
Review Type:	**Title V, Operating**
Source ID:	**21-141-00038**
Regional Office:	**Bowling Green Regional Office 2642 Russellville Road Bowling Green, KY 42101 (270) 746-7475**
County:	**Logan**
Application Complete Date:	**August 6, 2019**
Issuance Date:	**December 27, 2020**
Revision Date:	**April 4, 2025**
Expiration Date:	**December 27, 2025**

Rick Shewekah

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

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Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action
V-20-004	Renewal; PSD	APE20190005; APE20190008	8/6/2019; 10/22/2019	12/27/2020	Modification to Remelt 2 PSD Project; Renewal Permit
V-20-004 R1	Minor Revision	APE20210003	6/24/2021	10/20/2021	As-Built Modifications to Remelt 2 Project, Addition of Mobile Bale Breaker, and Approval of Use of Salt Flux in EP57 – Multichamber Furnace
V-20-004 R2	Significant Revision	APE20210008	1/6/2022	5/24/2022	Hot Mill upgrade project
V-20-004 R3	Minor Revision	APE20230007	1/26/2024	5/24/2024	Addition of EP205
V-20-004 R4	Minor Revision	APE20240007	11/20/2024	4/4/2025	Addition of EP59 alternate operating scenario

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 has been 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

GROUP 1 REQUIREMENTS: Scrap Shredding Systems
EP56 (1010-1), EP127 (9023), EP133 (9027), & EP205

Description:
EP56 encompasses conveying and shredding equipment used to process both clean and dirty scrap fed to the Multichamber Furnace. This system includes three low speed high torque shredders that process selected scrap.

EP127, EP133, and EP205 each encompass a bale breaker, a shredder, an eddy current separator, and an air knife. These systems feed scrap to Decoaters A & B.

Under 40 CFR 63, Subpart RRR these units are considered new aluminum scrap shredders.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Control Device	Construction Commenced
56 (1010-1)	Scrap Processing System	15	Baghouse System with Leak Detection	2006
127 (9023)	Shredding System A	20	Baghouse System with Leak Detection (C-9093)	7/12/2016
133 (9027)	Shredding System B	20	Baghouse System with Leak Detection (C-9095)	10/1/2016
205	Shredding System C	30	Baghouse System with Leak Detection (C-9099)	2024

APPLICABLE REGULATIONS:
401 KAR 59:010, ***New process operations***
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*
40 CFR 64, ***Compliance Assurance Monitoring (CAM)*** for EP56 for PM & PM_{10}

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality,*** for EP56 for PM_{10}
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for EP127 & EP133 for PM, 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 be based on information available to the Division 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)]

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

b. The permittee shall: [40 CFR 63.1506(c)]
   i. Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14); [40 CFR 63.1506(c)(1)]
   ii. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to the baghouse; and [40 CFR 63.1506(c)(2)]
   iii. Operate each capture/collection system according to the procedures and requirements in the OM&M plan. [40 CFR 63.1506(c)(3)]

c. The permittee shall operate a bag leak detection system, or a continuous opacity monitor, or conduct visible emissions observations. [40 CFR 63.1506(e)]
   i. If a bag leak detection system is used to meet the monitoring requirements in 40 CFR 63.1510, the permittee shall: [40 CFR 63.1506(e)(1)]
      1) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(e)(1)(i)]
      2) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action. [40 CFR 63.1506(e)(1)(ii)]
   ii. If a continuous opacity monitoring system is used to meet the monitoring requirements in 40 CFR 63.1510, the permittee shall initiate corrective action within 1-hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(e)(2)]
   iii. If visible emission observations are used to meet the monitoring requirements in 40 CFR 63.1510, the permittee shall initiate corrective action within 1-hour of any observation of visible emissions during a daily visible emissions test and complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(e)(3)]

d. 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 shall 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

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

performance test and steps to prevent the likely recurrence of the cause of a deviation. [40 CFR 63.1506(p)]

e. The permittee shall prepare and implement for each scrap shredder in Group 1, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division within 90 days after a successful initial performance test under 40 CFR 63.1511(b). 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. The permittee shall 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 procedures in **6. Specific Reporting Requirements (b)**. Each plan shall 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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, 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 or add-on control device 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 and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

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

f. The permittee shall limit the operation of EP127 and EP133 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6** and **D.7.**

g. The permittee shall maintain the capture efficiency of each hood and exhaust pickup point serving EP127 and EP133 at or above 98% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

h. The permittee shall ensure that the building removal efficiency for PM, PM_{10}, and $PM_{2.5}$ in the building that houses EP127 and EP133 is at least 90%. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** through **(f),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (g)** and **(h),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (k), 6. Specific Reporting Requirements (d)(iv),** and **7. Specific Control Requirements (b).**

2. Emission Limitations:

a. The permittee shall not allow the shredders in Group 1 to discharge or cause to be discharged to the atmosphere: [40 CFR 63.1505(b)]
   i. Emissions in excess of 0.023 grams (g) of PM per dry standard cubic meter (dscm) [0.010 grain (gr) of PM per dry standard cubic foot (dscf)]; and [40 CFR 63.1505(b)(1)]
   ii. Visible emissions (VE) in excess of 10 percent opacity from any PM add-on air pollution control device if a continuous opacity monitor (COM) or visible emissions monitoring is chosen as the monitoring option. [40 CFR 63.1505(b)(2)]

b. The permittee shall not allow the emissions of PM_{10} from the Scrap Processing System (EP56) to exceed 1.5 lbs of PM_{10}/hr on a 3-hour average basis. [To preclude 401 KAR 51:017]

c. 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)]

d. 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 weights ≤ 0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights ≤ 30 tons/hour: $E = 3.59P^{0.62}$

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.

e. For EP127 and EP133, refer to **Section D.6** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a), (b),** and **(d),** the permittee shall demonstrate compliance by meeting the requirements of **3**. **Testing Requirements** and **4. Specific Monitoring Requirements (c).**

2) For **2. Emission Limitations (d)**, the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (c),** compliance is assumed when complying with **2. Emission Limitations (a)(ii).** However, if neither a COM nor VE monitoring is chosen as the monitoring option, compliance with **2. Emission Limitations (c)** must be demonstrated by meeting the requirements of **4. Specific Monitoring Requirements (e)** and **5. Specific Recordkeeping Requirements (d).**

3. Testing Requirements:

a. Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee shall 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 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 63.1511(a)]

b. Following approval of the site-specific test plan, the permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source in Group 1, and report the results in the notification of compliance status report as described in 40 CFR 63.1515(b). The permittee shall conduct this initial performance test within 180 days after startup of each emission unit in Group

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

1. Except for the date by which the performance test must be conducted, 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 continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. [40 CFR 63.1511(b)(2)]

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), above, 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. The permittee shall use the following methods in 40 CFR part 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)]

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d. The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3), below: [40 CFR 63.1511(d)]
   i. The permittee may use test method ASTM D7520-13 as an alternative to U.S. EPA Method 9 subject to conditions described in 40 CFR 63.1510(f)(4). [40 CFR 63.1511(d)(1)]
   ii. In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the permittee may use Method 204 in 40 CFR 51, Appendix M, to conduct annual verification of a permanent total enclosure for the affected source/emission unit. [40 CFR 63.1511(d)(2)]
   iii. The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

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

f. The permittee shall 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 shall 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 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), above, must be met. [40 CFR 63.1511(g)(5)]

g. With the prior approval of the Division, the permittee may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to

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

a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: [40 CFR 63.1511(i)]

i. All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; [40 CFR 63.1511(i)(1)]
ii. All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; [40 CFR 63.1511(i)(2)]
iii. The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; [40 CFR 63.1511(i)(3)]
iv. All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and [40 CFR 63.1511(i)(4)]
v. For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device. [40 CFR 63.1511(i)(5)]

h. The permittee shall conduct performance tests to measure PM emissions at the outlet of the control system. If visible emission observation is the selected monitoring option, the permittee shall record visible emission observations from each exhaust stack for all consecutive 6-minute periods during the PM emission test according to the requirements of Method 9 in 40 CFR 60, Appendix A. If emissions observations by ASTM Method D7520-13 (incorporated by reference, see 40 CFR 63.14) is the selected monitoring option, the permittee shall record opacity observations from each exhaust stack for all consecutive 6-minute periods during the PM emission test. [40 CFR 63.1512(a)]

i. The permittee, for each emission unit in Group 1 using a continuous opacity monitoring system, shall conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in 40 CFR 60, Appendix B. Following the performance evaluation, the permittee shall measure and record the opacity of emissions from each exhaust stack for all consecutive 6-minute periods during the PM emission test. [40 CFR 63.1512(l)]

Remelt 2 Project Testing (j. below)

j. No later than December 31, 2023, and every 5 years thereafter, the permittee shall conduct performance testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP127, using 40 CFR 51, Appendix M, Method 201A, and 40 CFR 60, Appendix A, Method 5 or an equivalent method approved by the Division, on both the inlet and outlet of the baghouse serving them. [To preclude 401 KAR 51:017, Sections 8-14]

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i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
iii. This testing shall update the inlet and outlet emission factor for EP127 and EP133 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum shredded.
iv. During this test the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest opening of each hood and exhaust pickup point, that can be safely accessed while EP127 is operational, is inward using a smoke tube and the following procedures:
    1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
    2) The fan amps and volumetric flow rate shall be monitored during the test.

Shred Line C Project Testing

k. Within 180 days after startup of EP205, and every 5 years thereafter, the permittee shall conduct performance testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP205, using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 or an equivalent method approved by the Division, on both the inlet and outlet of the baghouse serving the emission point.
    i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
    ii. The permittee shall monitor process weight rate, fan RPM, and volumetric flow rate during the test.
    iii. This testing shall update the inlet and outlet emission factor for EP205 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum shredded.

l. Within 180 days after startup of EP205, the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest opening of each hood and exhaust pickup point, that can be safely accessed while EP205 is operational, is inward using a smoke tube and the following procedures:
    i. The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
    ii. The fan RPM and volumetric flow rate shall be monitored during the test.

m. 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 scrap shredder in Group 1, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements (a)** and **(b)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

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

b. The permittee shall: [40 CFR 63.1510(d)]
   i. Install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device; and [40 CFR 63.1510(d)(1)]
   ii. Inspect the capture/collection systems for Group 1 at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection. [40 CFR 63.1510(d)(2)]
   iii. Meet the requirements in **Section E.**

c. The permittee shall install and operate a bag leak detection system as required in 40 CFR 63.1510(f)(1), install and operate a continuous opacity monitoring system as required in 40 CFR 63.1510(f)(2), or conduct visible emission observations as required in 40 CFR 63.1510(f)(3) on each control device in Group 1. [40 CFR 63.1510(f)]
   i. The following requirements apply to the permittee if a bag leak detection system is used: [40 CFR 63.1510(f)(1)]
      1) The permittee shall install and operate a bag leak detection system for each exhaust stack of a fabric filter. [40 CFR 63.1510(f)(1)(i)]
      2) Each bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. [40 CFR 63.1510(f)(1)(ii)]
      3) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. [40 CFR 63.1510(f)(1)(iii)]
      4) The bag leak detection system sensor must provide output of relative or absolute PM loadings. [40 CFR 63.1510(f)(1)(iv)]
      5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. [40 CFR 63.1510(f)(1)(v)]
      6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. [40 CFR 63.1510(f)(1)(vi)]
      7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter. [40 CFR 63.1510(f)(1)(vii)]
      8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [40 CFR 63.1510(f)(1)(viii)]
      9) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. [40 CFR 63.1510(f)(1)(ix)]
      10) Following initial adjustment of the system, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which

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demonstrates that the fabric filter is in good operating condition. [40 CFR 63.1510(f)(1)(x)]

ii. The following requirements apply to the permittee if a continuous opacity monitoring system is used: [40 CFR 63.1510(f)(2)]
   1) The permittee shall install, calibrate, maintain, and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack. [40 CFR 63.1510(f)(2)(i)]
   2) Each continuous opacity monitoring system must meet the design and installation requirements of Performance Specification 1 in 40 CFR 60, Appendix B. [40 CFR 63.1510(f)(2)(ii)]

iii. The following requirements apply to the permittee if visible emission observations are conducted. The permittee shall: [40 CFR 63.1510(f)(3)]
   1) Perform a visible emissions test for each aluminum scrap shredder using a certified observer at least once a day according to the requirements of Method 9 in 40 CFR 60, Appendix A. Each Method 9 test must consist of five 6-minute observations in a 30-minute period; and [40 CFR 63.1510(f)(3)(i)]
   2) Record the results of each test. [40 CFR 63.1510(f)(3)(ii)]

iv. As an alternative to the requirements of 40 CFR 63.1510(f)(3), above, the permittee may measure the opacity of the emissions discharged through a stack or stacks using ASTM Method D7520-13 (incorporated by reference, see 40 CFR 63.14) subject to the requirements of paragraphs 40 CFR 63.1510(f)(4)(i) through (iv), below. Each test must consist of five 6-minute observations in a 30-minute period. [40 CFR 63.1510(f)(4)]
   1) During the digital camera opacity technique (DCOT) certification procedure outlined in Section 9.2 of ASTM D7520-13, the permittee or the DCOT vendor shall present the plumes in front of various backgrounds of color and contrast representing conditions anticipated during field use such as blue sky, trees, and mixed backgrounds (clouds and/or a sparse tree stand). [40 CFR 63.1510(f)(4)(i)]
   2) The permittee shall also have standard operating procedures in place including daily or other frequency quality checks to ensure that equipment is within manufacturing specifications as outlined in Section 8.1 of ASTM D7520-13. [40 CFR 63.1510(f)(4)(ii)]
   3) The permittee shall follow the recordkeeping procedures outlined in 40 CFR 63.10(b)(1) for DCOT certification, compliance report, data sheets and all raw unaltered JPEGs used for opacity and certification determination. [40 CFR 63.1510(f)(4)(iii)]
   4) The permittee or the DCOT vendor shall have a minimum of four (4) independent technology users apply the software to determine the visible opacity of the 300 certification plumes. For each set of 25 plumes, the user may not exceed 15 percent opacity on any one reading and the average error must not exceed 7.5 percent opacity. [40 CFR 63.1510(f)(4)(iv)]

d. For each emission point in Group 1, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling aluminum production in tons;
   ii. The monthly average process weight rate in tons/hr;

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iii. The monthly operating hours;
iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
v. For EP56, the monthly and 12-month rolling emissions of PM_{10} in tons;
vi. For EP127 and EP133, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons.

e. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

f. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64 for EP56.

g. 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 the 40 CFR 63.10(b) and 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [40 CFR 63.1517(b)]
   i. For each emission unit in Group 1 with emissions controlled by a fabric filter: [40 CFR 63.1517(b)(1)]
      1) If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. [40 CFR 63.1517(b)(1)(i)]
      2) If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any 6-minute period exceeds 5 percent, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken. [40 CFR 63.1517(b)(1)(ii)]
      3) If an aluminum scrap shredder is subject to visible emission observation requirements, records of all Method 9 observations, including records of any visible emissions during a 30-minute daily test or records of all ASTM D7520-13 observations (incorporated by reference, see 40 CFR 63.14), including data sheets and all raw unaltered JPEGs used for opacity determination, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken. [40 CFR 63.1517(b)(1)(iii)]
   ii. For each continuous monitoring system, records required by 40 CFR 63.10(c). [40 CFR 63.1517(b)(6)]

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

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

v. 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)]

vi. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]

1) 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)]

2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

c. For each emission point in Group 1, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]

i. The monthly and 12-month rolling aluminum production in tons;

ii. The monthly average process weight rate in tons/hr;

iii. The monthly operating hours;

iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;

v. For EP56, the monthly and 12-month rolling emissions of PM_{10} in tons;

vi. For EP127 and EP133, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons.

d. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

e. For EP56, 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)]

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

f. For EP56, 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)(2)]

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

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test as required by permit V-20-004. The plan shall 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 shall 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(b) or 40 CFR 63, Subpart RRR, the permittee shall 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. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]
   i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]
   ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]
   iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]
      1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]
      2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]

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

3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]

iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]
   1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]
   2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]

v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]

vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

d. The permittee shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b). The notification shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(q), 40 CFR 63.1512(s), 40 CFR 63.1515(b)]

i. All information required in 40 CFR 63.9(h). The permittee shall provide a complete performance test report for each affected source in Group 1. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests). [40 CFR 63.1515(b)(1)]

ii. The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system). [40 CFR 63.1515(b)(2)]

iii. The compliant operating parameter value or range established for each affected source in Group 1 with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test. [40 CFR 63.1515(b)(4)]

iv. Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c). [40 CFR 63.1515(b)(5)]

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

v. If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems as specified in 40 CFR 63.1510(f). [40 CFR 63.1515(b)(6)]
vi. The OM&M plan. [40 CFR 63.1515(b)(9)]

e. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5**. Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]
   i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(i)]
   ii. The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(ii)]
   iii. The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap shredder in Group 1 was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(iii)]
   iv. 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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
   v. Any emission unit was not operated according to the requirements of 40 CFR Part 63 Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]

f. 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 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 shall 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)]

g. For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the permittee shall 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)]

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

h. If there was a malfunction during the reporting period, the permittee shall 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 shall 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 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 63.1506(a)(5). [40 CFR 63.1516(d)]

i. All reports required by 40 CFR 63, Subpart RRR not subject to the requirements in 40 CFR 63.1516(b) 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 63.1516(b) in paper format. [40 CFR 63.1516(e)]

j. For EP56, 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)]

k. For EP56, 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

l. Refer to **Appendix A** for reporting requirements under 40 CFR 64 for EP56.

m. Refer to **Section F** for general reporting requirements.

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

7. Specific Control Equipment Operating Conditions:

a. The baghouses associated with Group 1 shall be properly maintained, used in conjunction with operation of the underlying emission units, and operated consistent with the manufacturer's specifications at all times. [401 KAR 52:020, Section 10]

b. For the baghouse associated with EP127 and EP133, the permittee shall continuously monitor the inlet volumetric flow rate in the stack, and maintain it at or above the level measured during the testing required by **3. Testing Requirements (j)**. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

c. Refer to **Section E**.

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

GROUP 2 REQUIREMENTS: Group 2 Furnaces
EP02 (1005-1A&B), EP03 (1005-4A&B), EP27 (1008-1), & EP40 (1006-2)

Description:
The permittee operates two Pre-Heaters & three Melt Furnaces **(**Direct Chill Lines (DC1-DC3)). Low NOx regenerative burners are installed on EP02 (1005-1A&B) DC1 and EP03 (1005-4 A&B) DC2.

The Reservoir Furnace (EP27) serves as a molten aluminum supply unit to the DC3 Holding Furnace. This unit is capable of receiving molten aluminum from the Swarf Furnace and the Multichamber furnace as well as solid sows and pigs in its dry hearth.

Under 40 CFR 63, Subpart RRR all of the furnaces in Group 2 are classified as existing group 2 furnaces that process only clean charge with no reactive fluxing. All of the furnaces in Group 2 use natural gas as the primary fuel, but have the ability to use propane as a backup fuel in case of natural gas curtailment.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
02 (1005-1 A&B)	Melt Furnace (East) & Pre-Heater (DC1)	35.0	80.0	None	6/15/1981
03 (1005-4 A&B)	Melt Furnace (West) & Pre-Heater (DC2)	35.0	80.0	None	6/15/1981
27 (1008-1)	Reservoir Furnace	30.0	50.0	None	10/2/1997
40 (1006-2)	Melt Furnace (DC3)	44.2	80.0	None	11/26/1991

APPLICABLE REGULATIONS:
401 KAR 59:010, ***New process operations***
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants***

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality,*** for EP02, EP03, EP27, & EP40 for PM, VOC, & NO_x

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 Division 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. The permittee shall provide and maintain easily visible labels posted at the furnaces in Group 2 that identify 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). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standard(s) and control method(s) (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, all scrap, 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. The permittee shall operate the furnaces in Group 2 using only clean charge as the feedstock and using no reactive flux. [40 CFR 1506(o)]

d. 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 shall initiate corrective action. Corrective action shall 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 shall 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)]

e. The permittee shall prepare and implement for each of the furnaces in Group 2, a written operation, maintenance, and monitoring (OM&M) plan. 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. The permittee shall 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 procedures in **6. Specific Reporting Requirements (b)**. Each plan shall 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)]

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

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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, 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 or add-on control device 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 and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

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

g. Refer to **Section H** if propane is used as alternative fuel in any of the emission points in Group 2.

Compliance Demonstration Method:
For **1. Operating Limitations (a)** through **(f),** the permittee shall demonstrate compliance by meeting the requirements of **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

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

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

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

c. For EP02 and EP03, refer to **Section D.4.** and **D.5.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

d. For EP27 and EP40, refer to **Section D.5.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

e. Refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (d)** and **5. Specific Recordkeeping Requirements (c).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3. Testing Requirements:

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, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division no later than the compliance date established by 40 CFR 63.1501(a).

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

Refer to **6. Specific Reporting Requirements (a)** and **(b)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. The permittee shall inspect equipment labels for the furnaces in Group 2 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. The permittee shall: [40 CFR 63.1510(r)]
   i. Record a description of the materials charged to each of the furnaces in Group 2, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents. [40 CFR 63.1510(r)(1)]
   ii. 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)]

d. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

e. For each emission point in Group 2, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling aluminum production in tons;
   ii. The monthly average process weight rate in tons/hr;
   iii. The monthly operating hours;
   iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   v. The monthly and 12-month rolling emissions of PM, NOx, and VOC in tons;
   vi. The monthly and 12-month rolling natural gas usage in MMscf;
   vii. The monthly and 12-month rolling propane usage in Mgal.

f. 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 the 40 CFR 63.10(b) and 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [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. Records of all charge materials and fluxing materials or agents. [40 CFR 63.1517(b)(12)]

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

iii. 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)]
iv. Records for any approved alternative monitoring or test procedure. [40 CFR 63.1517(b)(15)]
v. A 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)]
vi. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]
   1) 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)]
   2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

c. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

d. For each emission point in Group 2, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling aluminum production in tons;
   ii. The monthly average process weight rate in tons/hr;
   iii. The monthly operating hours;
   iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   v. The monthly and 12-month rolling emissions of PM, NOx, and VOC in tons;
   vi. The monthly and 12-month rolling natural gas usage in MMscf;
   vii. The monthly and 12-month rolling propane usage in Mgal.

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

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test. The plan shall 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 shall comply with all of the provisions of the OM&M plan as required by **1. Operating Limitations (e)** above, unless and until the plan is revised in accordance with the following procedures: [40 CFR 63.1510(b)]

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

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 Subpart RRR, the permittee shall 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. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]
   i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]
   ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]
   iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]
      1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]
      2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]
      3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]
   iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]
      1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]
      2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]
   v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or

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

disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]

vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

d. The permittee shall submit a notification of compliance status report within 90 days after startup**.** The notification shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(q), 40 CFR 63.1515(r), 40 CFR 63.1512(s), 40 CFR 63.1515(b)]
   i. All information required in 40 CFR 63.9(h). [40 CFR 63.1515(b)(1)]
   ii. Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements. [40 CFR 63.1515(b)(3)]
   iii. The OM&M plan. [40 CFR 63.1515(b)(9)]

e. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5.** Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]
   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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
   ii. Any affected source was not operated according to the requirements of 40 CFR Part 63 Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]
   iii. Each report must include the following certification, if applicable: "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)]

f. For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the permittee shall 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)]

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

g. If there was a malfunction during the reporting period, the permittee shall 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 shall 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 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 63.1506(a)(5) and 40 CFR 63.1520(a)(8). [40 CFR 63.1516(d)]

h. All reports required by 40 CFR 63, Subpart RRR not subject to the requirements in 40 CFR 63.1516(b) 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 63.1516(b) in paper format. [40 CFR 63.1516(e)]

i. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

GROUP 3 REQUIREMENTS: Group 1 Furnaces with Add-On Controls
EP26 (1009-1A, 1B, & 1D), EP57 (1011-1), EP129 (9041-1 & 2), EP130 (9045-1 & 2), EP135 (9046-1 & 2), & EP136 (9047-1 & 2)

Description:
EP26 is a sidewell type swarf furnace where Class I and runaround scrap are melted, treated with reactive flux, tapped into crucibles, and added to the Direct Chill Line (DC) Melting Furnaces or the Reservoir Furnace. Emissions from the sidewell are controlled by a dedicated lime-injected baghouse, while emissions during drossing activities in the furnace main hearth are routed to a separate baghouse (Swarf Hearth Baghouse). Main hearth emissions are uncontrolled. The Swarf Furnace is classified as an existing group 1 furnace under 40 CFR Part 63, Subpart RRR, and is part of an existing SAPU (SAPU A). The sidewell emission unit includes emissions from drossing activities. This unit uses natural gas as the primary fuel, but has the ability to use propane as a backup fuel in case of natural gas curtailment.

EP57 is a Multichamber Furnace that melts a variety of aluminum scrap types to produce molten aluminum, which is tapped into crucibles. The Multichamber Furnace is classified as a new group 1 furnace under 40 CFR 63, Subpart RRR, and is part of a new SAPU (SAPU B). Emissions from this unit are controlled by a lime-injected baghouse system. The main hearth chamber door hood was upgraded in 2010 and improvements to charge tower exhaust system were constructed in 2012. This unit uses natural gas as the primary fuel, but has the ability to use propane as a backup fuel in case of natural gas curtailment.

EP129, EP130, EP135, and EP136 are sidewell-type furnaces. Emissions generated in each sidewell melt furnace charge well and during drossing activities in the furnace main hearth are routed to the baghouse. Main hearth emissions from EP129, EP130, EP135 and EP136 are also routed to the respective baghouses. Each of the four (4) sidewell melt furnaces are classified as new group 1 Furnaces under 40 CFR 63, Subpart RRR, and are part of a different new SAPU (SAPU C). All four (4) sidewell furnaces will have the flexibility on a short-term basis to process a charge mix ranging from 100 percent shredded and decoated scrap fed to the furnace via conveyor to 100 percent loose scrap (i.e., coated scrap, internal runaround scrap, etc.) manually loaded to the furnace. These units are only capable of using natural gas as fuel.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (tons/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
26 (1009-1A)	Swarf Furnace (Main Hearth)	12.5	34.0	None	11/15/1997
26 (1009-1B & 1D)	Swarf Furnace (Sidewell & Drossing)	12.5	34.0	Lime Injected Baghouse & Leak Detection	11/15/1997
57 (1011-1)	Multichamber Furnace	16.2	27.3	Lime Injected Baghouse & Leak Detection	2006; Modified 2012

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

Emission Point (Unit ID)	Unit Name	Maximum Capacity (tons/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
129 (9041-1 & 2)	Sidewell A1 Melt Furnace (Sidewell, Drossing, & Main Hearth)	15	33.0	Lime Injected Baghouse & Leak Detection (C-9092)	7/12/2016
130 (9045-1 & 2)	Sidewell A2 Melt Furnace (Sidewell, Drossing, & Main Hearth)	15	33.0	Lime Injected Baghouse & Leak Detection (C-9091)	7/12/2016
135 (9046-1 & 2)	Sidewell B1 Melt Furnace (Sidewell, Drossing, & Main Hearth)	15	33.0	Lime Injected Baghouse & Leak Detection (C-9094)	10/1/2016
136 (9047-1 & 2)	Sidewell B2 Melt Furnace (Sidewell, Drossing & Main Hearth)	15	33.0	Lime Injected Baghouse & Leak Detection (C-9096)	10/1/2016

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP129, EP130, EP135, & EP136, for NO_x, CO, VOC, & GHG

401 KAR 59:010, *New process operations*

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

40 CFR 64, *Compliance Assurance Monitoring (CAM)* for EP26 for PM & EP57 for PM & PM_{10}

STATE-ORIGIN REGULATION:

401 KAR 63:021, *Existing sources emitting toxic air pollutants,* for EP26

PRECLUDED REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*, for EP26 for PM, VOC, & NO_x; & for EP57 for PM_{10} & NO_x

401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for EP129, EP130, EP135, and EP136 for PM, 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 be based on information available to the Division which may include, but is not limited

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

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. The permittee shall provide and maintain easily visible labels posted at each of the furnaces in Group 3 that identify 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). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standard(s) and control method(s) (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, all scrap, 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. The permittee shall (except for the Swarf Hearth Baghouse): [40 CFR 63.1506(c)]
   i. Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14); [40 CFR 63.1506(c)(1)]
   ii. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to the baghouse; and [40 CFR 63.1506(c)(2)]
   iii. Operate each capture/collection system according to the procedures and requirements in the OM&M plan. [40 CFR 63.1506(c)(3)]
   iv. For the Multichamber Furnace the permittee shall derive the minimum ACGIH design flow-rate for the melting chamber door hood and charge tower container hood system.

d. The permittee shall: [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)]

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

e. If a bag leak detection system is used to meet the monitoring requirements in 40 CFR 63.1510, the permittee shall (except for the Swarf Hearth Baghouse): [40 CFR 63.1506(m)(1)]
   i. Initiate corrective action within 1 hour of a bag leak detection system alarm. [40 CFR 63.1506(m)(1)(i)]
   ii. Complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(m)(1)(ii)]
   iii. Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action. [40 CFR 63.1506(m)(1)(iii)]

f. If a continuous opacity monitoring system is used to meet the monitoring requirements in 40 CFR 63.1510, the permittee shall (except for the Swarf Hearth Baghouse): [40 CFR 63.1506(m)(2)]
   i. Initiate corrective action within 1 hour of any 6-minute average reading of 5 percent or more opacity; and [40 CFR 63.1506(m)(2)(i)]
   ii. Complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(m)(2)(ii)]

g. The permittee shall maintain the 3-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14 °C (plus 25 °F). [40 CFR 63.1506(m)(3)]

h. The permittee shall, for a continuous lime injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the performance test. [40 CFR 63.1506(m)(4)]

i. The permittee shall maintain the total reactive chlorine 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(m)(5)]

j. The permittee shall operate each sidewell furnace such that: [40 CFR 63.1506(m)(6)]
   i. The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits. [40 CFR 63.1506(m)(6)(i)]
   ii. Reactive flux is added only in the sidewell, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits. [40 CFR 63.1506(m)(6)(ii)]

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

k. The operation of capture/collection systems and control devices associated with natural gas-fired, propane-fired or electrically heated group 1 furnaces that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices shall be restarted before feed/charge, flux or alloying materials are added to the furnace. [40 CFR 63.1506(m)(7)]

l. 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 shall 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)]

m. The permittee shall prepare and implement for each of the furnaces in Group 3, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division within 90 days after a successful initial performance test under 40 CFR 63.1511(b). 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. The permittee shall 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 procedures in **6. Specific Reporting Requirements (b).** Each plan shall 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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable,

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

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 or add-on control device 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 and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

n. Prior to changing furnace classifications to those not already authorized in **Section B**, the permittee shall submit a permit application to incorporate the applicable standards from 40 CFR 63, Subpart RRR. [401 KAR 52:020, Section 7]

o. For EP129, EP130, EP135, and EP136, the BACT determination for Greenhouse Gases (CO_2e) requires the facility to meet the following design and operational requirements: [401 KAR 51:017]
   i. The facility design shall incorporate the ability to receive hot shredded aluminum scrap from the decoaters, the use of molten metal vortexing when charging shredded scrap in the sidewell to ensure rapid and efficient mixing of incoming scrap stream with molten metal bath, and the use of regenerative burners to achieve the maximum combustion air preheat temperatures of any available burner class.
   ii. Installing and maintaining an insulation-lined door with adequate door seals to prevent cold air infiltration.
   iii. Installing and maintaining a limit switch on door to drive burners to low fire and to open flue damper when the door is raised.
   iv. Utilizing a molten metal circulation well to avoid bath temperature stratification and to decrease the impact of introducing cold charge to the metal bath.
   v. Installing and maintaining seals and modern insulation media to minimize heat losses from the furnace hearth, upper and lower sidewalls, doors, roof, and any openings around the burners or other equipment traversing through the furnace shell.
   vi. Periodic preventive maintenance of gas supply valves in accordance with the manufacturer's recommended procedures and schedule.
   vii. Periodic calibration of gas supply meter in accordance with the manufacturer's recommended procedures and schedule.
   viii. Periodic calibration of furnace pressure control system in accordance with the manufacturer's recommended procedures and schedule.
   ix. Installing, operating, and maintaining regenerative burners in accordance with manufacturer’s specifications to achieve consistent air preheat temperatures resulting in high thermal efficiency.

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

p. The permittee shall prepare and maintain for EP129, EP130, EP135, and EP136, within 90 days of startup, a good combustion and operation practices (GCOP) plan that defines, measures and verifies the use of operational and design practices determined as BACT for minimizing NO_x, CO, VOC, and GHG emissions. Any revisions requested by the Division shall be made and the revisions shall be maintained on site. The permittee shall operate according to the provisions of this plan at all times, including periods of startup, shutdown, and malfunction. The plan shall be incorporated into the plant standard operating procedures (SOP) and shall be made available for the Division's inspection. The plan shall include, but not be limited to: [401 KAR 51:017]

i. A list of combustion optimization practices and a means of verifying the practices have occurred.
ii. A list of combustion and operation practices to be used to lower energy consumption and a means of verifying the practices have occurred.
iii. A list of the design choices determined to be BACT and verification that designs were implemented in the final construction.

q. The permittee shall limit the operation of EP129, EP130, EP135, and EP136 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

r. The permittee shall maintain the capture efficiency of each charge well capture and collection system serving EP129, EP130, EP135, and EP136 at or above 98% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

s. The permittee shall ensure that the building removal efficiency for PM, PM_{10}, and $PM_{2.5}$ in the building that houses EP129, EP130, EP135, and EP136 is at least 90%. [To preclude 401 KAR 51:017, Section 8-14 for PM, PM_{10}, and $PM_{2.5}$]

t. Refer to **Section H** if propane is used as an alternative fuel in EP26 or EP57.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** through **(n),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements.**

2) For **1. Operating Limitations (o)** and **(p),** the permittee shall demonstrate compliance as follows:
   A. The facility construction shall be completed in accordance with the approved GCOP plan. Refer to **6. Specific Reporting Requirements (q)**.
   B. Prepare, maintain, and implement the GCOP plan. Refer to **1. Operating Limitations (p), 5. Specific Recordkeeping Requirements (d)** and **(f),** and **6. Specific Reporting Requirements (p).**
   C. The permittee shall perform testing for NO_x, CO, and VOC. Refer to **3. Testing Requirements (u).**

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

3) For **1. Operating Limitations (r)** and **(s),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (x), 6. Specific Reporting Requirements (i)(v),** and **7. Specific Control Equipment Operating Conditions (c)**.

2. Emission Limitations:

a. The permittee has a choice to limit emissions from the furnaces in Group 3 on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU), included in the OM&M Plan. Refer to **Section D.3.** On an individual basis, the permittee shall not allow the emissions from the furnaces in Group 3 to exceed the following: [40 CFR 63.1505(i), (k)]

i. Particulate matter (PM) emissions shall not exceed 0.40 lb/ton (0.20 kg/Mg) of feed/charge. [40 CFR 63.1505(i)(1)]

ii. Dioxin/furan (D/F TEQ) emissions shall not exceed 2.1×10^{-4} gr D/F TEQ/ton (15 μg D/F TEQ/Mg) of feed/charge. [40 CFR 63.1505(i)(3)]

iii. Hydrochloric acid (HCl) emissions shall not exceed 0.40 lb/ton (0.20 kg/Mg) of feed/charge, or 10 percent of the uncontrolled HCl emissions, by weight. [40 CFR 63.1505(i)(4)]

iv. The permittee shall not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option. [40 CFR 63.1505(i)(5)]

v. 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)]

vi. Except for EP57, if the permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, then the permittee shall comply with the emission limits of 40 CFR 63.1505(i)(1) through (4) on the basis of the combined emissions from the sidewell and the hearth. [40 CFR 63.1505(i)(7)]

b. The permittee shall not allow the emissions from the Multichamber Furnace (EP57) to exceed the following limits on a 3-hour average basis: [To preclude 401 KAR 51:017]

Emission Point	Control Equipment	PM_{10} (lb/hr)	NO_X (lb/hr)
Multichamber Furnace	Lime-injected baghouse	1.6	8.3

c. 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)]

d. 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 weights ≤0.5 tons/hour: 2.34 lbs/hr

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

ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
Where:
E = rate of emission in lb/hr; and
P = process weight rate in tons/hr.

e. For EP26, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

f. Refer to **Section D.3.** for SAPU calculations.

g. For EP26, refer to **Section D.5.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

h. For EP129, EP130, EP135, and EP136, the permittee shall not cause or contribute to emissions of NOx that, on an individual basis, exceed 0.22 pounds of NO_x per ton of aluminum and 14.63 tons of NO_x per year, on a rolling 12-month basis. [401 KAR 51:017]

i. For EP129, EP130, EP135, and EP136, the permittee shall not cause or contribute to emissions of CO that, on an individual basis, exceed 0.52 pounds of CO per ton of aluminum and 34.66 tons of CO per year, on a rolling 12-month basis. [401 KAR 51:017]

j. For EP129, EP130, EP135, and EP136, the permittee shall not cause or contribute to emissions of VOC that, on an individual basis, exceed 0.14 pounds of VOC per ton of aluminum and 9.37 tons of VOC per year, on a rolling 12-month basis. [401 KAR 51:017]

k. For EP129, EP130, EP135, and EP136, the permittee shall not cause or contribute to emissions of CO_2e that, on an individual basis, exceed 16,925 tons of CO_2e per year, on a rolling 12-month basis. [401 KAR 51:017]

l. For EP129, EP130, EP135, and EP136, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Section 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance using the equations in 40 CFR 63.1513 and by meeting the requirements in **3. Testing Requirements, 4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements,** and **6. Specific Reporting Requirements.**

2) If the permittee cannot or chooses not to demonstrate compliance with the individual limits in **2. Emission Limitations (a)**, the permittee shall comply with the SAPU emission limits calculated using the equations in 40 CFR 63.1505(k) referenced in **Section D.3.** Initial compliance with the SAPU emission limits during the performance test shall be demonstrated by using the equations in 40 CFR 63.1513(e)

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

referenced in the **Compliance Demonstration Method** for **Section D.3.** Continuous compliance with the calculated SAPU emission limits shall be demonstrated by calculating and recording the 3-day rolling 24-hour average emissions for the SAPU using the equations in 40 CFR 63.1510(t).

3) For **2. Emission Limitations (b)**, the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (u), 4. Specific Monitoring Requirements (p), 5. Specific Recordkeeping Requirements (d),** and **6. Specific Reporting Requirements.**

4) For **2. Emission Limitations (c),** compliance is assumed when complying with **2. Emission Limitations (a)(iv).** However, if a COM is not chosen as the monitoring option, compliance with **2. Emission Limitations (c)** must be demonstrated by meeting the requirements of **4. Specific Monitoring Requirements (m)** and **5. Specific Recordkeeping Requirements (c).**

5) For **2. Emission Limitations (d),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

6) For **2. Emission Limitations (h), (i), (j)**, and **(k)** the permittee shall demonstrate compliance by meeting the requirements in **1. Operating Limitations (p), 3. Testing Requirements (v)** and **(w), 4. Specific Monitoring Requirements (n)**, and **5. Specific Recordkeeping Requirements (d).**

7) For **2. Emission Limitations (l),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (x)** and **(y), 4. Specific Monitoring Requirements (n),** and **5. Specific Recordkeeping Requirements (d).**

3. Testing Requirements:

a. Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee shall 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 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

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

such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.1511(a)]

b. Following approval of the site-specific test plan, the permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit in Group 3, 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 for EP129, EP130, EP135, and EP136 within 180 days after startup. 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 continuous process (All except EP26) must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. [40 CFR 63.1511(b)(2)]
   iii. Each performance test for a batch process (EP26) 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 40 CFR 60, Appendix A, 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 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 40 CFR 60, Appendix A, 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)]

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iv. 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)]
v. 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)]
vi. Apply 40 CFR 63.1511(b)(1) through (5), above, 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)]
vii. The permittee shall not conduct performance tests during periods of malfunction. [40 CFR 63.1511(b)(7)]

c. The permittee shall 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 23 for the concentration of D/F. [40 CFR 63.1511(c)(7)]
viii. 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. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the permittee shall measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system. [40 CFR 63.1511(c)(9)]

d. The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3), below: [40 CFR 63.1511(d)]
i. In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the permittee may use Method 204 in 40 CFR 51, Appendix M, to conduct annual verification of a permanent total enclosure for the affected source/emission unit. [40 CFR 63.1511(d)(2)]
ii. The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

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

f. The permittee shall 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 shall use the

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

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 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), above, must be met. [40 CFR 63.1511(g)(5)]

g. When group 1 furnaces and/or in-line fluxers are included in a single existing SAPU or new SAPU, and the emissions from more than one emission unit within that existing SAPU or new SAPU are manifolded to a single control device, compliance for all units within the SAPU is demonstrated if the total measured emissions from all controlled and uncontrolled units in the SAPU do not exceed the emission limits calculated for that SAPU based on the applicable equation in 40 CFR 63.1505(k). [40 CFR 63.1511(h)]

h. With the prior approval of the Division, the permittee may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: [40 CFR 63.1511(i)]

i. All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; [40 CFR 63.1511(i)(1)]
ii. All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; [40 CFR 63.1511(i)(2)]
iii. The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; [40 CFR 63.1511(i)(3)]

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

iv. All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and [40 CFR 63.1511(i)(4)]

v. For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device. [40 CFR 63.1511(i)(5)]

i. The permittee shall conduct performance tests to measure emissions of PM and D/F at the outlet of the control devices and emissions of HCl at the outlet (for the emission limit) or at the inlet and outlet (for the percent reduction standard) of the lime-injected baghouses serving the furnaces in Group 3 (except for the Swarf Hearth Baghouse). [40 CFR 63.1512(d)(1)]

j. The permittee may choose to determine the rate of reactive flux addition to the furnaces in Group 3 during the test and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added is emitted. Under these circumstances, the permittee is not required to conduct an emission test for HCl. [40 CFR 63.1512(d)(3)]

k. For all furnaces except EP57, if the permittee conducts reactive fluxing (except for cover flux) in the hearth, or conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, the permittee shall conduct the performance tests required by 40 CFR 63.1512(d)(1), to measure emissions from both the sidewell and the hearth. [40 CFR 63.1512(d)(4)]

l. The permittee shall 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 and µg TEQ/Mg of feed/charge for D/F emissions 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 that processes scrap other than clean charge to measure emissions of PM and D/F and either: [40 CFR 63.1512(j)(2)]

1) Emissions of HF and HCl (for the emission limit); or [40 CFR 63.1512(j)(2)(i)]

2) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). [40 CFR 63.1512(j)(2)(ii)]

m. During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the permittee shall measure (or otherwise determine) and record the total weight of feed/charge to each of the furnaces in Group 3 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

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

the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight. [40 CFR 63.1512(k)]

n. If the permittee uses a continuous opacity monitoring system, the permittee shall conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in 40 CFR 60, Appendix B. Following the performance evaluation, the permittee shall measure and record the opacity of emissions from each exhaust stack for all consecutive 6-minute periods during the PM emission test. [40 CFR 63.1512(l)]

o. The permittee shall use the following procedures to establish an operating parameter value or range for the baghouse inlet gas temperature (except for the Swarf Hearth Baghouse): [40 CFR 63.1512(n)]
   i. Continuously measure and record the temperature at the inlet to the lime-injected baghouse every 15 minutes during the HCl and D/F performance tests; [40 CFR 63.1512(n)(1)]
   ii. Determine and record the 15-minute block average temperatures for the 3 test runs; and [40 CFR 63.1512(n)(2)]
   iii. Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs. [40 CFR 63.1512(n)(3)]

p. The permittee shall use the following procedures to establish an operating parameter value or range for the total reactive chlorine 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, HF, and D/F 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 by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine 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)]

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

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)]

q. The permittee shall use the following procedures during the HCl and D/F tests to establish an operating parameter value for the lime feeder setting for each operating cycle or time period used in the performance test. [40 CFR 63.1512(p)]
   i. For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and [40 CFR 63.1512(p)(1)]
   ii. Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary during the runs, determine and record the average feed rate and lime injection rate from the 3 runs. [40 CFR 63.1512(p)(2)]

r. To determine compliance with the emission limitations in **2. Emission Limitations (a)**, above, the following equations shall be used. [40 CFR 60.1513(b) & (c)]
   i. 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 kg/Mg (lb/ton) of feed;
   C = Concentration of PM, HCl or HF, in g/dscm (gr/dscf);
   Q = Volumetric flow rate of exhaust gases, in dscm/hr (dscf/hr);
   K_1 = Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and
   P = Production rate, in Mg/hr (ton/hr).
   ii. To determine compliance with an emission limit for D/F: [40 CFR 63.1513(b)(2)]

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

   Where:
   E = Emission rate of D/F, µg/Mg (gr/ton) of feed;
   C = Concentration of D/F, µg/dscm (gr/dscf);
   Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr); and
   P = Production rate, Mg/hr (ton/hr).
   iii. To determine compliance with an HCl percent reduction standard: [40 CFR 63.1513(c)]

$$\%R = \frac{L_i - L_o}{L_i} \times 100$$

   Where:
   %R = Percent reduction of the control device;
   L_i = Inlet loading of pollutant, kg/Mg (lb/ton); and
   L_o = Outlet loading of pollutant, kg/Mg (lb/ton).

s. To convert D/F measurements to TEQ units, the permittee shall use the procedures and equations in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update", incorporated by reference see 40 CFR 63.14. [40 CFR 63.1513(d)]

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

t. For the furnaces in Group 3, the permittee shall 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)]
   i. 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)]
   ii. 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)]

u. No later than December 31, 2023, and every 5 years thereafter, the permittee shall perform stack testing for NO_X and PM_{10} using U.S. EPA Reference Method 7E for NO_x and U.S. EPA Reference Method 201A/202, Method 5 for PM_{10} or an equivalent method approved by the Division. This testing shall be used to determine compliance with the NO_X and PM_{10} emission limit in **2. Emission Limitations (b)** for the Multichamber Furnace. [To preclude 401 KAR 51:017]

Remelt 2 Project Testing (v., w., x., and y. below)

v. No later than 180 days after issuance of final permit V-20-004, the permittee shall perform stack testing for NO_x, VOC and CO emissions from EP135 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 7E for NO_x;
   ii. U.S. EPA Method 25A for VOC; and
   iii. U.S. EPA Method 10 for CO;
   iv. An alternate method as approved by the Division;
   v. This testing shall establish an emission factor for EP129 and EP135 for NO_x, VOC, and CO in lb/ton of aluminum and demonstrate compliance with the emission limits in **2. Emission Limitations (h) – (j).**
   vi. No later than 5 years after this test is performed, the permittee shall perform the same testing on EP129.

w. No later than 180 days after issuance of final permit V-20-004, the permittee shall perform stack testing for NO_x, VOC and CO emissions from EP130 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 7E for NO_x;
   ii. U.S. EPA Method 25A for VOC; and
   iii. U.S. EPA Method 10 for CO;
   iv. An alternate method as approved by the Division;

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

v. This testing shall establish an individual emission factor for EP130 and EP136 for NO_x, VOC, and CO in lb/ton of aluminum and demonstrate compliance with the emission limits in emission limit in **2. Emission Limitations (h) – (j).**
vi. No later than 5 years after this test is performed, the permittee shall perform the same testing on EP136.

x. Within 180 days after initial startup after the completion of re-routing the main hearth flue from Sidewell B1 to the corresponding baghouse, but no later than 2023, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP135 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5, or an alternate method as approved by the Division, on both the inlet and outlet of the baghouse serving the furnace. [To preclude 401 KAR 51:017, Sections 8-14]
   i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
   ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
   iii. This testing shall establish an inlet and outlet emission factor for EP129 and EP135 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.
   iv. During this test the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest opening of each hood and exhaust pickup point, that can be safely accessed while the emission point is operating, is inward using a smoke tube and the following procedures:
      1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
      2) The fan amps and volumetric flow rate shall be monitored during the test.
   v. No later than 5 years after this test is performed, the permittee shall perform the same testing on EP129.

y. Within 180 days after initial startup after the completion of re-routing the main hearth flue from Sidewell A2 to the corresponding baghouse, but no later than 2023, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP130 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5, or an alternate method as approved by the Division, on both the inlet and outlet of the baghouse serving the furnace. [To preclude 401 KAR 51:017, Sections 8-14]
   i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
   ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
   iii. This testing shall establish an inlet and outlet emission factor for EP130 and EP136 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.
   iv. During this test the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest opening of each hood and exhaust pickup point, that can be safely accessed while the emission point is operating, is inward using a smoke tube and the following procedures:

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

1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
2) The fan amps and volumetric flow rate shall be monitored during the test.

v. No later than 5 years after this test is performed, the permittee shall perform the same testing on EP136.

z. 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 furnace in Group 3, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements (a)** through **(e)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. The permittee shall inspect equipment labels for each of the furnaces in Group 3 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. The permittee shall (except for the Swarf Hearth Baghouse): [40 CFR 63.1510(d)]
   i. Install, operate, and maintain a capture/collection system for each furnace in Group 3 equipped with an add-on air pollution control device; and [40 CFR 63.1510(d)(1)]
   ii. Inspect the capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection. [40 CFR 63.1510(d)(2)]
   iii. Meet the requirements in **Section E**.

d. The permittee shall 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)]

e. The permittee shall install and operate a bag leak detection system as required in 40 CFR 63.1510(f)(1) or a continuous opacity monitoring system as required in 40 CFR 63.1510(f)(2) on each control device in Group 3 (except for the Swarf Hearth Baghouse).[40 CFR 63.1510(f)]
   i. The following requirements apply to the permittee if a bag leak detection system is used: [40 CFR 63.1510(f)(1)]
      1) The permittee shall install and operate a bag leak detection system for each exhaust stack of a fabric filter. [40 CFR 63.1510(f)(1)(i)]

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

2) Each bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. [40 CFR 63.1510(f)(1)(ii)]
3) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. [40 CFR 63.1510(f)(1)(iii)]
4) The bag leak detection system sensor must provide output of relative or absolute PM loadings. [40 CFR 63.1510(f)(1)(iv)]
5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. [40 CFR 63.1510(f)(1)(v)]
6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. [40 CFR 63.1510(f)(1)(vi)]
7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter. [40 CFR 63.1510(f)(1)(vii)]
8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [40 CFR 63.1510(f)(1)(viii)]
9) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. [40 CFR 63.1510(f)(1)(ix)]
10) Following initial adjustment of the system, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition. [40 CFR 63.1510(f)(1)(x)]

ii. The following requirements apply to the permittee if a continuous opacity monitoring system is used: [40 CFR 63.1510(f)(2)]
1) The permittee shall install, calibrate, maintain, and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack. [40 CFR 63.1510(f)(2)(i)]
2) Each continuous opacity monitoring system must meet the design and installation requirements of Performance Specification 1 in 40 CFR 60, Appendix B. [40 CFR 63.1510(f)(2)(ii)]

f. The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the baghouse inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A. The temperature monitoring device shall meet the following performance and equipment specifications (except for the Swarf Hearth Baghouse): [40 CFR 63.1510(h)]

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

i. The monitoring system shall record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. [40 CFR 63.1510(h)(2)(i)]
ii. The recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n). [40 CFR 63.1510(h)(2)(ii)]
iii. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Division. [40 CFR 63.1510(h)(2)(iii)]

g. The permittee shall verify that lime is always free-flowing by either: [40 CFR 63.1510(i)(1)]
   i. Inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the permittee shall increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The permittee may return to inspections at least once every 8-hour period if corrective action results in no further blockages of lime during the 3-day period; or [40 CFR 63.1510(i)(1)(i)]
   ii. Subject to the approval of the Division, installing, operating and maintaining a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the permittee shall promptly initiate and complete corrective action. [40 CFR 63.1510(i)(1)(ii)]
   iii. Subject to the approval of the Division, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the permittee shall promptly initiate and complete corrective action. [40 CFR 63.1510(i)(1)(iii)]

h. The permittee shall record the lime feeder setting once each day of operation. [40 CFR 63.1510(i)(2)]

i. At least once per month, the permittee shall verify that the lime injection rate in pounds per hour (lb/hr) is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the permittee shall repair or adjust the lime injection system to restore normal operation within 45 days. The permittee may request from the Division an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The permittee may request from the Division an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR 63.1517. [40 CFR 63.1510(i)(4)]

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

j. The permittee shall: [40 CFR 63.1510(j)]
   i. Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each of the furnaces in Group 3 in accordance with the following: [40 CFR 63.1510(j)(1)]
      1) The monitoring system shall 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 CFR63.1510(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 Division 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 that the affected source will meet the relevant emission standards on a continuous basis. [40 CFR 63.1510(j)(5)]

k. The permittee shall record in an operating log for each tap of a sidewell furnace (all furnaces in Group 3 except EP57) whether the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods. [40 CFR 63.1510(n)(1)]

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

l. The permittee shall monitor the number of total operating hours during each 6-month reporting period for the furnaces in Group 3. [40 CFR 63.1517(b)(1)(i)]

m. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

n. For each emission point in Group 3, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly aluminum production in tons;
   ii. For EP26, EP129, EP130, EP135, and EP136, the 12-month rolling aluminum production in tons;
   iii. The monthly average process weight rate in tons/hr;
   iv. The monthly operating hours;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP26, the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   vii. For EP129, EP130, EP135, and EP136, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons.
   viii. The monthly natural gas usage in MMscf;
   ix. For EP26, EP129, EP130, EP135, and EP136, the 12-month rolling natural gas usage in MMscf;
   x. For EP26 and EP57, the monthly and 12-month rolling propane usage in Mgal.

o. Refer to **Section D.3.** for SAPU requirements.

p. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64 for EP26 and EP57.

q. 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 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [40 CFR 63.1517(b)]
   i. If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. [40 CFR 63.1517(b)(1)(i)]
   ii. If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any 6-minute period exceeds 5

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

percent, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken. [40 CFR 63.1517(b)(1)(ii)]

iii. For the baghouses for the furnaces in Group 3, records of 15-minute block average inlet temperatures for the lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value + 14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken (except for the Swarf Hearth Baghouse). [40 CFR 63.1517(b)(3)]

iv. Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken; [40 CFR 63.1517(b)(4)(i)]

v. If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit. These records must be maintained on site and available upon request. [40 CFR 63.1517(b)(4)(ii)]

vi. 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)]

vii. For each continuous monitoring system, records required by 40 CFR 63.10(c). [40 CFR 63.1517(b)(6)]

viii. 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)]

ix. Operating logs for each group 1 sidewell furnace with add-on air pollution control devices in Group 3 documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions. [40 CFR 63.1517(b)(10)]

x. Records of monthly inspections for proper unit labeling for each of the furnaces in Group 3. [40 CFR 63.1517(b)(13)]

xi. 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-

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

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

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

xiii. A 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)]

xiv. 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)]

xv. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]
   1) 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)]
   2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

xvi. For each period of startup or shutdown for which the permittee chooses to demonstrate compliance for an affected source, the permittee shall comply with 40 CFR 63.1517(b)(19)(i) or (ii), below. [40 CFR 63.1517(b)(19)]
   1) 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 shall 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)]
      (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(i)(A)]
      (B) The quantities of feed/charge and flux introduced during each startup and shutdown; and [40 CFR 63.1517(b)(19)(i)(B)]
      (C) 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)]
   2) To demonstrate compliance based on performance tests, the permittee shall maintain the following records: [40 CFR 63.1517(b)(19)(ii)]
      (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(ii)(A)]
      (B) The measured emissions in lb/hr or µg/hr or ng/hr; [40 CFR 63.1517(b)(19)(ii)(B)]

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(C) 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)]

(D) An explanation to support that such conditions are considered representative startup and shutdown operations. [40 CFR 63.1517(b)(19)(ii)(D)]

c. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

d. For each emission point in Group 3, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly aluminum production in tons;
   ii. For EP26, EP129, EP130, EP135, and EP136, the 12-month rolling aluminum production in tons;
   iii. The monthly average process weight rate in tons/hr;
   iv. The monthly operating hours;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP26, the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons.
   vii. For EP129, EP130, EP135, and EP136, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons;
   viii. The monthly natural gas usage in MMscf;
   ix. For EP26, EP129, EP130, EP135, and EP136, the 12-month rolling natural gas usage in MMscf;
   x. For EP26 and EP57, the monthly and 12-month rolling propane usage in Mgal;
   xi. Maintenance activities performed on the baghouses serving the furnaces in Group 3;
   xii. The GCOP Plan as well as any revisions.

e. Refer to **Section D.3.** for SAPU requirements.

f. The permittee shall maintain records of any time that EP129, EP130, EP135, or EP136 was not operated according to the GCOP plan required by **1. Operating Limitations (p)** with a description of the situation and actions taken to remedy the issue. [401 KAR 51:017]

g. For EP26 and EP57, 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)]

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

h. For EP26 and EP57, 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)(2)]

i. Refer to **Section F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test as required by permit V-20-004. The plan shall 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 shall 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(b) or 40 CFR 63, Subpart RRR, the permittee shall 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. Within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the permittee shall include the following information: [40 CFR 63.1510(s)(1)]
   i. The identification of each emission unit in the SAPU; [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 SAPU and the date of its installation or application; [40 CFR 63.1510(s)(1)(ii)]
   iii. The emission limit calculated for each SAPU 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 SAPU 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)]

d. 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)]

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

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)]

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

f. Except as provided in 40 CFR 63.1510(u), the permittee shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit (SAPU) on a daily basis. [40 CFR 63.1510(t)]

g. 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 (SAPU) is in compliance with the applicable emission limits for the emission unit. [40 CFR 63.1510(u)]

h. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]
   i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]
   ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]
   iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]
      1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]
      2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]
      3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]

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

iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]
   1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]
   2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]

v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]

vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

i. The permittee shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b). The notification shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(q), 40 CFR 63.1512(r), 40 CFR 63.1512(s), 40 CFR 63.1515(b)]
   i. All information required in 40 CFR 63.9(h). The permittee shall provide a complete performance test report for each furnace in Group 3. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests). [40 CFR 63.1515(b)(1)]
   ii. The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system). [40 CFR 63.1515(b)(2)]
   iii. Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements. [40 CFR 63.1515(b)(3)]
   iv. The compliant operating parameter values or ranges established for each furnace in Group 3 with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the time period used in the performance test. [40 CFR 63.1515(b)(4)]
   v. Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c). [40 CFR 63.1515(b)(5)]
   vi. If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems as specified in 40 CFR 63.1510(f). [40 CFR 63.1515(b)(6)]

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

vii. The OM&M plan. [40 CFR 63.1515(b)(9)]

j. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5.** Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]
   i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(i)]
   ii. The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(ii)]
   iii. 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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
   iv. Any emission unit (including an emission unit in a SAPU) was not operated according to the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]
   v. If applicable, a deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. [40 CFR 63.1516(b)(1)(vii)]
   vi. Each report shall include the following certifications, if applicable: [40 CFR 63.1516(b)(2)]
      1) For each sidewell group 1 furnace with add-on air pollution control devices: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period." [40 CFR 63.1516(b)(2)(iii)]
      2) 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)]

k. The permittee shall submit the results of any performance test conducted during the semiannual 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 each of the furnaces in Group 3. [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 shall 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)]

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

l. For the purpose of annual certifications of compliance required by 40 CFR 70 or 71, the permittee shall 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(b)(2)]

m. If there was a malfunction during the reporting period, the permittee shall 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 shall 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 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 63.1506(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) 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 63.1516(b) in paper format. [40 CFR 63.1516(e)]

o. For EP26, the permittee shall retain, notify and assert in accordance with Collection and Retention according to Section VI, paragraph 14 to 18, of the Consent Decree of December 8, 2010.

p. The permittee shall include, in the semi-annual report, any time that EP129, EP130, EP135, or EP136 was not operated according to the GCOP plan required by **1. Operating Limitations (p)** with a description of the situation and actions taken to remedy the issue. Refer to **5. Specific Recordkeeping Requirements (h)**. [401 KAR 51:017]

q. The permittee shall submit certification that the design elements proposed as BACT for EP129, EP130, EP135, and EP136 have been implemented in the final construction. Any deviations from the design elements proposed in the application shall be analyzed for changes in air emissions profile. Design changes and emission analysis shall be submitted in a report to the Division prior to construction of the changed element. Any changes shall also be incorporated into the GCOP. [401 KAR 51:017]

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

r. For EP26 and EP57, 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)]

s. For EP26 and EP57, 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

t. Refer to **Appendix A** for reporting requirements under 40 CFR 64 for EP26 and EP57.

u. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The baghouses associated with Group 3 shall be properly maintained, used in conjunction with operation of the underlying emission units, and operated consistent with the manufacturer's specifications. [401 KAR 52:020, Section 10]

b. The permittee shall maintain a daily log of the pressure drop across each baghouse and ensure it remains in the proper operating range as specified by the manufacturer and as required by the OM&M plan. [401 KAR 52:020, Section 10]

c. For the baghouses associated with EP129, EP130, EP135, and EP136, the permittee shall continuously monitor the inlet volumetric flow rate in the stack, and maintain it at or above the level measured during the testing required in **3. Testing Requirements (x)** and **(y)**. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

d. For EP26, the swarf furnace: [To preclude 401 KAR 51:017]:
   i. The permittee shall install, operate, and maintain a second baghouse for the hearth door capture/collection system to be used during drossing operations; and

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

ii. The permittee shall dedicate the original (existing) lime-injected baghouse to the sidewell capture/collection system.

e. Refer to **Section E.**

8. Alternate Operating Scenarios:

The permittee may use propane as fuel in EP26 and EP57 during periods of natural gas curtailment. Refer to **Section H.**

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

GROUP 4 REQUIREMENTS: Group 1 Furnaces Without Add-On Controls
EP04 (1005-2), EP17 (1005-5), EP42 (1006-2), EP131 (9053), & EP137 (9054)

Description:
EP04, EP17, & EP42 are Holding Furnaces for the Direct Chill Lines (DC1-DC3). Under 40 CFR 63, Subpart RRR, these Holding Furnaces are classified as existing Group 1 Furnaces without add-on pollution control devices, and are in an existing SAPU (SAPU A). These units use natural gas as their primary fuel, but have the ability to use propane as a backup fuel in case of natural gas curtailment.

EP131 & EP137 are Holding Furnaces for Direct Chill Line 4 (DC4). Under 40 CFR 63, Subpart RRR, these Holding Furnaces are classified as new Group 1 Furnaces without add-on pollution control devices, and are in a new SAPU (SAPU C). These units only use natural gas as fuel.

All of the Holding Furnaces support reactive fluxing and process only "clean charge".

Emission Point (Unit ID)	Unit Name	Maximum Capacity (tons/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
04 (1005-2)	Hold Furnace (East) (DC1)	45.0	15.0	None	6/15/1981
17 (1005-5)	Hold Furnace (West) (DC2)	45.0	15.0	None	6/15/1981
42 (1006-2)	Hold Furnace (DC3)	61.3	15.0	None	11/26/1991
131 (9053)	Holder A (DC4)	46.7	24.0	None	7/12/2016
137 (9054)	Holder B (DC4)	46.7	24.0	None	10/1/2016

APPLICABLE REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP131 & EP137, for NO_x, CO, VOC, & GHG
401 KAR 59:010, *New process operations*
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*

STATE-ORIGIN REGULATION:
401 KAR 63:021, *Existing sources emitting toxic air pollutants,* for EP04, EP17, & EP42.

PRECLUDED REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP04, EP17, & EP42 for PM, VOC, & NO_x
401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for EP131 & EP137 for PM, PM_{10}, & $PM_{2.5}$

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

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 Division 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. The permittee shall provide and maintain easily visible labels posted at each of the furnaces in Group 4 that identify 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). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standard(s) and control method(s) (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, all scrap, 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. The permittee shall: [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. The permittee shall maintain the total reactive chlorine flux injection rate and fluorine flux injection rate for each of the furnaces in Group 4 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)]

e. The permittee shall operate each of the furnaces in Group 4 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)]

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

f. 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 shall 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)]

g. The permittee shall prepare and implement for the furnaces in Group 4, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division within 90 days after a successful initial performance test under 40 CFR 63.1511(b). 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. The permittee shall 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 procedures in **6. Specific Reporting Requirements (b).** Each plan shall 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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, 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 or add-on control device parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including: [40 CFR 63.1510(b)(6)]

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

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 and control device 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)]

h. Prior to changing furnace classifications to those not already authorized in **Section B**, the permittee shall submit a permit application to incorporate the applicable standards from 40 CFR 63, Subpart RRR. [401 KAR 52:020, Section 7]

i. The permittee shall only process clean charge, as defined in 40 CFR 63, Subpart RRR.

j. For EP131 and EP137, the BACT determination for Greenhouse Gases (CO_2e) requires the facility to meet the following design and operational requirements: [401 KAR 51:017]
   i. The facility design shall include high velocity cold air burners.
   ii. Installing and maintaining an insulation-lined door with adequate door seals to prevent cold air infiltration.
   iii. Installing and maintaining a limit switch on door to drive burners to low fire and to open flue damper when the door is raised.
   iv. Installing and maintaining seals and modern insulation media to minimize heat losses from the furnace hearth, upper and lower sidewalls, doors, roof, and any openings around the burners or other equipment traversing through the furnace shell.
   v. Periodic preventative maintenance of gas supply valves in accordance with the manufacturer's recommended procedures and schedule.
   vi. Periodic calibration of gas supply meter in accordance with the manufacturer's recommended procedures and schedule.
   vii. Periodic calibration of furnace pressure control system in accordance with the manufacturer's recommended procedures and schedule.
   viii. Installing, operating, and maintaining a combustion system that includes air to fuel ratio control for improved fuel efficiency.
   ix. Implementing burner temperature control to achieve optimum temperature uniformity.
   x. Utilize long flame burners for efficient radiant energy transfer.

k. The permittee shall prepare and maintain for EP131 and EP137, within 90 days of startup, a good combustion and operation practices (GCOP) plan that defines, measures and verifies the use of operational and design practices determined as BACT for minimizing NO_x, CO, VOC, and GHG emissions. Any revisions requested by the

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

Division shall be made and the revisions shall be maintained on site. The permittee shall operate according to the provisions of this plan at all times, including periods of startup, shutdown, and malfunction. The plan shall be incorporated into the plant standard operating procedures (SOP) and shall be made available for the Division's inspection. The plan shall include, but not be limited to: [401 KAR 51:017]

i. A list of combustion optimization practices and a means of verifying the practices have occurred.
ii. A list of combustion and operation practices to be used to lower energy consumption and a means of verifying the practices have occurred.
iii. A list of the design choices determined to be BACT and verification that designs were implemented in the final construction.

l. The permittee shall limit the operation of EP131 and EP137 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

m. Refer to **Section H** if propane is used as alternative fuel in EP04, EP17, or EP42.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** through **(i),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (j)** and **(k)**, the permittee shall demonstrate compliance as follows:
   a. The facility construction shall be completed in accordance with the approved GCOP plan. Refer to **6. Specific Reporting Requirements (p)**.
   b. Prepare, maintain, and implement the GCOP plan. Refer to **1. Operating Limitations (k)**, **6. Specific Reporting Requirements (o)**.
   c. The permittee shall perform testing for NO_x, CO, and VOC. Refer to **3. Testing Requirements (u).**

2. Emission Limitations:

a. The permittee has a choice to limit emissions from the furnaces in Group 4 on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU), included in the OM&M Plan. Refer to **Section D.3.** On an individual basis, the permittee shall not allow the emissions from the furnaces in Group 4 to exceed the following: [40 CFR 63.1505(i), (k)]
   i. Particulate matter (PM) emissions shall not exceed 0.40 lb/ton (0.20 kg/Mg) of feed/charge. [40 CFR 63.1505(i)(1)]
   ii. Hydrofluoric acid (HF) emission shall not exceed 0.40 lb/ton (0.20 kg/Mg) of feed/charge. [40 CFR 63.1505(i)(4)]
   iii. Hydrochloric acid (HCl) emissions shall not exceed 0.40 lb/ton (0.20 kg/Mg) of feed/charge. [40 CFR 63.1505(i)(4)]

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

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. 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)]

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

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

d. For EP04, EP17, and EP42, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

e. For EP04 and EP17, refer to **Section D.4.** and **D.5.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

f. For EP42, refer to **Section D.5.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

g. For EP131 and EP137, the permittee shall not cause or contribute to emissions of NOx that, on an individual basis, exceed 0.032 pounds of NO_x per ton of aluminum and 6.52 tons of NO_x per year, on a rolling 12-month basis. [401 KAR 51:017]

h. For EP131 and EP137, the permittee shall not cause or contribute to emissions of CO that, on an individual basis, exceed 0.042 pounds of CO per ton of aluminum and 8.61 tons of CO per year, on a rolling 12-month basis. [401 KAR 51:017]

i. For EP131 and EP137, the permittee shall not cause or contribute to emissions of VOC that, on an individual basis, exceed 0.031 pounds of VOC per ton of aluminum and 6.26 tons of VOC per year, on a rolling 12-month basis. [401 KAR 51:017]

j. For EP131 and EP137, the permittee shall not cause or contribute to emissions of CO_2e that, on an individual basis, exceed 12,309 tons of CO_2e per year, on a rolling 12-month basis. [401 KAR 51:017]

k. For EP131 and EP137, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

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

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance using the equations in 40 CFR 63.1513 and by meeting the requirements in **3. Testing Requirements, 4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements, 6. Specific Reporting Requirements.**

2) If the permittee cannot or chooses not to demonstrate compliance with the individual limits in **2. Emission Limitations (a)**, the permittee shall comply with the SAPU emission limits calculated using the equations in 40 CFR 63.1505(k) referenced in **Section D.3.** Initial compliance with the SAPU emission limits during the performance test shall be demonstrated by using the equations in 40 CFR 63.1513(e) referenced in the **Compliance Demonstration Method** for **Section D.3.** Continuous compliance with the calculated SAPU emission limits shall be demonstrated by calculating and recording the 3-day rolling 24-hour average emissions for the SAPU using the equations in 40 CFR 63.1510(t).

3) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (m)** and **5. Specific Recordkeeping Requirements (c).**

4) For **2. Emission Limitations (c),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:

i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

5) For **2. Emission Limitations (g), (h), (i)**, and **(j),** the permittee shall demonstrate compliance by meeting the requirements in **1. Operating Limitations (l), 3. Testing Requirements (u)** and **(v)**, **4. Specific Monitoring Requirements (n),** and **5. Specific Recordkeeping Requirements (d).**

6) For **2. Emission Limitations (k),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (w), 4. Specific Monitoring Requirements (n),** and **5. Specific Recordkeeping Requirements (d).**

3. Testing Requirements:

a. Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee shall 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

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

40 CFR 63.7. 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 63.1511(a)]

b. Following approval of the site-specific test plan, the permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit in Group 4, 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 for EP131 and EP137 within 180 days after startup. 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 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

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

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), above, 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. The permittee shall 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 23 for the concentration of D/F. [40 CFR 63.1511(c)(7)]

viii. 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. The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3), below: [40 CFR 63.1511(d)]

i. In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the permittee may use Method 204 in 40 CFR 51, Appendix M, to conduct annual verification of a permanent total enclosure for the affected source/emission unit. [40 CFR 63.1511(d)(2)]

ii. The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

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

f. 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 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)]

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

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. The permittee shall 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 shall 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 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), above, must be met. [40 CFR 63.1511(g)(5)]

h. In the site-specific monitoring plan required by 40 CFR 63.1510(o), the permittee of a group 1 furnace (including a melting/holding furnaces) without add-on air pollution control devices shall 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 shall 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)]

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

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 EP04, EP17, or EP42, the permittee shall comply with the requirements of either 40 CFR 63.1512(e)(4)(i), (ii) or (iii), below, 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)]
   v. Round top furnaces constructed before February 14, 2012, and reconstructed round top furnaces are exempt from the requirements of 40 CFR 63.1512(e)(4)(i) and (ii). Round top furnaces must be operated to minimize unmeasured emissions according to 40 CFR 63.1512(e)(7). [40 CFR 63.1512(e)(4)(v)]

l. When testing a EP131 or EP137, the permittee shall install hooding that meets ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14) or petition the Division that such hoods are impracticable 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 the provisions of 40 CFR 63.1512(e)(7). [40 CFR 63.1512(e)(5)]

m. 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

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

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)]

n. 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 or the top is off; [40 CFR 63.1512(e)(7)(iv)]
   v. Delaying gaseous reactive fluxing until charging doors are closed and, for round top furnaces, until the top is on; [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 or the top is off; [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)]

o. The permittee shall conduct performance tests as described in 40 CFR 63.1512(j)(2). The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, HCl, and HF and µg TEQ/Mg of feed/charge for D/F emissions 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 either: [40 CFR 63.1512(j)(1)]
      1) Emissions of HF and HCl (for determining the emission limit); or [40 CFR 63.1512(j)(1)(i)]
      2) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard). [40 CFR 63.1512(j)(1)(ii)]

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p. During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the permittee shall measure (or otherwise determine) and record the total weight of feed/charge to each of the furnaces in Group 4 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)]

q. The permittee shall use the following 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, HF, and D/F 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 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)]

r. To determine compliance with the emission limitations in **2. Emission Limitations (a)**, above, the following equations shall be used. [40 CFR 60.1513(b) & (c)]
   i. To determine compliance with an emission limit for PM, HCl or HF: [40 CFR 63.1513(b)(1)]

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

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

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

ii. To determine compliance with an HCl percent reduction standard: [40 CFR 63.1513(c)]

$$\%R = \frac{L_i - L_o}{L_i} \times 100$$

Where:
%R = Percent reduction of the control device;
L_i = Inlet loading of pollutant, kg/Mg (lb/ton); and
L_o = Outlet loading of pollutant, kg/Mg (lb/ton).

s. To convert D/F measurements to TEQ units, the permittee shall use the procedures and equations in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update", incorporated by reference see 40 CFR 63.14. [40 CFR 63.1513(d)]

t. For the furnaces in Group 4, the permittee shall 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)]
   i. 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)]
   ii. 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)]

Remelt 2 Project Testing (u., v., and w., below)

u. No later than December 31, 2023, the permittee shall perform stack testing for NO_x, CO, and VOC emissions from EP137 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 7E for NO_x;
   ii. U.S. EPA Method 25A for VOC; and
   iii. U.S. EPA Method 10 for CO;
   iv. An alternate method as approved by the Division;

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v. This testing shall establish an emission factor for EP131 and EP137 for NO_x, VOC, and CO in lb/ton of aluminum and demonstrate compliance with the emission limits in **2. Emission Limitations (g) – (i).**

v. No later than 180 days after issuance of final permit V-20-004, the permittee shall perform stack testing for VOC emissions from EP131 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 25A for VOC; or
   ii. An alternate method as approved by the Division;
   iii. This testing shall establish an emission factor for EP131 and EP137 for VOC in lb/ton of aluminum and demonstrate compliance with the emission limits in **2. Emission Limitations (i).**

w. No later than December 31, 2024, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP137 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate method as approved by the Division). This testing shall establish an emission factor for EP131 and EP137 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum. [To preclude 401 KAR 51:017, Sections 8-14]

x. 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 furnace in Group 4, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements (a)** through **(e)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. The permittee shall inspect equipment labels for each of the furnaces in Group 4 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. The permittee shall 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)]

d. The permittee shall: [40 CFR 63.1510(j)]
   i. Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each of the furnaces in Group 4 in accordance with the following: [40 CFR 63.1510(j)(1)]

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

1) The monitoring system shall 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 CFR63.1510(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 Division 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 that the affected source will meet the relevant emission standards on a continuous basis. [40 CFR 63.1510(j)(5)]

e. The permittee shall develop, in consultation with the Division, a written site-specific monitoring plan for each of the furnaces in Group 4. 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, D/F, and HF, and the proposed monitoring parameters for each pollutant. Test data shall establish the highest level of PM, HCl, D/F, 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)]

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

i. For existing affected sources, the permittee 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, D/F, and HF and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, D/F, 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-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

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

provisions for the demonstration and implementation of the program in accordance with all applicable requirements in 40 CFR 63.1510(p), below. [40 CFR 63.1510(o)(7)]

i. 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), below. [40 CFR 63.1510(o)(8)]
   i. 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)]
      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. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

n. For each emission point in Group 4, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr and aluminum production rate in tons/month;

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

ii. The monthly hours of operation;
iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
iv. For EP04, EP17, and EP42, the monthly and 12-month rolling emissions of PM, NOx, and VOC in tons;
v. For EP131 and EP137, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons.
vi. The monthly and 12-month rolling natural gas usage in MMscf;
vii. For EP04, EP17, and EP42, the monthly and 12-month rolling propane usage in Mgal.

o. Refer to **Section D.3.** for SAPU requirements.

p. 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 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [40 CFR 63.1517(b)]
i. 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. 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 furnace 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 of the furnaces in Group 4. [40 CFR 63.1517(b)(13)]
vii. Records for any approved alternative monitoring or test procedure. [40 CFR 63.1517(b)(15)]
viii. 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)]

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

2) Site-specific secondary aluminum processing unit emission plan (if applicable). [40 CFR 63.1517(b)(16)(iii)]

ix. 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)]

x. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]
   1) 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)]
   2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

xi. For each period of startup or shutdown for which the permittee chooses to demonstrate compliance for an affected source, the permittee shall comply with 40 CFR 63.1517(b)(19)(i) or (ii), below. [40 CFR 63.1517(b)(19)]
   1) 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 shall 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)]
      (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(i)(A)]
      (B) The quantities of feed/charge and flux introduced during each startup and shutdown; and [40 CFR 63.1517(b)(19)(i)(B)]
      (C) 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)]
   2) To demonstrate compliance based on performance tests, the permittee shall maintain the following records: [40 CFR 63.1517(b)(19)(ii)]
      (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(ii)(A)]
      (B) The measured emissions in lb/hr or µg/hr or ng/hr; [40 CFR 63.1517(b)(19)(ii)(B)]
      (C) 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)]
      (D) An explanation to support that such conditions are considered representative startup and shutdown operations. [40 CFR 63.1517(b)(19)(ii)(D)]

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

c. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

d. For each emission point in Group 4, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate and aluminum production in tons/hr;
   ii. The monthly and 12 month rolling hours of operation;
   iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   iv. For EP04, EP17, and EP42, the monthly and 12-month rolling emissions of PM, NOx, and VOC in tons;
   v. For EP131 and EP137, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons;
   vi. The monthly and 12-month rolling natural gas usage in MMscf;
   vii. For EP04, EP17, and EP42, the monthly and 12-month rolling propane usage in Mgal;
   viii. The GCOP plan as well as any revisions.

e. Refer to **Section D.3.** for SAPU requirements.

f. The permittee shall maintain records of any time that EP131 or EP137 was not operated according to the GCOP plan required by **1. Operating Limitations (l)** with a description of the situation and actions taken to remedy the issue. [401 KAR 51:017]

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

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test as required by permit V-20-004. The plan shall 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 shall 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(b) or 40 CFR 63, Subpart RRR, the permittee shall 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.

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

c. Within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the permittee shall include the following information: [40 CFR 63.1510(s)(1)]
   i. The identification of each emission unit in the SAPU; [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 SAPU and the date of its installation or application; [40 CFR 63.1510(s)(1)(ii)]
   iii. The emission limit calculated for each SAPU 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 Part 63 Subpart RRR; and [40 CFR 63.1510(s)(1)(iv)]
   v. The monitoring requirements applicable to each emission unit in a SAPU 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)]

d. 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)]

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

f. Except as provided in 40 CFR 63.1510(u), the permittee shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) for each secondary aluminum processing unit (SAPU) on a daily basis. [40 CFR 63.1510(t)]

g. 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 (SAPU) is in compliance with the applicable emission limits for the emission unit. [40 CFR 63.1510(u)]

h. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the

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

Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]

i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]

ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]

iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]

1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]

2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]

3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]

iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]

1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]

2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]

v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]

vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

i. The permittee shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b). The notification shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(r), 40 CFR 63.1515(b)]

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

i. All information required in 40 CFR 63.9(h). The permittee shall provide a complete performance test report for each furnace in Group 4. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests). [40 CFR 63.1515(b)(1)]
ii. The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system). [40 CFR 63.1515(b)(2)]
iii. Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements. [40 CFR 63.1515(b)(3)]
iv. The compliant operating parameter values or ranges established for each furnace in Group 4 with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the time period used in the performance test. [40 CFR 63.1515(b)(4)]
v. The OM&M plan. [40 CFR 63.1515(b)(9)]

j. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5.** Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]
   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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
   ii. Any emission unit (including an emission unit in a SAPU) was not operated according to the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]
   iii. If applicable, a deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. [40 CFR 63.1516(b)(1)(vii)]
   iv. Each report shall include the following certifications, if applicable: [40 CFR 63.1516(b)(2)]
      1) 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)]
      2) 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)]

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

k. 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 furnaces in Group 4. [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 shall 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)]

l. For the purpose of annual certifications of compliance required by 40 CFR 70 or 71, the permittee shall 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 shall 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 shall 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 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 63.1506(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) 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 63.1516(b) in paper format. [40 CFR 63.1516(e)]

o. The permittee shall include, in the semi-annual report, any time that EP131 or EP137 was not operated according to the GCOP plan required by **1. Operating Limitations (l)** with a description of the situation and actions taken to remedy the issue. Refer to **5. Specific Recordkeeping Requirements (f)**. [401 KAR 51:017]

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

p. The permittee shall submit certification that the design elements proposed as BACT for EP131 and EP137 have been implemented in the final construction. Any deviations from the design elements proposed in the application shall be analyzed for changes in air emissions profile. Design changes and emission analysis shall be submitted in a report to the Division prior to construction of the changed element. Any changes shall also be incorporated into the GCOP plan. [401 KAR 51:017]

q. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:
None.

8. Alternate Operating Scenarios:
The permittee may use propane as fuel in EP04, EP17, and EP42 during periods of natural gas curtailment. Refer to **Section H.**

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

GROUP 5 REQUIREMENTS: In-Line Fluxers
EP22-A (1001-1), EP22-B (1001-1), EP22-C (1001-1), & EP132 (9050FB)

Description:
EP22-A, EP22-B, and EP22-C are three Flux Boxes **(**Direct Chill Lines (DC1-DC3)). The three Flux Boxes process only molten aluminum from the existing holding furnaces and accommodate limited reactive fluxing with chlorine gas. Emissions from the Flux Boxes are controlled by a lime-injected baghouse shared by all three units. The lime-injected baghouse is not used to demonstrate compliance with the emission standards in 40 CFR Part 63 Subpart RRR, however, the baghouse must be operated at all times the In-Line Fluxers are operating.

EP132 is a flux box that processes molten aluminum from Holder A and Holder B. Emissions generated by Flux Box A will be collected and ducted out of an uncontrolled, shared stack with the exhaust flow from Holder A.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Control Device	Construction Commenced
22-A (1001-1)	Flux Box (DC1)	166.3 combined	Lime-Injected Baghouse (constructed 3/2003)	6/15/1981
22-B (1001-1)	Flux Box (DC2)			6/15/1981
22-C (1001-1)	Flux Box (DC3)			11/26/1991
132 (9050FB)	Flux Box A (DC4)	46.7	None	7/12/2016

APPLICABLE REGULATIONS:
401 KAR 59:010, ***New process operations***
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants,*** for EP22-A-C

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for EP22-A-C for PM & VOC
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for EP132 for PM, 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 be based on information available to the Division 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)]

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

b. The permittee shall provide and maintain easily visible labels posted at the emission units in Group 5 that identify the applicable emission limits and means of compliance, including: [40 CFR 63.1506(b)]
   i. The type of emission unit (e.g. in-line fluxer). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standard(s) and control method(s) (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, all scrap, 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. The permittee shall: [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. 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 shall initiate corrective action. Corrective action shall 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 shall 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)]

e. The permittee shall prepare and implement for each of the in-line fluxers in Group 5, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division within 90 days after a successful initial performance test under 40 CFR 63.1511(b). 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. The permittee shall 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

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

procedures in **6. Specific Reporting Requirements (b).** Each plan shall 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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, 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 or add-on control device 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 and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

f. The permittee shall limit the operation of EP132 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

Compliance Demonstration Method:
For **1. Operating Limitations (a)** through **(e**), the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

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

2. Emission Limitations:

a. The permittee has a choice to limit emissions from the in-line fluxers in Group 5 on an individual basis or as part of a Secondary Aluminum Processing Unit (SAPU), included in the OM&M Plan. Refer to **Section D.3.** On an individual basis, the permittee shall not allow the emissions from the in-line fluxers in Group 5 to exceed the following: [40 CFR 63.1505(j)]

i. Hydrochloric acid (HCl) emissions shall not exceed 0.04 lb/ton (0.02 kg/Mg) of feed/charge; [40 CFR 63.1505(j)(1)]

ii. Particulate matter (PM) emissions shall not exceed 0.01 lb/ton (0.005 kg/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)]

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)]

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 weights ≤0.5 tons/hour: 2.34 lbs/hr

ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$

iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

Where:

E = rate of emission in lb/hr; and

P = process weight rate in tons/hr.

d. For EP22-A – C, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

e. For EP22-A – C, refer to **Section D.4.** and **Section D.5.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

f. For EP132, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a)**, the permittee shall demonstrate compliance using the equations in 40 CFR 63.1513 and by meeting the requirements in **3. Testing Requirements, 4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements, 6. Specific Reporting Requirements.**

2) If the permittee cannot or chooses not to demonstrate compliance with the individual limits in **2. Emission Limitations (a)**, the permittee shall comply with the SAPU

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

emission limits calculated using the equations in 40 CFR 63.1505(k) referenced in **Section D.3.** Initial compliance with the SAPU emission limits during the performance test shall be demonstrated by using the equations in 40 CFR 63.1513(e) referenced in the **Compliance Demonstration Method** for **Section D.3.** Continuous compliance with the calculated SAPU emission limits shall be demonstrated by calculating and recording the 3-day rolling 24-hour average emissions for the SAPU using the equations in 40 CFR 63.1510(t).

3) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (e)** and **5. Specific Recordkeeping Requirements (c).**

4) For **2. Emission Limitations (c)**, the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

5) For **2. Emission Limitations (f),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (o)**, **4. Specific Monitoring Requirements (f)**, and **5. Specific Recordkeeping Requirements (d).**

3. Testing Requirements:

a. Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee shall 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 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 63.1511(a)]

b. Following approval of the site-specific test plan, the permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit in Group 5, 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 for EP132 and EP138 within 180 days after startup. 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)]

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

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 40 CFR 60, Appendix A, 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 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 40 CFR 60, Appendix A, 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), above, 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)]

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

c. The permittee shall 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. The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3), below: [40 CFR 63.1511(d)]
   i. In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the permittee may use Method 204 in 40 CFR 51, Appendix M, to conduct annual verification of a permanent total enclosure for the affected source/emission unit. [40 CFR 63.1511(d)(2)]
   ii. The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

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

f. With the prior approval of the Division the permittee may utilize emission rates obtained 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. The permittee shall 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

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

establish the minimum or maximum value or range, the permittee shall 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 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), above, must be met. [40 CFR 63.1511(g)(5)]

h. The permittee shall conduct a performance test to measure emissions of HCl and PM or otherwise demonstrate compliance in accordance with 40 CFR 63.1511(h)(2). [40 CFR 63.1512(h)(1); 401 KAR 52:020, Section 10]

i. 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. [40 CFR 63.1512(h)(2)]

j. The permittee shall 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 and HCl 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 each in-line fluxer to measure emissions of PM and HCl. [40 CFR 63.1512(j)(3)]

k. During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the permittee shall measure (or otherwise determine) and record the total weight of feed/charge to each of the in-line fluxers in Group 5 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

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

the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight. [40 CFR 63.1512(k)]

l. The permittee shall use the following procedures to establish an operating parameter value or range for the total reactive chlorine 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, HF, and D/F 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 by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine 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)]

m. To determine compliance with the emission limitations in **2. Emission Limitations (a)**, above, the following equations shall be used. [40 CFR 60.1513(b)]
   i. To determine compliance with an emission limit for PM or HCl: [40 CFR 63.1513(b)(1)]

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

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

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

n. For the in-line fluxers in Group 5, the permittee shall 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)]
   i. 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)]
   ii. 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)]

Remelt 2 Project Testing (o. below)

o. No later than December 31, 2023, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP132 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate method as approved by the Division). This testing shall establish an emission factor for EP132 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum. [To preclude 401 KAR 51:017, Sections 8-14]

p. 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, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements (a)** through **(e)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. The permittee shall inspect equipment labels for the in-line fluxers in Group 5 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. The permittee shall 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

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

determine the total weight of feed/charge or aluminum production to the affected source or emission unit. [40 CFR 63.1510(e)]

d. The permittee shall: [40 CFR 63.1510(j)]
   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 shall 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 CFR63.1510(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 procedure 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 of an in-line fluxer performing reactive fluxing may apply to the Division 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 that the affected source will meet the relevant emission standards on a continuous basis. [40 CFR 63.1510(j)(5)]

e. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

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

f. For each emission point in Group 5, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in ton/hr and aluminum production rate in tons/month;
   ii. The monthly hours of operation;
   iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   iv. For EP22A-C, the monthly and 12-month rolling emissions of PM and VOC in tons;
   v. For EP132, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons.

g. Refer to **Section D.3**. for SAPU requirements.

h. 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 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [40 CFR 63.1517(b)]
   i. 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. 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. Records of monthly inspections for proper unit labeling for each of the in-line fluxers in Group 5. [40 CFR 63.1517(b)(13)]
   v. Records for any approved alternative monitoring or test procedure. [40 CFR 63.1517(b)(15)]
   vi. A 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)]
   vii. 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)]

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

viii. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]
1) 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)]
2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

ix. For each period of startup or shutdown for which the permittee chooses to demonstrate compliance for an affected source, the permittee shall comply with 40 CFR 63.1517(b)(19)(i) or (ii), below. [40 CFR 63.1517(b)(19)]
1) 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 shall 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)]
(A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(i)(A)]
(B) The quantities of feed/charge and flux introduced during each startup and shutdown; and [40 CFR 63.1517(b)(19)(i)(B)]
(C) 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)]
2) To demonstrate compliance based on performance tests, the permittee shall maintain the following records: [40 CFR 63.1517(b)(19)(ii)]
(A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(ii)(A)]
(B) The measured emissions in lb/hr or µg/hr or ng/hr; [40 CFR 63.1517(b)(19)(ii)(B)]
(C) 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)]
(D) An explanation to support that such conditions are considered representative startup and shutdown operations. [40 CFR 63.1517(b)(19)(ii)(D)]

c. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

d. For each emission point in Group 5, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
i. The monthly average process weight rate in tons/hr and aluminum production rate in tons/month;

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

ii. The monthly hours of operation;
iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
iv. For EP22A-C, the monthly and 12-month rolling emissions of PM and VOC in tons;
v. For EP132, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons.

e. Refer to **Section D.3**. for SAPU requirements.

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

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test as required by permit V-20-004. The plan shall 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 shall 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, Subpart RRR, the permittee shall 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. Within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the permittee shall include the following information: [40 CFR 63.1510(s)(1)]
   i. The identification of each emission unit in the SAPU; [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 SAPU and the date of its installation or application; [40 CFR 63.1510(s)(1)(ii)]
   iii. The emission limit calculated for each SAPU 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 SAPU 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)]

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

d. 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)]

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

f. Except as provided in 40 CFR 63.1510(u), the permittee shall calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit (SAPU) on a daily basis. [40 CFR 63.1510(t)]

g. 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 (SAPU) is in compliance with the applicable emission limits for the emission unit. [40 CFR 63.1510(u)]

h. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]
   i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]
   ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]
   iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]
      1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]
      2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]

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

3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]

iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]
   1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]
   2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]

v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]

vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

i. The permittee shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b). The notification shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(r), 40 CFR 63.1512(s), 40 CFR 63.1515(b)]
   i. All information required in 40 CFR 63.9(h). The permittee shall provide a complete performance test report for each in-line fluxer in Group 5. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests). [40 CFR 63.1515(b)(1)]
   ii. The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system). [40 CFR 63.1515(b)(2)]
   iii. Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements. [40 CFR 63.1515(b)(3)]
   iv. The compliant operating parameter values or ranges established for each in-line fluxer in Group 5 with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the time period used in the performance test. [40 CFR 63.1515(b)(4)]
   v. The OM&M plan. [40 CFR 63.1515(b)(9)]

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

j. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5.** Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]
   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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]
   ii. Any emission unit (including an emission unit in a SAPU) was not operated according to the requirements of 40 CFR 63, Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]
   iii. If applicable, a deviation from the 3-day, 24-hour rolling average emission limit for a SAPU. [40 CFR 63.1516(b)(1)(vii)]
   iv. Each report shall include the following certifications, if applicable: [40 CFR 63.1516(b)(2)]
      1) 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)]
      2) 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)]

k. The permittee shall submit the results of any performance test conducted during the semiannual 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 each of the furnaces in Group 3. [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 shall 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)]

l. For the purpose of annual certifications of compliance required by 40 CFR 70 or 71, the permittee shall 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)]

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

m. If there was a malfunction during the reporting period, the permittee shall 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 shall 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 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 63.1506(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) 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 63.1516(b) in paper format. [40 CFR 63.1516(e)]

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

7. Specific Control Equipment Operating Conditions:

a. The Flux Box baghouse shall be properly maintained, used in conjunction with the associated process (Flux Boxes, EP22-A-C), and operated in accordance with the manufacturer's specifications or based on good engineering/pollution prevention practices. [401 KAR 52:020, Section 10]

b. The permittee shall maintain a daily log of the pressure drop across the baghouse and ensure it remains within the operating range established in accordance with the manufacturer's specifications or based on good engineering/pollution prevention practices. [401 KAR 52:020, Section 10]

c. Refer to **Section E.**

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

GROUP 6 REQUIREMENTS: Scalping Process
EP05 (2005-1C), EP154 (2005-2D), & EP25 (1009-1C)

Description:
Cast ingots from the casting operation are brought to the scalping process and loaded by overhead crane. The scalpers also have the ability to process externally produced ingots. Ingots can be loaded onto a roller table feeding Scalper 2 from the exterior of the production building. Scalper 2 is equipped with an automated racetrack-type ingot handling system to maximize the available operating time for Scalper 2 to scalp the rolling surfaces of the ingots. The Scalpers' combined capacities are limited by the downstream Reversing Mill operating capacity. The cyclones are used to recover aluminum from the exhaust stream and do not act as control equipment.

Emission Point (Unit ID)	Unit Name	Maximum Lubricant Usage (gal/hr)	Maximum Hourly Capacity (ton/hr)	Maximum Annual Capacity (ton/yr)	Construction Commenced
05 (2005-1C)	Scalper 1 (routed to Cyclone 3)	0.83	212	1,956,051	6/15/1981
154 (2005-2D)	Scalper 2 (routed to Cyclone 4)	0.50	420		12/20/2015; Modified 2022
25 (1009-1C)	Chip Conveyor for Swarf Furnace	N/A	12.5	109,500	11/15/1997

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

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants***, for EP25

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for EP05 & EP25 for PM, VOC, & NO_x

401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for EP05 & EP154 for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The permittee shall not process more than a combined total of 1,956,051 tons of aluminum ingots per year through EP05 and EP154 on a rolling 12-month basis. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   b. The permittee shall not process more than 109,500 tons of aluminum per year through EP25 on a rolling 12-month basis. [To preclude 401 KAR 51:017]

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

c. The permittee shall limit the operation of EP05 and EP154 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

Compliance Demonstration Method:
For **1. Operating Limitations (a)** and **(b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements.**

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

c. For EP05, refer to **Section D.4.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

d. For EP25, refer to **Section D.5.** for group PM emissions limitations. [To preclude 401 KAR 51:017]

e. For EP05 and EP154, emissions of PM, PM_{10}, and $PM_{2.5}$ from EP05 and EP154, combined, shall not exceed 13.36 tons/yr for PM, 16.68 tons/yr of PM_{10}, and 12.78 tons/yr for $PM_{2.5}$, on a rolling 12-month basis. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

f. For EP25, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

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

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (e),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (b), 4. Specific Monitoring Requirements (b)**, and **5. Specific Recordkeeping Requirements (b).**

3. Testing Requirements:

a. 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.

b. No later than December 31, 2023, the permittee shall perform stack testing for combined PM, PM_{10}, and $PM_{2.5}$ emissions from the operation of both EP05 and EP154 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate method as approved by the Division). This testing shall establish an emission factor for EP05 and EP154 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.

c. No later than December 31, 2023, the permittee shall perform stack testing for VOC emissions using 40 CFR 51, Appendix M, Method 25A (or an alternate method as approved by the Division). This testing shall establish an emission factor for EP05 and EP154 for VOC in lb/ton of aluminum.

4. Specific Monitoring Requirements:

a. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. For each emission point in Group 6, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly individual hours of operation;
   iii. The monthly and 12-month rolling individual and combined throughputs, in tons;
   iv. The monthly and 12-month rolling lubricant usage in gallons;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP05 and EP154, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons;
   vii. For EP05, the monthly and 12-month rolling emissions of VOC in tons.

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

c. The permittee shall maintain and make available for inspection at all times the SDS for the lubricant used. Any changes to the lubricant use that would result in an increase of emissions shall be submitted to the Division. [401 KAR 52:020, Section 10]
d. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. For each emission point in Group 6, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly individual hours of operation;
   iii. The monthly and 12-month rolling individual and combined throughputs, in tons;
   iv. The monthly and 12-month rolling lubricant usage in gals;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP05 and EP154, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons;
   vii. For EP05, the monthly and 12-month rolling emissions of VOC in tons.

c. 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:

None.

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

Emission Point: EP44 (1003-1) Sow Dryer

Description:
The Sow Dryer removes moisture from pigs and sows prior to melting. The dryer uses natural gas as the primary fuel, but has the ability to use propane as a backup fuel in case of natural gas curtailment.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
44 (1003-1)	Sow Dryer	47.1	24.0	None	9/1998

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

STATE-ORIGIN REGULATION:
401 KAR 63:020, ***Potentially hazardous matter or toxic substances***

1. **Operating Limitations:**
   Refer to **Section H** if propane is used as alternative fuel in EP44.

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 weights ≤ 0.5 tons/hour: 2.34 lbs/hr
      ii. For process weights < 30 tons/hour: $E = 3.59P^{0.62}$
      iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
      Where:
      E = rate of emission in lb/hr; and
      P = process weight rate in tons/hr.

   c. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

   Compliance Demonstration Method:
   For **2. Emission Limitations (a) – (c),** the permittee is assumed to be in compliance when combusting natural gas or propane as fuel.

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

3. Testing Requirements:
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. For EP44, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling natural gas usage in MMscf;
   ii. The monthly and 12-month rolling propane usage in Mgal.

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

5. Specific Recordkeeping Requirements:

a. For EP44, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling natural gas usage in MMscf;
   ii. The monthly and 12-month rolling propane usage in Mgal.

b. 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:
None

8. Alternate Operating Scenarios:
The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

GROUP 7 REQUIREMENTS: Skimming & Drossing Houses
EP01 (1002-1&2) & EP140 (9070)

Description:
The Aluminum Skimming House (EP01) and Dross House (EP140), receive dross skimmings from the direct cast processes and are equipped with baghouses.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (tons/hr)	Control Device	Construction Commenced
01 (1002-1 & 2)	Aluminum Skimming House	2.90	Baghouse (C-1002-1) & Baghouse (C-1002-2)	6/15/1981
140 (9070)	Dross House	7.07	Baghouse (C-9090)	2016

APPLICABLE REGULATIONS:
401 KAR 59:010, ***New process operations***
401 KAR 63:010, ***Fugitive emissions*****.** Applicable to emissions into the air outside buildings, structures, & equipment other than from a stack or air pollution control equipment exhaust.
40 CFR 64, ***Compliance Assurance Monitoring (CAM)*** for EP01 for PM

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants*****,** for EP01

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for EP01 for PM & VOC
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for EP140 for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The Dross House (EP140) entrance and exit doors shall be closed during loading operations and all other times when practical. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   b. 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. 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)]
      ii. 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)]

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

iii. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
iv. The maintenance of paved roadways in a clean condition; or [401 KAR 63:010, Section 3(1)(e)]
v. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]

c. The permittee shall limit the operation of EP140 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

d. The permittee shall maintain the capture efficiency of the Dross House (EP140) at or above 98% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** and **(b)**, the permittee shall demonstrate compliance by meeting the requirements of **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (d),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (a)** and **7. Specific Control Equipment Operating Conditions (c)**.

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

c. ***Fugitive Emission Standard***: For each affected facility that is not subject to the opacity standards in **2. Emission Limitations (a)**, above, and that emits or may emit any air contaminant into the air outside buildings, structures, and equipment other than from a stack or air pollution control equipment exhaust:
   i. The permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as

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

determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

1) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
2) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

d. For EP01, refer to **Section B,** Group 13 requirements for group emission limitations related to 401 KAR 63:021.

e. For EP01, refer to **Section D.4.** and **D.5.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

f. For EP140, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (d)**, **5. Specific Recordkeeping Requirements (c),** and **6. Specific Reporting Requirements (a).**

2) For **2. Emission Limitations (b)**, the permittee shall demonstrate compliance by comparing, each month, the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:

i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (f),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (a), 4. Specific Monitoring Requirements (b),** and **5. Specific Recordkeeping Requirements (b).**

3. Testing Requirements:

Remelt 2 Project Testing (a. below)

a. No later than December 31, 2023, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP140, using 40 CFR 51, Appendix M, Method 201A, and 40 CFR 60, Appendix A, Method 5 (or an alternate method as approved by the Division) on both the inlet and outlet of the baghouse serving the dross house (EP140). [To preclude 401 KAR 51:017, Sections 8-14]

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

i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
iii. This testing shall establish an inlet and outlet emission factor for EP140 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.
iv. During this test the permittee shall verify the face velocity and that the direction of airflow through each of the bay door openings is inward using a smoke tube and the following procedures:
1) The direction and velocity of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
2) The fan amps and volumetric flow rate shall be monitored during the test.
3) A minimum face velocity at each bay door opening shall be determined and the permittee shall demonstrate that the velocity inward through each bay door opening exceeds this value.

b. 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 perform a qualitative visual observation of the opacity of emissions from each stack or vent no less frequently than once every calendar week while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), then 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 point in Group 7, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
i. The monthly and 12-month rolling total material processed in tons;
ii. The monthly average process weight rate in tons/hr;
iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
iv. The monthly hours of operation;
v. For EP01, the monthly and 12-month rolling emissions of PM and VOC in tons;
vi. For EP140, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$, in tons.

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

d. If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions)

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

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]

e. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64 for EP01.

f. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of 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 Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. For each emission point in Group 7, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling total material processed in tons;
   ii. The monthly average process weight rate in tons/hr;
   iii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   iv. The monthly hours of operation;
   v. For EP01, the monthly and 12-month rolling emissions of PM and VOC in tons;
   vi. For EP140, the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$, in tons.

c. 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]

d. The permittee shall maintain a log of any Reference Method 22 performed and field records identified in Reference Method 22 and any corrective action taken and the results. [401 KAR 52:020, Section 10]

e. For EP01, 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)]

f. For EP01, 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)(2)]

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

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

6. Specific Reporting Requirements:

a. Following an exceedance of the opacity standard, the permittee shall submit to the field office, for a period of 2 months, the weekly visible emission readings and the monthly average process weight rates for the emission point, within 30 days of the end of each month. [401 KAR 52:020, Section 10]

b. For EP01, 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)]

c. For EP01, 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

d. Refer to **Appendix A** for reporting requirements under 40 CFR 64 for EP01.

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

7. Specific Control Equipment Operating Conditions:

a. The baghouses associated with Group 7 shall be properly maintained, used in conjunction with the associated processes, and operated consistent with the manufacturer's specifications. [401 KAR 52:020, Section 10]

b. The permittee shall maintain a daily log of the pressure drop across each baghouse, and ensure it remains in the proper operating range as specified by the manufacturer or the most recent stack test in which compliance was demonstrated. [401 KAR 52:020, Section 10]

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

c. For the baghouse associated with EP140, the permittee shall continuously monitor the inlet volumetric flow rate in the stack, and ensure these parameters are maintained above the values measured during the testing required in **3. Testing Requirements (b)**. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

d. Refer to **Section E.**

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

GROUP 8 REQUIREMENTS: Carbottom & Pusher Furnaces
EP06 (2010-A), EP18 (2011-A), EP19 (2011-B), & EP126 (2011-C)

Description:
The Carbottom and Pusher Furnaces are used to heat the aluminum before the Reversing Mill. All of the furnaces use natural gas as the primary fuel, but have the ability to use propane as a backup fuel in case of natural gas curtailment.

Emission Point (Unit ID)	Unit Name	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
06 (2010-A)	Carbottom Furnaces 1 - 3	100.26	None	6/15/1981
18 (2011-A)	Pusher Furnaces 1 & 2	224.8	None	1/16/1990
19 (2011-B)	Pusher Furnace 3	124.0	None	10/1999
126 (2011-C)	Pusher Furnace 4	105.0	None	4/12/2016

APPLICABLE REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP126 for NO_x, CO, VOC, & GHG
401 KAR 59:010, *New process operations*

STATE-ORIGIN REGULATION:
401 KAR 63:021, *Existing sources emitting toxic air pollutants,* for EP06, EP18, & EP19.

PRECLUDED REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP06 & EP18 for PM, VOC, & NO_x
401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for EP126 for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. EP126 shall not use more than 701 MMscf of natural gas per year, on a rolling 12-month basis. [401 KAR 51:017]

   b. For EP126, the BACT determination for Greenhouse Gases (CO_2e) requires the facility to meet the following design and operational requirements: [401 KAR 51:017]
      i. The facility design shall include low NO_x recuperative burners,
      ii. Install, operate, and maintain pneumatic door seals to ensure airtight operation thereby minimizing incoming air. Door open time by furnace load will be tracked as a corresponding recordkeeping requirement for this work practice.
      iii. Calculate and track natural gas usage on a Btu/lb of aluminum output basis as a parametric indicator of furnace efficiency. Establish acceptable parametric ranges for this efficiency metric and initiate corrective actions if actual readings for this metric fall outside of the acceptable range.
      iv. Conduct periodic calibration of gas supply system in accordance with manufacturer's recommended procedures and schedule.

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

v. Conduct periodic thermography readings of furnace shell in areas recommended by the manufacturer and according to the schedule recommended by the manufacturer (at least annually).

c. The permittee shall prepare and maintain for EP126, within 90 days of startup, a good combustion and operation practices (GCOP) plan that defines, measures and verifies the use of operational and design practices determined as BACT for minimizing NO_x, CO, VOC, and GHG emissions. Any revisions requested by the Division shall be made and the revisions shall be maintained on site. The permittee shall operate according to the provisions of this plan at all times, including periods of startup, shutdown, and malfunction. The plan shall be incorporated into the plant standard operating procedures (SOP) and shall be made available for the Division's inspection. The plan shall include, but not be limited to: [401 KAR 51:017]
   i. A list of combustion optimization practices and a means of verifying the practices have occurred.
   ii. A list of combustion and operation practices to be used to lower energy consumption and a means of verifying the practices have occurred.
   iii. A list of the design choices determined to be BACT and verification that designs were implemented in the final construction.

d. The permittee shall limit the operation of EP126 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

e. Refer to **Section H** if propane is used as an alternative fuel in any of the emission points in Group 8.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)**, the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **1. Operating Limitations (b)** and **(c),** the permittee shall demonstrate compliance as follows:
   A. The facility construction shall be completed in accordance with the approved GCOP plan. Refer to **6. Specific Reporting Requirements (b)**.
   B. Prepare, maintain, and implement the GCOP plan. Refer to **1. Operating Limitations (c), 5. Specific Recordkeeping Requirements (a)** and **(b),** and **6. Specific Reporting Requirements (a)**.
   C. The permittee shall perform testing for NO_x, CO, and VOC. Refer to **3. Testing Requirements (b).**

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)]

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

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

c. For EP06, EP18, and EP19, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

d. For EP06, refer to **Section D.4.** for group PM, VOC, and NOx emission limitations. [To preclude 401 KAR 51:017]

e. For EP18, refer to **Section D.5.** for group PM, VOC, and NOx emission limitations. [To preclude 401 KAR 51:017]

f. For EP126, the permittee shall not cause or contribute to emissions of NOx that exceed 168.0 pounds of NO_x per MMscf of natural gas and 58.9 tons of NO_x per year, on a rolling 12-month basis. [401 KAR 51:017]

g. For EP126, the permittee shall not cause or contribute to emissions of CO that exceed 60.6 pounds of CO per MMscf of natural gas and 21.2 tons of CO per year, on a rolling 12-month basis. [401 KAR 51:017]

h. For EP126, the permittee shall not cause or contribute to emissions of VOC that exceed 5.5 pounds of VOC per MMscf of natural gas and 1.93 tons of VOC per year, on a rolling 12-month basis. [401 KAR 51:017]

i. For EP126, the permittee shall not cause or contribute to emissions of CO_2e that exceed 42,068 tons of CO_2e per year, on a rolling 12-month basis. [401 KAR 51:017]

j. For EP126, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a) – (c),** the permittee is assumed to be in compliance when combusting natural gas or propane as fuel.

2) For **2. Emission Limitations (f), (g), (h),** and **(i)**, the permittee shall demonstrate compliance by meeting the requirements in **1. Operating Limitations (c), 3. Testing Requirements (b)**, **4. Specific Monitoring Requirements (a)**, and **5. Specific Recordkeeping Requirements (a).**

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

3) For **2. Emission Limitations (j),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (c)**, **4. Specific Monitoring Requirements (a)**, and **5. Specific Recordkeeping Requirements (a).**

3. Testing Requirements:

a. 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.

Remelt 2 Project Testing (b. and c. below)

b. No later than December 31, 2024, the permittee shall perform stack testing for NO_x, VOC, and CO emissions from EP126 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 7E for NO_x;
   ii. U.S. EPA Method 25A for VOC; and
   iii. U.S. EPA Method 10 for CO;
   iv. An alternate method as approved by the Division;
   v. This testing shall establish an emission factor for EP126 for NO_x, VOC, and CO in lb/MMscf of natural gas burned and demonstrate compliance with the emission limits in **2. Emission Limitations (f) – (h).**

c. No later than December 31, 2024, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5, or an alternate method as approved by the Division. This testing shall establish an emission factor for EP126 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum. [To preclude 401 KAR 51:017, Sections 8-14]

4. Specific Monitoring Requirements:

a. For each emission point in Group 8, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling total material processed in tons;
   ii. For EP06 and EP18, the monthly and 12-month rolling emissions of PM, VOC, and NOx in tons;
   iii. For EP126, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons;
   iv. The monthly natural gas usage in MMscf;
   v. For EP06, EP18, and EP126, the 12-month rolling natural gas usage in MMscf;
   vi. The monthly and 12-month rolling propane usage in Mgal;
   vii. The monthly hours of operation.

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

5. Specific Recordkeeping Requirements:

a. For each emission point in Group 8, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling total material processed in tons;

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

ii. For EP06 and EP18, the monthly and 12-month rolling emissions of PM, VOC, and NOx in tons;
iii. For EP126, the monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO2e in tons;
iv. The monthly natural gas usage in MMscf;
v. For EP06, EP18, and EP126, the 12-month rolling natural gas usage in MMscf;
vi. The monthly and 12-month rolling propane usage in Mgal;
vii. The monthly hours of operation.
viii. The GCOP plan as well as any revisions.

b. The permittee shall maintain records of any time that EP126 was not operated according to the GCOP plan required by **1. Operating Limitations (b)** with a description of the situation and actions taken to remedy the issue. [401 KAR 51:017]

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

6. Specific Reporting Requirements:

a. The permittee shall include, in the semi-annual report, any time that EP126 was not operated according to the GCOP plan required by **1. Operating Limitations (b)** with a description of the situation and actions taken to remedy the issue. Refer to **5. Specific Recordkeeping Requirements (b)**. [401 KAR 51:017]

b. The permittee shall submit certification that the design elements proposed as BACT for EP126 have been implemented in the final construction. Any deviations from the design elements proposed in the application shall be analyzed for changes in air emissions profile. Design changes and emission analysis shall be submitted in a report to the Division prior to construction of the changed element. Any changes shall also be incorporated into the GCOP plan. [401 KAR 51:017]

c. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

None.

8. Alternate Operating Scenarios:

The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

Emission Point: EP07 (2015-1) Reversing Mill

Description:
The Reversing Mill is used to roll aluminum ingots to a specific thickness. It is equipped with dedicated Inertial Separators to control PM emissions which provide no control for VOC emissions. This mill is the bottleneck for all of the upstream Scalping Process operations and downstream finishing mill operations.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Control Device	Construction Commenced
07 (2015-1)	Reversing Mill	336	Inertial Separators (C-2015-1)	6/15/1981; Modified 2017 & 2022

APPLICABLE REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for VOC (due to modification in 2017)
401 KAR 59:010, ***New process operations***
40 CFR 64, ***Compliance assurance monitoring (CAM)*** for PM

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants***

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for PM & VOC (group limit in Section D)
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The permittee shall not exceed 1,877,809 tons of aluminum/yr processed through the Reversing Mill. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   b. The permittee shall prepare written operating instructions and procedures that specify good operating and maintenance practices and includes, at a minimum, the following specific practices targeting VOC emissions minimization: [401 KAR 51:017]
      i. Controlling coolant application rates per unit of production to remain within targeted ranges for ensuring process conditions are maintained at optimum levels while simultaneously preventing wasted coolant from entering the system.
      ii. Maintaining the supplied coolant temperature within required temperature ranges to prevent overheated coolant from being exposed to aluminum slab/strip and work/backup rolls.
      iii. Performing periodic physical/chemical analysis of coolant package to assess coolant conditions and evaluate excessive degradation or out-of-range specifications for key coolant properties.

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

iv. Spill prevention and other waste reduction measures to ensure the coolant supplied to the system remains within the bounds of the storage, circulation, filtration, and treatment systems.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)**, the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b).**

2) For **1. Operating Limitations (b)**, the permittee shall demonstrate compliance by meeting the requirements in **5. Specific Recordkeeping Requirements (c).**

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

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

c. Refer to **Section B,** Group 13 requirements for group emission limitations related to 401 KAR 63:021.

d. Refer to **Section D.4.** and **Section D.5.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

e. The permittee shall not cause or contribute to emissions of VOC from the stack that exceed 10.0 pounds of VOC per hour, and 32.82 tons per year, on a rolling 12-month basis. [401 KAR 51:017]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate each month by comparing the allowable rate to the actual rate calculated using the following equation:

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

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (e)**, the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (b)-(e), 4. Specific Monitoring Requirements (c),** and **5. Specific Recordkeeping Requirements (c).**

3. Testing Requirements:

a. 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.

b. Before conducting the initial and any subsequent Reversing Mill performance testing, the permittee shall develop and submit a site-specific test plan to the Division 60 days prior to the scheduled test date. The permittee shall propose the following in the test plan for Division review and approval: [401 KAR 51:017]
   i. The reference test methods that will be used.
   ii. The anticipated operating parameter ranges for Reversing Mill during the test.
   iii. The monitoring parameters that will be measured during the test to assess the performance of the capture system.

c. Within 60 days after achieving the maximum production rate at which the Reversing Mill will be operated but not later than 180 days after the initial startup after the changes to the Reversing Mill implemented in V-13-020 R2 are complete (north shear, motor upgrade and slab cooler installation) and the change to the Finishing Mill (EP08) implemented in V-13-020 R2 is complete, the permittee shall complete performance testing for VOC emissions using U.S. EPA Method 25A at the reversing mill stack. This test shall be repeated once every 5 years. [401 KAR 51:017]

d. The performance test program shall include the following elements: [401 KAR 51:017]
   i. Prior to the test, the permittee shall establish a pressure drop range and a volumetric exhaust flow rate range in accordance with the manufacturer's written instructions or based on good engineering/pollution prevention practices and operate the capture system within these ranges during the test.
   ii. The permittee shall monitor process weight rate, pressure drop, and volumetric exhaust flow rate during the test.
   iii. The testing will establish an outlet emission factor for the Reversing Mill for VOC in lb/ton of aluminum.

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

iv. Inclusion of information that is necessary to document the operation of the emission capture system operating conditions during the test and inclusion of an explanation why the conditions represent normal operation.

e. The permittee shall perform an initial technical evaluation of the capture system for Reversing Mill in conjunction with the initial testing for VOC. The permittee may request to use relevant EPA Reference Test Methods or alternative methods to calculate the capture efficiency achieved during a performance test. Such alternative methods may include measurements of capture velocity and volumetric flow rates at the Reversing Mill stack. The request shall be submitted to the Division's Technical Service branch and the Permit Review branch. [401 KAR 51:017]

f. Every 5 years, the permittee shall conduct performance testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP07 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 or an equivalent method approved by the Division on both the inlet and outlet of the inertial separators.
   i. The permittee shall monitor process weight rate, pressure drop, and volumetric flow rate during the test.
   ii. This testing shall measure and evaluate the efficiency of the control device.
   iii. This testing shall establish an inlet and outlet emission factor for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.
   iv. The permittee shall document information that is necessary to document the operation of the emission capture system and add-on control device operating conditions during the test and inclusion of an explanation why the conditions represent normal operation.

g. Within 60 days after achieving the maximum production rate at which the Reversing Mill will be operated but not later than 180 days after the initial startup after the changes to the Reversing Mill and Finishing Mill (EP08) implemented in V-20-004 R2 are complete, the permittee shall complete performance testing for VOC emissions using U.S. EPA Method 25A at the reversing mill stack and for PM, PM_{10}, and $PM_{2.5}$ emissions from EP07 using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 or an equivalent method approved by the Division on both the inlet and outlet of the inertial separators. [401 KAR 50:045]

h. Refer to **Section D.8.**

4. Specific Monitoring Requirements:

a. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly aluminum production in tons;

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

iv. The monthly hours of operation;
v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
vi. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons;
vii. The daily pressure drop across the inertial separators.

c. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

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

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
i. The monthly average process weight rate in tons/hr;
ii. The monthly coolant usage in Mgal;
iii. The monthly aluminum production in tons;
iv. The monthly hours of operation;
v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
vi. The monthly and 12-month rolling emissions of PM, PM10, PM2.5, and VOC in tons;
vii. SDSs of all materials used in the reversing mill.
viii. The daily pressure drop across the inertial separators.

c. The permittee shall maintain records that demonstrate that the work practice standards identified in **1. Operating Limitations (b)** are maintained. [401 KAR 52:020, Section 10]

d. 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)]

e. 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)(2)]

f. 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. 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)]

b. 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)]

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

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

iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]

iv. 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)]

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

d. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The Reversing Mill Inertial Separators shall be properly maintained, used in conjunction with the associated processes, and operated in accordance with the manufacturer’s specifications. [401 KAR 52:020, Section 10]

b. The permittee shall ensure the pressure drop across the inertial separators is maintained within the proper operating range as specified by the manufacturer or based on good engineer/pollution prevention practices. [401 KAR 52:020, Section 10]

c. Refer to **Section E.**

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

Emission Point: EP08 (2015-2) Finishing Mill

Description:
The Finishing Mill is used to roll aluminum ingots to a specific thickness and is equipped with control for PM emissions. The aluminum sheets from the Reversing Mill are fed to the Finishing Mill.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Control Device	Construction Commenced
08 (2015-2)	Finishing Mill	Can body stock - 317 Can end stock - 174	Bulk Entrainment Separator (BES) & Second Stage Mist Eliminators (SSMEs) (C-2015-2)	6/15/1981; Modified 2011, 2017, & 2022

APPLICABLE REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for VOC (due to modification in 2017)
401 KAR 59:010, ***New process operations***
40 CFR 64, ***Compliance assurance monitoring (CAM)*** for PM, PM_{10}, & $PM_{2.5}$.

STATE-ORIGIN REGULATIONS:
401 KAR 63:020, ***Potentially hazardous matter or toxic substances,*** applies to any pollutants not included in the list of pollutants under **Group 13, Existing Sources Emitting Toxic Air Pollutants**.
401 KAR 63:021, ***Existing sources emitting toxic air pollutants***

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for PM & VOC (group limit in Section D)
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The permittee shall not process more than 1,765,140 tons of aluminum/yr through the finishing mill. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   b. The permittee shall limit the operation of EP08 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

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

c. The permittee shall maintain the capture efficiency of each hood and exhaust pickup point serving EP08 at or above 95% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

d. The permittee shall ensure that the building removal efficiency for PM, PM_{10}, and $PM_{2.5}$ in the building that houses EP08 is at least 70%, 50%, and 15%, respectively. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

e. The permittee shall prepare written operating instructions and procedures that specify good operating and maintenance practices and includes, at a minimum, the following specific practices targeting VOC emissions minimization: [401 KAR 51:017]
   i. Controlling coolant application rates per unit of production and kerosene usage rates for the slab threading process to remain within targeted ranges for ensuring process conditions are maintained at optimum levels while simultaneously preventing wasted coolant/kerosene from entering the system.
   ii. Maintaining the supplied coolant temperature within required temperature ranges to prevent overheated coolant from being exposed to aluminum slab/strip and work/backup rolls.
   iii. Performing periodic physical/chemical analysis of coolant package to assess coolant conditions and evaluate excessive degradation or out-of-range specifications for key coolant properties.
   iv. Spill prevention and other waste reduction measures to ensure the coolant supplied to the system remains within the bounds of the storage, circulation, filtration, and treatment systems.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b)**.

2) For **1. Operating Limitations (c)** and **(d),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (b)** and **(f)**, and **7. Specific Control Equipment Operating Conditions (b)**.

3) For **1. Operating Limitations (e),** the permittee shall demonstrate compliance by meeting the requirements in **5. Specific Recordkeeping Requirements (c)**.

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)]

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

i. For process weights ≤0.5 tons/hour: 2.34 lbs/hr
ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
Where:
E = rate of emission in lb/hr; and
P = process weight rate in tons/hr.

c. Refer to **Section B,** Group 13 requirements for group emission limitations related to 401 KAR 63:021.

d. Refer to **Section D.4.** and **D.5.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

e. Refer to **Section D.6.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

f. The permittee shall not cause or contribute to emissions of VOC from the stack that exceed 73.2 pounds of VOC per hour and 239.2 tons per year, on a rolling 12-month basis. [401 KAR 51:017]

g. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance by comparing, each month, the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (f)**, the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (c)-(f), 4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b)** and **(c).**

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

4) For **2. Emission Limitations (g),** based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

3. Testing Requirements:

a. 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.

Remelt 2 Project Testing (b. below)

b. No later than December 31, 2022, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP08, using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate test method as approved by the Division) on both the inlet and outlet of the SSMEs serving them and shall submit a complete test report. [To preclude 401 KAR 51:017, Sections 8-14]
   i. Prior to the test, the permittee shall establish a pressure drop range across the SSMEs and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
   ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
   iii. This testing shall establish an inlet and outlet emission factor for EP08 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of each type of aluminum.
   iv. During this test the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest hood opening, that ca be safely accessed while EP08 is operational, is inward using a smoke tube and the following procedures:
      1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
      2) The fan amps and volumetric flow rate shall be monitored during the test.

c. Before conducting the initial and any subsequent Finishing Mill performance testing, the permittee shall develop and submit a site-specific test plan to the Division 60 days prior to the scheduled test date. The permittee shall propose the following in the test plan for Division review and approval: [401 KAR 51:017]
   i. The reference test methods that will be used.
   ii. The anticipated operating parameter ranges for Finishing Mill during the test.
   iii. The monitoring parameters that will be measured during the test to assess the performance of the capture system.

d. Within 60 days after achieving the maximum production rate at which the Finishing Mill will be operated but not later than 180 days after initial startup after the changes to the Reversing Mill implemented in V-13-020 R2 are complete (north shear, motor upgrade and slab cooler installation) and the change to the Finishing Mill (EP08) implemented in

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V-13-020 R2 is complete, the permittee shall complete performance testing for VOC emissions using U.S. EPA Method 25A at the Finishing Mill stack. [401 KAR 51:017]

e. The performance test program shall include the following elements: [401 KAR 51:017]
   i. Prior to the test, the permittee shall establish a volumetric exhaust flow rate range and operate the capture system within these ranges during the test.
   ii. The permittee shall monitor process weight rate and volumetric exhaust flow rate during the test.
   iii. This testing will establish an outlet emission factor for the Finishing Mill for VOC in lb/ton of aluminum.

f. The permittee shall perform an initial technical evaluation of the capture system for Finishing Mill in conjunction with the initial testing for VOC. If changes to any physical installation of the capture system and/or control device serving the Finishing Mill occur, the permittee shall update the capture system technical evaluation and perform a repeat performance test, as necessary. The permittee may request to use relevant EPA Reference Test Methods or alternative methods to calculate the capture efficiency achieved during a performance test. Such alternative methods may include measurements of capture velocity and volumetric flow rates at the Finishing Mill stack. The request shall be submitted to the Division's Technical Service branch and the Permit Review branch. [401 KAR 51:017]

g. Within 60 days after achieving the maximum production rate at which the Finishing Mill will be operated but not later than 180 days after initial startup after the changes to the Reversing Mill (EP07) and the Finishing Mill implemented in V-20-004 R2 are complete, the permittee shall complete performance testing for VOC emissions using U.S. EPA Method 25A at the Finishing Mill stack and for PM, PM_{10}, and $PM_{2.5}$ emissions using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate test method as approved by the Division) on both the inlet and outlet of the PM control device train (BES & SSMEs) serving the Finishing Mill. This test shall be repeated once every 5 years. The performance test program shall include the following elements: [401 KAR 50:045]
   i. Prior to the test, the permittee shall establish a volumetric exhaust flow rate range and operate the capture system within these ranges during the test.
   ii. The permittee shall monitor process weight rate and volumetric exhaust flow rate during the test.
   iii. This testing will establish stack outlet and uncaptured emission factors for the Finishing Mill for VOC, PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.
   iv. The permittee shall update the capture system technical evaluation for Finishing Mill in conjunction with the testing for VOC, PM, PM_{10}, and $PM_{2.5}$. The permittee may request to use relevant EPA Reference Test Methods or alternative methods to calculate the capture efficiency achieved during a performance test. Such alternative methods may include measurements of capture velocity and volumetric flow rates at the Finishing Mill stack. The request shall be submitted to the Division's Technical Service branch and the Permit Review branch.

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h. Refer to **Section D.8.**

4. Specific Monitoring Requirements:

a. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage, Mgal;
   iii. The monthly amount of each type of aluminum material (can body and can end stock) processed in tons;
   iv. The monthly hours of operation;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons;
   vii. The daily pressure drop across the BES and daily pressure drop across the SSMEs.

c. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

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

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage, Mgal;
   iii. The monthly amount of each type of aluminum material (can body and can end stock) processed in tons;
   iv. The monthly hours of operation;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. The monthly and 12-month rolling emissions of PM, PM10, PM2.5, and VOC in tons;
   vii. SDSs of all materials used in the finishing mill;
   viii. The daily pressure drop across the BES and daily pressure drop across the SSMEs.

c. The permittee shall maintain records that demonstrate that the work practice standards identified in **1. Operating Limitations (e)** are maintained. [401 KAR 52:020, Section 10]

d. 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

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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)]

e. 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)(2)]

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

6. Specific Reporting Requirements:

a. 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)]

b. 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

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

d. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The Finishing Mill SSMEs shall be properly maintained, used in conjunction with the associated processes, and operated in accordance with the manufacturer’s specifications. [401 KAR 52:020, Section 10]

b. For the BES and SSMEs associated with EP08, the permittee shall continuously monitor the fume exhaust volumetric flow rate, and maintain it at or above the level measured

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during the testing required by **3. Testing Requirements (b) – (h)**. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

c. Refer to **Section E.**

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GROUP 9 REQUIREMENTS: Cold Mills 1 & 2 with Roll Coolant Recovery System (RCRS) EP30 (3005-1), EP32 (3010-1), & EP59 (3010-2)

Description:
The Cold Mills process aluminum coils to reduce their gauge thickness. Exhaust gases from each Cold Mill are routed to a Roll Coolant Recovery System, where the roll coolant is recovered for reuse. The RCRS consists of an absorption column and rectification column with vacuum pump, degassing column, rolling oil distillate and electric heater.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Construction Commenced
30 (3005-1)	Cold Mill 1 (CM1)	243.1	6/15/1981
32 (3010-1)	Cold Mill 2 (CM2)	94.4	6/15/1981
59 (3010-2)	Control Device for CM1 & CM2: Roll Coolant Recovery System (RCRS)		2011

APPLICABLE REGULATIONS:
401 KAR 59:010, ***New process operations***
40 CFR 64, ***Compliance Assurance Monitoring (CAM)*** for PM, PM_{10}, $PM_{2.5}$, & VOC

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for PM & VOC
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The permittee shall not process more than 2,129,556 tons/yr of aluminum through Cold Mill 1 (EP30). [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   b. The permittee shall not process more than 826,769 tons/yr of aluminum through Cold Mill 2 (EP32). [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   c. The permittee shall limit the operation of EP30 and EP32 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.**

   d. The permittee shall maintain the capture efficiency of each hood and exhaust pickup point serving EP30 and EP32 at or above 90% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   e. The permittee shall ensure that the building removal efficiency for PM, PM_{10}, and $PM_{2.5}$ in the building that houses EP30 and EP32 is at least 70%, 50%, and 15%, respectively. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   Compliance Demonstration Method:
   1) For **1. Operating Limitations (a)** and **(b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (b)** and **5. Specific**

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Recordkeeping Requirements (b).

2) For **1. Operating Limitations (d)** and **(e),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (b),** and **7. Specific Control Requirements (b).**

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

c. The combined VOC emissions from Cold Mills 1 and 2 shall not exceed 118.5 tons per year, on rolling 12-month basis. [To preclude 401 KAR 51:017]

d. Refer to **Section D.4.** for group PM and VOC emission limitations. [To preclude 401 KAR 51:017]

e. Refer to **Section D.6.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);

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h_i = the actual total hours of operation for month *i* (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (c),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements, 4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b).**

3. Testing Requirements:

a. Before conducting the Cold Mill performance testing required in **3. Testing Requirements (b)**, the permittee shall develop and submit a site-specific test plan to the Division 60 days prior to the scheduled test date. The permittee shall propose the following in the test plan for Division review and approval: [401 KAR 50:045, Section 2]
   i. The reference test methods that will be used.
   ii. The anticipated operating parameter ranges for the Cold Mills and Roll Coolant Recovery System during the test.
   iii. The monitoring parameters that will be measured during the test, which at a minimum shall include washing oil flow rate, temperature of the washing oil in the inlet stream to the absorber, and the rectification column vacuum pressure.

b. No later than December 31, 2025, and every 5 years thereafter, the permittee shall perform a stack test for VOC and PM emissions from the RCRS stack using the following methods:
   i. U.S. EPA Method 25A for VOC; and
   ii. U.S. EPA Method 17 & 202 for PM, PM_{10}, and $PM_{2.5}$;
   iii. An alternate method as approved by the Division;
   iv. This testing shall establish an emission factor for VOC, PM, PM_{10}, and $PM_{2.5}$ in lb/hr and lb/ton of aluminum during normal steady-state operation and an emission factor for VOC during extended bypass as allowed by **8. Alternate Operating Scenario Requirements**;
   v. The permittee shall record information that is necessary to document emission capture system and add-on control device operating conditions during the test and the submitted test report shall include an explanation as to why the conditions represent normal operation;
   vi. The permittee shall monitor process weight rate and volumetric flow rate during the test;
   vii. During this test, the permittee shall verify the direction of airflow through both the largest building wall opening closest to the process and the largest hood opening, that can be safely accessed while EP30, EP32, and EP59 are operational, is inward using a smoke tube and the following procedures:
      1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.
      2) The volumetric flow rate shall be monitored during the test.

c. Refer to **Section D.8.**

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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 perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly amount of aluminum processed in tons;
   iv. The monthly hours of operation in normal steady-state operation;
   v. The monthly hours of operation in extended bypass operation;
   vi. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vii. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons.

c. The permittee shall install, operate, and maintain a continuous monitoring system to measure and record the washing oil flow rate to the absorber in the Roll Coolant Recovery System when the system is in operation and the temperature and flow rate of the inlet stream of the absorber column. [401 KAR 50:055, Section 2(2); 401 KAR 52:020, Section 10]

d. The permittee shall install, operate, and maintain a monitoring device to measure the rectification column vacuum pressure. Data shall be recorded at least once every 8 hours when the rectification system is in operation. [401 KAR 50:055, Section 2(2); 401 KAR 52:020, Section 10]

e. The permittee shall install, operate, and maintain a monitoring device to measure the temperature of the washing oil in the inlet stream to the absorber. Data shall be recorded at least once every 8 hours when the system is in operation. [401 KAR 50:055, Section 2(2); 401 KAR 52:020, Section 10]

f. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

g. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;

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iii. The monthly amount of aluminum processed in tons;
iv. The monthly hours of operation in normal steady-state operation;
v. The monthly hours of operation in extended bypass operation;
vi. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
vii. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons;
viii. SDSs of all materials used in the cold mills.
ix. The washing oil flow rate into the absorber measured in accordance with **4. Specific Monitoring Requirements (c)**;
x. The rectification column vacuum pressure, measured in accordance with **4. Specific Monitoring Requirements (d)**;
xi. The temperature of washing oil in inlet stream to the absorber, measured in accordance with **4. Specific Monitoring Requirements (e)**;

c. The permittee shall keep on file the manufacturer's maintenance and operating instructions for the absorber and rectification system that are part of the Roll Coolant Recovery System. [401 KAR 52:020, Section 10]

d. The permittee shall maintain records of maintenance activities performed on the Roll Coolant Recovery System that have the potential to affect the emissions performance of the absorber system. [401 KAR 52:020, Section 10]

e. The permittee shall maintain records of maintenance activities and calibration checks performed on the following absorption system monitoring systems: [401 KAR 52:020, Section 10]
i. Washing oil flow meter;
ii. Rectification column vacuum pressure gauge;
iii. Washing oil inlet stream temperature monitor.

f. 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)]

g. 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)(2)]

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

6. Specific Reporting Requirements:

a. 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)]

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b. 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

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

d. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. For the RCRS: the permittee shall properly maintain, keep in good operating condition, use in conjunction with the associated processes (Cold Mills 1 and 2), and operate in accordance with the manufacturer's specifications. All control equipment associated with Cold Mills 1 and 2 shall be operational at all times, except as allowed by **8. Alternate Operating Scenario Requirements**. [401 KAR 52:020, Section 10]

b. For Cold Mills 1 and 2, the permittee shall continuously monitor the inlet volumetric flow rate to the stack, and maintain it at or above the level measured during the testing required by **3. Testing Requirements (b)**. [401 KAR 52:020, Section 10]

c. Refer to **Section E.**

8. Alternate Operating Scenarios:

For the RCRS: for equipment replacement, preventative, or corrective maintenance, the permittee shall be allowed up to 24-hours of extended bypass of the rectification column with 8-hours of anticipated "return to normal" operation. During the extended bypass, the rectification column vacuum pressure will be out of the range established in Appendix A on the high end. The permittee will rely on an extended duration bypass VOC emission factor established by **3. Testing Requirements (b)** for the bypass period greater than 8-hours through the 8-hour "return to normal" period for the purposes of calculating the monthly and 12-month rolling total emissions of VOC.

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GROUP 10 REQUIREMENTS: Annealing Furnaces
EP12 (3030-B, D)

Description:
The annealing furnaces treat coiled aluminum and are classified as existing process heaters designed to burn gas 1 fuels under 40 CFR 63, Subpart DDDDD. The furnaces use natural gas as the primary fuel, but have the ability to use propane as a backup fuel in case of natural gas curtailment. These units are uncontrolled.

Emission Point (Unit ID)	Unit Name	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
12 (3030-B & D)	Annealing Furnaces 3 & 4	17 each, 34 total	None	6/15/1981

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*

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for PM, VOC, & NO_x

1. **Operating Limitations:**
   a. 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 Division 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)]

   b. The permittee shall conduct a tune-up of each furnace in Group 10 no later than January 31, 2016 and annually thereafter, as specified in 40 CFR 63.7540(a)(10)(i) through (vi). [40 CFR 63.7510(e); 40 CFR 63.7540(a)(10); 40 CFR 63, Subpart DDDDD, Table 3]

   c. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up. [40 CFR 63.7515(d)]

   d. The required tune-ups of the process heaters shall demonstrate continuous compliance by meeting the requirements as specified in 40 CFR 63.7540(a)(10)(i) through (vi), below: [40 CFR 63.7540(a)(10)]
      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

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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)(1)(v)]

vi. Maintain on-site and submit, if requested by the Division, an annual 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; and [40 CFR 63.7540(a)(10)(vi)(B)]

3) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. [40 CFR 63.7540(a)(10)(vi)(C)]

e. 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)]

f. The permittee shall complete the one-time energy assessment specified in 40 CFR 63, Subpart DDDDD, Table 3 no later than January 31, 2016. [40 CFR 63.7510(e)]

g. The permittee shall have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in 40 CFR 63, Subpart DDDDD, Table 3, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in 40 CFR 63.7575. [40 CFR 63, Subpart DDDDD, Table 3(4)]

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

i. A visual inspection of the boiler or process heater system. [40 CFR 63, Subpart DDDDD, Table 3(4)(a)]
ii. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. [40 CFR 63, Subpart DDDDD, Table 3(4)(b)]
iii. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. [40 CFR 63, Subpart DDDDD, Table 3(4)(c)]
iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. [40 CFR 63, Subpart DDDDD, Table 3(4)(d)]
v. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified. [40 CFR 63, Subpart DDDDD, Table 3(4)(e)]
vi. A list of cost-effective energy conservation measures that are within the facility's control. [40 CFR 63, Subpart DDDDD, Table 3(4)(f)]
vii. A list of the energy savings potential of the energy conservation measures identified. [40 CFR 63, Subpart DDDDD, Table 3(4)(g)]
viii. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR 63, Subpart DDDDD, Table 3(4)(h)]

h. Refer to **Section H** if propane is used as alternative fuel.

Compliance Demonstration Method:
For **1. Operating Limitations (a)** through **(g),** the permitee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

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

c. Refer to **Section D.4.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:
For **2. Emission Limitations (a) – (b),** the permittee is assumed to be in compliance when combusting natural gas or propane as fuel.

3. Testing Requirements:
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. For each annealing furnace, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   ii. The monthly and 12-month rolling natural gas usage in MMscf;
   iii. The monthly and 12-month rolling propane usage in Mgal.

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

5. Specific Recordkeeping Requirements:

a. The permittee shall keep the following 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 was 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)]

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 63.7560(a)]

c. As specified in 40 CFR 63.10(b)(1), the permittee shall 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 shall 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)]

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

e. For each annealing furnace, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   ii. The monthly and 12-month rolling natural gas usage in MMscf;
   iii. The monthly and 12-month rolling propane usage in Mgal.

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

6. Specific Reporting Requirements:

a. For each unit in Group 10, the permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that the permittee conducted a tune-up of the unit. [40 CFR 63.7530(d)]

b. The permittee shall include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to 40 CFR 63, Subpart DDDDD, Table 3 and is an accurate depiction of the facility at the time of the assessment. [40 CFR 63.7530(e)]

c. The permittee shall submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.7545(e). [40 CFR 63.7530(f)]

d. The permittee shall report each instance in which the permittee did not meet each emission limit and operating limit in 40 CFR 63, Subpart DDDDD, Tables 1 through 4 or 11 through 13 that apply. 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)]

e. For the initial compliance demonstration for each boiler or process heater, the permittee shall submit the Notification of Compliance Status before the close of business on the 60th day following the completion of all initial compliance demonstrations for all boiler or process heaters at the facility according to 40 CFR 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in 40 CFR 63.7545(e)(1) through (8), below, as applicable. [40 CFR 63.7545(e)]
   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR 63, Subpart DDDDD, description of the fuel(s) burned, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of 40 CFR 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration. [40 CFR 63.7545(e)(1)]
   ii. A signed certification that the permittee has met all applicable emission limits and work practice standards. [40 CFR 63.7545(e)(6)]
   iii. If there was a deviation from any emission limit, work practice standard, or operating limit, the permittee shall also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report. [40 CFR 63.7545(e)(7)]

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

iv. In addition to the information required in 40 CFR 63.9(h)(2), the notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.7545(e)(8)]
   1) "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)." [40 CFR 63.7545(e)(8)(i)]
   2) "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." [40 CFR 63.7545(e)(8)(ii)]
   3) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.7545(e)(8)(iii)]

f. Each annual compliance report shall cover the applicable 1-year period from January 1 to December 31. [40 CFR 63.7550(b)(3)]

g. Each annual compliance report shall be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(4)]

h. A compliance report shall contain the following information: [40 CFR 63.7550(c)]
   i. Since 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 (iv) and (xiv). [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. The total operating time during the reporting period. [40 CFR 63.7550(c)(5)(iv)]
   vi. If there are no deviations from any emission limits or operating limits in 40 CFR 63, Subpart DDDDD that apply, a statement that there were no deviations from the emission limits or operating limits during the reporting period. [40 CFR 63.7550(c)(5)(xi)]
   vii. If a malfunction occurred during the reporting period, the report shall include 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 during a malfunction of a boiler, process heater to minimize emissions in accordance with 40 CFR 63.7500(a)(3), including actions taken to correct the malfunction. [40 CFR 63.7550(c)(5)(xiii)]
   viii. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to 40 CFR 63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown. [40 CFR 63.7550(c)(5)(xiv)]

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

ix. 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)]
x. The permittee shall submit the reports according to the procedures specified in paragraphs 40 CFR 63.7550(h)(1) through (3).

i. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:
None.

8. Alternate Operating Scenarios:
The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

Emission Point: EP53 (4022-5) Parts Washer – Cold Mill 3 Area

Description:
At this parts washer, coiled aluminum and cast aluminum parts get dipped in a cleaning tank. The unit is classified as a cold cleaner under 401 KAR 59:185.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (gal/hr)	Construction Commenced
53 (4022-5)	Parts Washer (Cold Mill 3 Area)	117	9/24/1992

APPLICABLE REGULATION:
401 KAR 59:185, ***New solvent metal cleaning equipment***

1. **Operating Limitations:**
   a. Waste solvent shall not be disposed of or transferred to another party such that greater than twenty (20) percent by weight of the waste solvent can evaporate into the atmosphere. Waste solvent shall be stored only in covered containers. [401 KAR 59:185, Section 4(2)(a)]

   b. The degreaser cover shall be closed if not handling parts in the cleaner. [401 KAR 59:185, Section 4(2)(b)]

   c. Cleaned parts shall be drained for a minimum of fifteen (15) seconds, or until dripping ceases, whichever is longer. [401 KAR 59:185, Section 4(2)(c)]

   d. The flushing of parts with a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. The solvent flow shall be directed downward to avoid turbulence at the air-solvent interface so as to prevent the solvent from splashing outside of the cold cleaner. [401 KAR 59:185, Section 4(2)(2)]

   e. Work area fans shall be positioned so that air is not directed across the opening of the cold cleaner. [401 KAR 59:185, Section 4(2)(e)]

   f. The use of an air-agitated solvent bath is prohibited. A pump-agitated solvent bath shall be operated so as to produce no observable splashing of the solvent against either the tank wall or the parts that are being cleaned. [401 KAR 59:185, Section 4(2)(f)]

   g. The cold cleaner shall be free of all liquid leaks. Auxiliary cleaning equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible leaks, tears, or cracks. [401 KAR 59:185, Section 4(2)(g)]

   h. Spills that occur during solvent transfer shall be cleaned immediately. Wipe rags, or other absorbent equipment and materials, used to clean the spill shall be stored in a covered container for disposal unless storage of these items is prohibited by fire protection authorities. [401 KAR 59:185, Section 4(2)(h)]

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

Compliance Demonstration Method:
For **1. Operating Limitations (a)** through **(h)**, the permittee shall demonstrate compliance by meeting the requirements in **7. Specific Control Equipment Operating Conditions**.

2. Emission Limitations:
None.

3. Testing Requirements:
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 monitor the annual volume of solvent added as makeup to the cold cleaner. [401 KAR 52:020, Section 10]

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

5. Specific Recordkeeping Requirements:
a. The permittee shall maintain records of the annual volume of solvent added as makeup to the cold cleaner. [401 KAR 52:020, Section 10]

b. 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:
a. The cleaner shall be equipped with a cover. If the solvent volatility is greater than fifteen (15) mm Hg measured at 100^{o}F or if the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with one (1) hand. [401 KAR 59:185, Section 4(1)(a)]

b. The cleaner shall be equipped with a drainage facility so that solvent that drains off parts removed from the cleaner will return to the cleaner. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100°F then the drainage facility shall be internal so that parts are enclosed under the cover while draining. The drainage facility may be external if the Division determines that an internal type cannot fit into the cleaning system. [401 KAR 59:185, Section 4(1)(b)]

c. A permanent, conspicuous label, summarizing the operating requirements in **1. Operating Limitations**, above, shall be installed on or near the cleaner. [401 KAR 59:185, Section 4(1)(c)]

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

d. If used, the solvent spray shall be a fluid stream, not a fine, atomized or shower type spray, and at a pressure which does not cause excessive splashing. [401 KAR 59:185, Section 4(1)(d)]

e. If the solvent volatility is greater than thirty-two (32) mm Hg measured at 100 ^{o}F or if the solvent is heated above 120 ^{o}F, then one (1) of the following control devices shall be used: [401 KAR 59:185, Section 4(1)(e)]
   i. A freeboard height that gives a free board ratio greater than or equal to 0.7; [401 KAR 59:185, Section 4(1)(e)(1)]
   ii. A water cover, solvent shall be insoluble in and heavier than water; or [401 KAR 59:185, Section 4(1)(e)(2)]
   iii. Other systems of equivalent control such as a refrigerated chiller or carbon adsorption. [401 KAR 59:185, Section 4(1)(e)(3)]

f. Refer to **Section E.**

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

Emission Point: EP09 (6020-A) Coating Line 1

Description:
Aluminum is pre-treated and coated with various water- or solvent-based paints and dried in a bake-off oven. A regenerative thermal oxidizer (RTO) controls particulate and VOC emissions from the operation. The bake-off oven uses natural gas as the primary fuel, but has the ability to use propane as a backup fuel in case of natural gas curtailment.

Emission Point (Unit ID)	Unit Name	Maximum Solvent Application Rate (gal/hr)	Maximum Capacity (ton/hr)	Control Device	Construction Commenced
09 (6020-A)	Coating Line 1	5.25	13.0	RTO (C-6020-A)	6/15/1981; RTO Installed 9/2012

APPLICABLE REGULATIONS:

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

401 KAR 60:005, Section 2(2)(zz), 40 C.F.R. 60.460 to 60.466 (Subpart TT), *Standards of Performance for Metal Coil Surface Coating*

401 KAR 63:002, Section 2(4)(xxx), 40 C.F.R. 63.5080 to 63.5200, Tables 1 to 2 (Subpart SSSS), *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil*

STATE-ORIGIN REGULATION:

401 KAR 63:021, ***Existing sources emitting toxic air pollutants***

PRECLUDED REGULATIONS:

401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for PM, VOC, & NO_x

401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The mix room doors shall remain shut at all times to prevent MEK from escaping into ambient air. [To preclude 401 KAR 51:017]

   b. Except as provided in 40 CFR 63.5121(b), for any coil coating line for which an add-on control device is used, the permittee shall meet the applicable operating limits specified in Table 1 to 40 CFR 63, Subpart SSSS. The permittee shall establish the operating limits during the performance test according to the requirements in 40 CFR 63.5160(d)(3) and Table 1 to 40 CFR 63.5160. The permittee must meet the operating limits established during the most recent performance test required in 40 CFR 63.5160 at all times after they are established. [40 CFR 63.5121(a)]

   c. If the permittee wishes to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR 63.8(f). [40 CFR 63.5121(b)]

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

d. For the thermal oxidizer, the average combustion temperature in any 3-hour period shall not fall below the combustion temperature limit established during the performance test according to 40 CFR 63.5160(d)(3)(i). [40 CFR 63, Subpart SSSS, Table 1(1)(a)]

e. For the emission capture system, the permittee shall develop monitoring plan that identifies operating parameter to be monitored and specifies operating limits according to 40 CFR 63.5150(a)(4). [40 CFR 63, Subpart SSSS, Table 1(3)]

f. At all times, the permittee must operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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 affected source. [40 CFR 63.5140(b)]

g. The permittee shall limit the operation of EP09 as necessary to comply with the emission limits in **Section D.6.**

h. Refer to **Section H** if propane is used as alternative fuel.

Compliance Demonstration Method:

1) The permittee shall be in compliance with the applicable operating limits in Table 1 to 40 CFR 63, Subpart SSSS at all times. If the permittee is complying with the emission standards of 40 CFR 63, Subpart SSSS without the use of a capture system and control device, the permittee must be in compliance with the standards at all times. [40 CFR 63.5140(a)]

2) For **1. Operating Limitations (d),** the permittee shall demonstrate continuous compliance by: [40 CFR 63, Subpart SSSS, Table 1]
   A. Collecting temperature data according to 40 CFR 63.5150(a)(3); [40 CFR 63, Subpart SSSS, Table 1(1)(a)(i)]
   B. Reducing the data to 3-hour block averages; and [40 CFR 63, Subpart SSSS, Table 1(1)(a)(ii)]
   C. Maintaining the 3-hour average combustion temperature at or above the temperature limit. [40 CFR 63, Subpart SSSS, Table 1(1)(a)(iii)]

3) For **1. Operating Limitations (e)**, the permittee shall demonstrate continuous compliance by conducting monitoring according to the plan in 40 CFR 63.5150(a)(4). [40 CFR 63, Subpart SSSS, Table 1(3)]

4) To demonstrate initial compliance for each capture system and each control device through performance tests and continuing compliance through continuous monitoring

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

of capture system and control device operating parameters, the permittee must meet the requirements in 40 CFR 63.5170(i)(1) through (3). [40 CFR 63.5170(i)]

A. Conduct an initial performance test to determine the control device destruction or removal efficiency, DRE, using the applicable test methods and procedures in 40 CFR 63.5160(d). [40 CFR 63.5170(i)(1)]
B. Determine the emission capture efficiency, CE, in accordance with 40 CFR 63.5160(e). [40 CFR 63.5170(i)(2)]
C. Whenever a coil coating line is operated, continuously monitor the operating parameters established according to 40 CFR 63.5150(a)(3) and (4) to ensure capture and control efficiency.

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

c. The permittee shall not cause to be discharged into the atmosphere more than 10 percent of the VOCs applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device operated at the most recently demonstrated overall efficiency. [40 CFR 60.462(a)(3)]

d. The permittee shall limit organic HAP emissions to the level specified in 40 CFR 63.5120(a)(1), (2), or (3): [40 CFR 63.5120(a)]
   i. No more than 2 percent of the organic HAP applied for each month during each 12-month compliance period (98 percent reduction); or [40 CFR 63.5120(a)(1)]
   ii. No more than 0.046 kilogram (kg) of organic HAP per liter of solids applied during each 12-month compliance period; or [40 CFR 63.5120(a)(2)]
   iii. If the permittee uses the oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent. [40 CFR 63.5120(a)(3)]

e. After the application of 1,870,000 gallons of coating in any consecutive 12-month period, the permittee shall not exceed 15 tons per year of PM emissions from EP09. [To preclude 401 KAR 51:017]

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

f. The permittee shall not exceed 40 tons per year of VOC emissions, after application of 1,870,000 gallons of coating and/or 34,419 gallons of MEK in any consecutive 12-month period. [To preclude 401 KAR 51:017]

g. Refer to **Section D.4.** for group PM, VOC, and NO_x emission limitations. [To preclude 401 KAR 51.017]

h. Refer to **Section D.6.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

i. Refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (k)** and **5. Specific Recordkeeping Requirements (f).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:

i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (c),** the permittee shall use the following procedures for each affected facility that continuously uses a capture system and a control device that destroys VOC's (e.g., incinerator) to comply with the emission limit specified under 40 CFR 60.462(a)(3). [40 CFR 60.463(c)(2)]

A. Determine the overall reduction efficiency (R) for the capture system and control device. For the initial performance test, the overall reduction efficiency (R) shall be determined as prescribed in 40 CFR 60.463(c)(2)(i) (A), (B), and (C). In subsequent months, the permittee may use the most recently determined overall reduction efficiency (R) for the performance test, providing control device and capture system operating conditions have not changed. The procedure in 40 CFR 60.463(c)(2)(i) (A), (B), and (C), shall be repeated when directed by the Administrator or when the permittee elects to operate the control device or capture system at conditions different from the initial performance test. [40 CFR 60.463(c)(2)(i)]

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

B. The permittee shall determine the overall reduction efficiency (R) using Equation 7 in 40 CFR 60.463. If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. [40 CFR 60.463(c)(2)(i)(C)]

4) For **2. Emission Limitations (d),** the permittee shall demonstrate compliance with one of these standards by following the applicable procedures in 40 CFR 63.5170. [40 CFR 63.5120(b)]

5) For the purpose of demonstrating continuous compliance with 40 CFR 63, Subpart SSSS, a compliance period consists of 12 months. Each month after the end of the initial compliance period described 40 CFR 63.5130(d) is the end of a compliance period consisting of that month and the preceding 11 months. [40 CFR 63.5130(e)]

6) For **2. Emission Limitations (d),** the permittee shall be in compliance with the applicable emission standards in 40 CFR 63.5120 at all times. If the permittee is complying with the emission standards of 40 CFR 63, Subpart SSSS without the use of a capture system and control device, the permittee must be in compliance with the standards at all times. [40 CFR 63.5140(a)]

7) For **2. Emission Limitations (d),** the permittee shall include all coating materials (as defined in 40 CFR 63.5110) used in the affected source when determining compliance with the applicable emission limit in 40 CFR 63.5120. To make this determination, the permittee must use at least one of the four compliance options listed in Table 1 of 40 CFR 63.5170. The permittee may use different compliance options at different times on the same line. However, the permittee may not use different compliance options at the same time on the same coil coating line. If the permittee switches between compliance options for any coil coating line, the permittee must document this switch as required by 40 CFR 63.5190(a), and the permittee must report it in the next semiannual compliance report required in 40 CFR 63.5180. [40 CFR 63.5170]

8) For **2. Emission Limitations (d)(ii),** if the permittee chooses to demonstrate compliance by the use of "as purchased" compliant coatings, then the permittee must demonstrate that each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased. Refer to 40 CFR 63.5170(a). [40 CFR 63.5170, Table 1(1)(a)]

A. *As-purchased compliant coatings.* If the permittee elects to use coatings that individually meet the organic HAP emission limit in 40 CFR 63.5120(a)(2) as-purchased, to which the permittee will not add HAP during distribution or application, the permittee must demonstrate that each coating material applied during the 12-month compliance period contains no more than 0.046 kg HAP per liter of solids on an as-purchased basis. [40 CFR 63.5170(a)]

i. Determine the organic HAP content for each coating material in accordance with 40 CFR 63.5160(b) and the volume solids content in accordance with 40 CFR 63.5160(c). [40 CFR 63.5170(a)(1)]

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ii. Combine these results using Equation 1 of 40 CFR 63.5170 and compare the result to the organic HAP emission limit in 40 CFR 63.5120(a)(2) to demonstrate that each coating material contains no more organic HAP than the limit. [40 CFR 63.5170(a)(2)]

$$H_{siap} = \frac{C_{hi} D_i}{V_{si}}$$

Where:

H_{siap} = as-purchased, organic HAP to solids ratio of coating material, *i*, kg organic HAP/liter solids applied.

C_{hi} = organic HAP content of coating material, *i*, expressed as a weight-fraction, kg/kg.

D_i = density of coating material, *i*, kg/l.

V_{si} = volume fraction of solids in coating, *i*, l/l.

9) For **2. Emission Limitations (d)(ii),** if the permittee chooses to demonstrate compliance by the use of "as applied" compliant coatings, then the permittee must demonstrate that: [40 CFR 63.5170, Table 1(2)]

A. Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Refer to 40 CFR 63.5170(b)(1); **or** [40 CFR 63.5170, Table 1(2)(a)]

i. *As-applied compliant coatings.* If the permittee chooses to use "as-applied" compliant coatings, the permittee must demonstrate that the average of each coating material applied during the 12-month compliance period contains no more than 0.046 kg of organic HAP per liter of solids applied in accordance with 40 CFR 63.5170(b)(1). [40 CFR 63.5170(b)]

ii. To demonstrate that the average organic HAP content on the basis of solids applied for each coating material applied, $H_{si\,yr}$, is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 2 of 40 CFR 63.5170: [40 CFR 63.5170(b)(1)]

$$H_{si\,yr} = \frac{\sum_{y=1}^{12}\left[V_i D_i C_{ahi} + \sum_{i=1}^{q} V_j D_j C_{hij}\right]}{\sum_{y=1}^{12} V_i V_{si}}$$

Where:

$H_{si\,yr}$ = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of material, *i*, kg organic HAP/liter solids applied.

V_i = volume of coating material, *i*, l.

D_i = density of coating material, *i*, kg/l.

C_{ahi} = monthly average, as-applied, organic HAP content of solids-containing coating material, *i*, expressed as a weight fraction, kilogram (kg)/kg.

V_j = volume of solvent, *j*, l.

D_j = density of solvent, *j*, kg/l.

C_{hij} = organic HAP content of solvent, *j*, added to coating material, *i*, expressed as a weight fraction, kg/kg.

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V_{si} = volume fraction of solids in coating, *i*, l/l.
y = identifier for months.
q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

B. The average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Refer to 40 CFR 63.5170(b)(2). [40 CFR 63.5170, Table 1(2)(b)]

i. *As-applied compliant coatings.* If the permittee chooses to use "as-applied" compliant coatings, the permittee must demonstrate that the average of all coating materials applied during the 12-month compliance period contain no more than 0.046 kg of organic HAP per liter of solids applied in accordance with 40 CFR 63.5170(b)(2). [40 CFR 63.5170(b)]

ii. To demonstrate that the average organic HAP content on the basis of solids applied, $H_{S\,yr}$, of all coating materials applied is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 3 of 40 CFR 63.5170: [40 CFR 63.5170(b)(2)]

$$H_{S\,yr} = \frac{\sum_{y=1}^{12}\left[\sum_{i=1}^{p} V_i D_i C_{ahi} + \sum_{j=1}^{q} V_j D_j C_{hij}\right]}{\sum_{y=1}^{12}\left[\sum_{i=1}^{p} V_i V_{si}\right]}$$

Where:

$H_{S\,yr}$ = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of all materials applied, kg organic HAP/liter solids applied.
V_i = volume of coating material, *i*, l.
D_i = density of coating material, *i*, kg/l.
C_{ahi} = monthly average, as-applied, organic HAP content of solids-containing coating material, *i*, expressed as a weight fraction, kilogram (kg)/kg.
V_j = volume of solvent, *j*, l.
D_j = density of solvent, *j*, kg/l.
C_{hij} = organic HAP content of solvent, *j*, added to coating material, *i*, expressed as a weight fraction, kg/kg.
V_{si} = volume fraction of solids in coating, *i*, l/l.
p = number of different coating materials applied in a month.
q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.
y = identifier for months.

10) For **2. Emission Limitations (d)(i)** or **(iii),** if the permittee chooses to demonstrate compliance by the use of a capture system or control device, then the permittee must demonstrate that the overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines; or overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Table 1 to 40 CFR 63.5170 and operating limits are achieved continuously for individual coil coating lines; or oxidizer outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests

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conducted according to Table 1 to 40 CFR 63.5170 and operating limits are achieved continuously for individual coil coating lines. Refer to 40 CFR 63.5170(c). [40 CFR 63.5170, Table 1(3)]

A. *Capture and control to reduce emissions to no more than the allowable limit.* If the permittee uses one or more capture systems and one or more control devices and demonstrate an average overall organic HAP control efficiency of at least 98 percent for each month to comply with 40 CFR 63.5120(a)(1); or operate a capture system and oxidizer so that the capture efficiency is 100 percent and the oxidizer outlet HAP concentration is no greater than 20 ppmv on a dry basis to comply with 40 CFR 63.5120(a)(3), the permittee must follow one of the procedures in 40 CFR 63.5170(c)(1) through (4). Alternatively, the permittee may demonstrate compliance for an individual coil coating line by operating its capture system and control device and continuous parameter monitoring system according to the procedures in 40 CFR 63.5170(i). [40 CFR 63.5170(c)]

i. If the affected source uses one compliance procedure to limit organic HAP emissions to the level specified in 40 CFR 63.5120(a)(1) or (3) and has only always-controlled work stations, then the permittee must demonstrate compliance with the provisions of 40 CFR 63.5170(f) when emissions are controlled by one or more oxidizers. [40 CFR 63.5170(c)(2)]

ii. The method of limiting organic HAP emissions to the level specified in 40 CFR 63.5120(a)(3) is the installation and operation of a PTE around each work station and associated curing oven in the coating line and the ventilation of all organic HAP emissions from each PTE to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis. An enclosure that meets the requirements in 40 CFR 63.5160(e)(1) is considered a PTE. Compliance of the oxidizer with the outlet organic HAP concentration limit is demonstrated either through continuous emission monitoring according to 40 CFR 63.5170(c)(4)(ii) or through performance tests according to the requirements of 40 CFR 63.5160(d) and Table 1 to 40 CFR 63.5160. If this method is selected, the permittee must meet the requirements of 40 CFR 63.5170(c)(4)(i) to demonstrate continuing achievement of 100 percent capture of organic HAP emissions and either 40 CFR 63.5170(c)(4)(ii) or (c)(4)(iii), respectively, to demonstrate continuous compliance with the oxidizer outlet organic HAP concentration limit through continuous emission monitoring or continuous operating parameter monitoring: [40 CFR 63.5170(c)(4)]

1. Whenever a work station is operated, continuously monitor the capture system operating parameter established in accordance with 40 CFR 63.5150(a)(4). [40 CFR 63.5170(c)(4)(i)]
2. To demonstrate that the value of the exhaust gas organic HAP concentration at the outlet of the oxidizer is no greater than 20 ppmv, on a dry basis, install, calibrate, operate, and maintain CEMS according to the requirements of 40 CFR 63.5150(a)(2). [40 CFR 63.5170(c)(4)(ii)]
3. To demonstrate continuous compliance with operating limits established in accordance with 40 CFR 63.5150(a)(3), whenever a work station is

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operated, continuously monitor the applicable oxidizer operating parameter. [40 CFR 63.5170(c)(4)(iii)]

11) For **2. Emission Limitations (d),** if the permittee chooses to demonstrate compliance by the use of a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate, then the permittee must demonstrate that the average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Refer to 40 CFR 63.5170(d). [40 CFR 63.5170, Table 1(4)]
   A. *Capture and control to achieve the emission rate limit.* If the permittee uses one or more capture systems and one or more control devices and limit the organic HAP emission rate to no more than 0.046 kg organic HAP emitted per liter of solids applied on a 12-month average as-applied basis, then the permittee must follow one of the procedures in 40 CFR 63.5170(d)(1) through (3). [40 CFR 63.5170(d)]
      i. If the permittee uses one or more oxidizers, the permittee must demonstrate compliance with the provisions in 40 CFR 63.5170(f). [40 CFR 63.5170(d)(2)]

12) For **2. Emission Limitations (d):** *Use of oxidation to demonstrate compliance.* If the permittee uses one or more oxidizers to control emissions from always controlled work stations, the permittee must follow the procedures in either 40 CFR 63.5170(f)(1) or (2): [40 CFR 63.5170(f)]
   A. *Continuous monitoring of capture system and control device operating parameters.* Demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuous monitoring of capture system and control device operating parameters as specified in 40 CFR 63.5170(f)(1)(i) through (xi): [40 CFR 63.5170(f)(1)]
      i. For each oxidizer used to comply with 40 CFR 63.5120(a), determine the oxidizer destruction or removal efficiency, DRE, using the procedure in 40 CFR 63.5160(d). [40 CFR 63.5170(f)(1)(i)]
      ii. Whenever a work station is operated, continuously monitor the operating parameter established in accordance with 40 CFR 63.5150(a)(3). [40 CFR 63.5170(f)(1)(ii)]
      iii. Determine the capture system capture efficiency, CE, for each work station in accordance with 40 CFR 63.5160(e). [40 CFR 63.5170(f)(1)(iii)]
      iv. Whenever a work station is operated, continuously monitor the operating parameter established in accordance with 40 CFR 63.5150(a)(4). [40 CFR 63.5170(f)(1)(iv)]
      v. Calculate the overall organic HAP control efficiency, R, achieved using Equation 7 of 40 CFR 63.5170. [40 CFR 63.5170(f)(1)(v)]
      vi. If demonstrating compliance with the organic HAP emission rate based on solids applied, measure the mass of each coating material applied on each work station during the month. [40 CFR 63.5170(f)(1)(vi)]
      vii. If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the organic HAP content of each coating material

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applied during the month following the procedure in 40 CFR 63.5160(b). [40 CFR 63.5170(f)(1)(vii)]

viii. If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the solids content of each coating material applied during the month following the procedure in 40 CFR 63.5160(c). [40 CFR 63.5170(f)(1)(viii)]

ix. Calculate the organic HAP emitted during the month, H_e, for each month: [40 CFR 63.5170(f)(1)(ix)]

1. For each work station and its associated oxidizer, use Equation 8 of 40 CFR 63.5170. [40 CFR 63.5170(f)(1)(ix)(A)]
2. For periods when the oxidizer has not operated within its established operating limit, the control device efficiency is determined to be zero. [40 CFR 63.5170(f)(1)(ix)(B)]

x. *Organic HAP emission rate based on solids applied for the 12-month compliance period,*L_{ANNUAL}. If demonstrating compliance with the organic HAP emission rate based on solids applied for the 12-month compliance period, calculate the organic HAP emission rate based on solids applied, L_{ANNUAL}, for the 12-month compliance period using Equation 6 of 40 CFR 63.5170. [40 CFR 63.5170(f)(1)(x)]

xi. *Compare actual performance to performance required by compliance option.* The affected source is in compliance with 40 CFR 63.5120(a) if each oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in 40 CFR 63.5150(a)(3) for each 3-hour period, and each capture system operating parameter average value is greater than or less than (as appropriate) the operating parameter value established in 40 CFR 63.5150(a)(4) for each 3-hour period; and the requirement in either 40 CFR 63.5170(f)(1)(xi)(A) or (B) is met. [40 CFR 63.5170(f)(1)(xi)]

1. The overall organic HAP control efficiency, R, is 98 percent or greater for each; or [40 CFR 63.5170(f)(1)(xi)(A)]
2. The organic HAP emission rate based on solids applied, L_{ANNUAL}, is 0.046 kg organic HAP per liter solids applied or less for the 12-month compliance period. [40 CFR 63.5170(f)(1)(xi)(B)]

B. *Continuous emission monitoring of control device performance.* Use continuous emission monitors, conduct performance tests of capture efficiency, and continuously monitor a site specific operating parameter to ensure that capture efficiency is maintained. Compliance must be demonstrated in accordance with 40 CFR 63.5170(e)(2). [40 CFR 63.5170(f)(2)]

13) For **2. Emission Limitations (d):** *Capture and control system compliance demonstration procedures using a CPMS for a coil coating line.* If the permittee uses an add-on control device, to demonstrate compliance for each capture system and each control device through performance tests and continuous monitoring of capture system and control device operating parameters, the permittee must meet the requirements in 40 CFR 63.5170(i)(1) through (3). [40 CFR 63.5170(i)]

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A. Conduct performance tests according to the schedule in Table 1 to 40 CFR 63.5160 to determine the control device destruction or removal efficiency, DRE, according to 40 CFR 63.5160(d) and Table 1 to 40 CFR 63.5160. [40 CFR 63.5170(i)(1)]
B. Determine the emission capture efficiency, CE, in accordance with 40 CFR 63.5160(e). [40 CFR 63.5170(i)(2)]
C. Whenever a coil coating line is operated, continuously monitor the operating parameters established according to 40 CFR 63.5150(a)(3) and (4) to ensure capture and control efficiency. [40 CFR 63.5170(i)(3)]

14) For **2. Emission Limitations (e),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate as calculated below:

$$E_{PM_{PSD}} = \sum_{i=1}^{12} \frac{E_{PM_T} \times h_{i_{PSD}}}{2000}$$

Where:

i = month;

$E_{PM_{PSD}}$ = the actual 12-month rolling total PM emissions included in the PSD emissions limit (tons/yr);

E_{PM_T} = the average PM emission rate as determined during the compliance test (lb/hr); and

$h_{i_{PSD}}$ = the total hours of operation during month *i* after 1,870,000 gallons of coating have been applied in any 12 consecutive month period (hrs/month).

NOTE: This limit applies only after the total coating (as applied) usage during any consecutive 12-month period exceeds 1,870,000 gallons in a consecutive 12-month period.

15) For **2. Emission Limitations (f),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate as calculated below:

$$E_{VOC_{PSD}} = \left[\sum_{i=1}^{12} \frac{E_{VOC_T} \times h_{i_{PSD}}}{2000}\right] + \left[\left\{\left(\sum_{i=1}^{12} P_{MEK_i}\right) - 34419\right\} \times \frac{\rho_{MEK}}{2000}\right]$$

Where:

i = the month;

$E_{VOC_{PSD}}$ = the actual 12-month rolling total VOC emissions (tons/yr);

E_{VOC_T} = the average VOC emission rate as determined during the compliance test (lb/hr);

$h_{i_{PSD}}$ = the total hours of operation during month *i* after 1,870,000 gallons of coating have been applied in any 12 consecutive month period (hrs/month),

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P_{MEK_i} = the MEK cleanup solvent usage during month *i* (gal/month) and

ρ_{MEK} = the density of MEK cleanup solvent (lb/gal)

NOTE: This limit applies above applies only after the total coating (as applied) usage exceeds 1,870,000 gallons and/or the MEK usage exceeds 34,419 gallons in a consecutive 12-month period.

3. Testing Requirements:

a. The permittee shall conduct an initial performance test as required under 40 CFR 60.8(a) and thereafter a performance test for each calendar month for each affected facility according to the procedures in 40 CFR 60.463. [40 CFR 60.463(b)]

i. If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. [40 CFR 60.463(c)(2)(i)(C)]

ii. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) shall be computed as follows. [40 CFR 60.463(c)(2)(i)(C)]

1) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in 40 CFR 60.463(c)(1)(i)(A), (B), and (C). [40 CFR 60.463(c)(2)(ii)]

2) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month by the following equation: [40 CFR 60.463(c)(2)(iii)]

$$N = G(1 - R)$$

3) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/*l* of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test. [40 CFR 60.463(c)(iv)]

b. The reference methods in 40 CFR 60, Appendix A, except as provided under 40 CFR 60.8(b), shall be used to determine compliance with 40 CFR 60.462 as follows: [40 CFR 60.466(a)]

i. Method 24, or data provided by the formulator of the coating, shall be used for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance of affected facilities, the results of the Method 24 analysis shall be adjusted as described in Section 12.6 of Method 24; [40 CFR 60.466(a)(1)]

ii. Method 25, both for measuring the VOC concentration in each gas stream entering and leaving the control device on each stack equipped with an emission control device and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere; [40 CFR 60.466(a)(2)]

iii. Method 1 for sample and velocity traverses; [40 CFR 60.466(a)(3)]

iv. Method 2 for velocity and volumetric flow rate; [40 CFR 60.466(a)(4)]

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v. Method 3 for gas analysis; and [40 CFR 60.466(a)(5)]
vi. Method 4 for stack gas moisture. [40 CFR 60.466(a)(6)]

c. For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil. [40 CFR 60.466(b)]

d. For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator. [40 CFR 60.466(c)]

e. If the permittee controls HAP on the coil coating line by limiting HAP or volatile matter content of coatings, the permittee must determine the HAP or volatile matter and solids content of coating materials according to the procedures in 40 CFR 63.5160(b) and (c). [40 CFR 63.5160, Table 1(1)]

f. If the permittee controls HAP on the coil coating line by using a capture system and add-on control device, the permittee must, except as specified in 40 CFR 63.5160(a), conduct an initial performance test within 180 days of the applicable compliance date in 40 CFR 63.5130, and conduct periodic performance tests within 5 years following the previous performance test, as follows: If the permittee is not required to complete periodic performance tests as a requirement of renewing the Title V permit, the permittee must conduct the first periodic performance test before March 25, 2023, unless the permittee already has conducted a performance test on or after March 25, 2018; thereafter, the permittee must conduct a performance test no later than 5 years following the previous performance test. Operating limits must be confirmed or reestablished during each performance test. If the permittee is required to complete periodic performance tests as a requirement of renewing the Title V permit, the permittee must conduct the periodic testing in accordance with the terms and schedule required by the permit conditions. For each performance test: [40 CFR 63.5160, Table 1(2)]
i. For each capture and control system, determine the destruction or removal efficiency of each control device according to 40 CFR 63.5160(d) and the capture efficiency of each capture system according to 40 CFR 63.5160(e), and
ii. Confirm or re-establish the operating limits.

g. If the permittee uses a control device to comply with the requirements of 40 CFR 63.5120, the permittee is not required to conduct a performance test to demonstrate compliance if one or more of the criteria in 40 CFR 63.5160(a)(1) through (3) are met: [40 CFR 63.5160(a)]
i. The control device is equipped with continuous emission monitors for determining total organic volatile matter concentration, and capture efficiency has been determined in accordance with the requirements of 40 CFR 63, Subpart SSSS; and the continuous emission monitors are used to demonstrate continuous compliance in accordance with 40 CFR 63.5150(a)(2); or [40 CFR 63.5160(a)(1)]

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ii. The permittee has received a waiver of performance testing under 40 CFR 63.7(h). [40 CFR 63.5160(a)(2)]

h. *Organic HAP content.* The permittee must determine the organic HAP weight fraction of each coating material applied by following one of the procedures in 40 CFR 63.5160(b)(1) through (4): [40 CFR 63.5160(b)]

i. *Method 311*. The permittee may test the material in accordance with Method 311 of appendix A of 40 CFR 63. The Method 311 determination may be performed by the manufacturer of the material and the results provided to the permittee. The organic HAP content must be calculated according to the criteria and procedures in 40 CFR 63.5160(b)(1)(i) through (iii). [40 CFR 63.5160(b)(1)]

1) Count only those organic HAP in Table 3 to 40 CFR 63, Subpart SSSS that are measured to be present at greater than or equal to 0.1 weight percent and greater than or equal to 1.0 weight percent for other organic HAP compounds. [40 CFR 63.5160(b)(1)(i)]

2) Express the weight fraction of each organic HAP counted according to 40 CFR 63.5160(b)(1)(i) as a value truncated to four places after the decimal point (for example, 0.3791). [40 CFR 63.5160(b)(1)(ii)]

3) Calculate the total weight fraction of organic HAP in the tested material by summing the counted individual organic HAP weight fractions and truncating the result to three places after the decimal point (for example, 0.763). [40 CFR 63.5160(b)(1)(iii)]

ii. *Method 24 in appendix A-7 of part 60*. For coatings, the permittee may determine the total volatile matter content as weight fraction of nonaqueous volatile matter and use it as a substitute for organic HAP, using Method 24 in appendix A-7 of part 60. As an alternative to using Method 24, the permittee may use ASTM D2369-10 (2015), "Test Method for Volatile Content of Coatings" (incorporated by reference, see 40 CFR 63.14). The determination of total volatile matter content using a method specified in 40 CFR 63.5160(b)(2) or as provided in 40 CFR 63.5160(b)(3) may be performed by the manufacturer of the coating and the results provided to the permittee. [40 CFR 63.5160(b)(2)]

iii. *Alternative method.* The permittee may use an alternative test method for determining the organic HAP weight fraction once the Administrator has approved it. The permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval. [40 CFR 63.5160(b)(3)]

iv. *Formulation data.* The permittee may use formulation data provided that the information represents each organic HAP in Table 3 to 40 CFR 63, Subpart SSSS that is present at a level equal to or greater than 0.1 percent and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used, weighted by the mass fraction of each raw material used in the material. Formulation data may be provided to the permittee by the manufacturer of the coating material. In the event of any inconsistency between test data obtained with the test methods specified in 40 CFR 63.5160(b)(1) through (3) and formulation data, the test data will govern. [40 CFR 63.5160(b)(4)]

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

i. *Solids content and density.* The permittee must determine the solids content and the density of each coating material applied. The permittee may determine the volume solids content using ASTM D2697-03(2014) Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings (incorporated by reference, see 40 CFR 63.14) or ASTM D6093-97 (2016) Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer (incorporated by reference, see 40 CFR 63.14), or an EPA approved alternative method. The permittee must determine the density of each coating using ASTM D1475-13 "Standard Test Method for Density of Liquid Coatings, Inks, and Related Products" (incorporated by reference, see 40 CFR 63.14) or ASTM D2111-10 (2015) "Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures" (incorporated by reference, see 40 CFR 63.14). The solids determination using ASTM D2697-03(2014) or ASTM D6093-97 (2016) and the density determination using ASTM D1475-13 or ASTM 2111-10 (2015) may be performed by the manufacturer of the material and the results provided to the permittee. Alternatively, the permittee may rely on formulation data provided by material providers to determine the volume solids. In the event of any inconsistency between test data obtained with the ASTM test methods specified in this section and formulation data, the test data will govern. [40 CFR 63.5160(c)]

j. If the permittee is using an add-on control device, such as an oxidizer, to comply with the standard in 40 CFR 63.5120, the permittee shall conduct performance tests according to Table 1 to 40 CFR 63.5160 to establish the destruction or removal efficiency of the control device or the outlet HAP concentration achieved by the oxidizer, according to the methods and procedures in 40 CFR 63.5160(d)(1) and (2). During performance tests, the permittee must establish the operating limits required by 40 CFR 63.5121 according to 40 CFR 63.5160(d)(3). [40 CFR 63.5160(d)]
   i. Performance tests conducted to determine the destruction or removal efficiency of the control device must be performed such that control device inlet and outlet testing is conducted simultaneously. To determine the outlet organic HAP concentration achieved by the oxidizer, only oxidizer outlet testing must be conducted. The data must be reduced in accordance with the test methods and procedures in 40 CFR 63.5160(d)(1)(i) through (ix). [40 CFR 63.5160(d)(1)]
      1) Method 1 or 1A of 40 CFR part 60, appendix A, is used for sample and velocity traverses to determine sampling locations. [40 CFR 63.5160(d)(1)(i)]
      2) Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, is used to determine gas volumetric flow rate. [40 CFR 63.5160(d)(1)(ii)]
      3) Method 3, 3A, or 3B of 40 CFR part 60, appendix A, used for gas analysis to determine dry molecular weight. The permittee may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses" (incorporated by reference, see 40 CFR 63.14). [40 CFR 63.5160(d)(1)(iii)]
      4) Method 4 of 40 CFR part 60, appendix A, is used to determine stack gas moisture. [40 CFR 63.5160(d)(1)(iv)]

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

5) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run, as specified in 40 CFR 63.5160(d)(1)(vii). [40 CFR 63.5160(d)(1)(v)]
6) Method 25 or 25A in appendix A-7 of 40 CFR part 60 is used to determine total gaseous non-methane organic matter concentration. The permittee may use Method 18 in appendix A-6 of 40 CFR part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon. Use the same test method for both the inlet and outlet measurements, which must be conducted simultaneously. The permittee must submit notification of the intended test method to the Administrator for approval along with notification of the performance test required under 40 CFR 63.7(b). The permittee must use Method 25A if any of the conditions described in 40 CFR 63.5160(d)(1)(vi)(A) through (D) apply to the control device. [40 CFR 63.5160(d)(1)(vi)]
   (A) The control device is an oxidizer, but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the standards in 40 CFR 63.5120; or [40 CFR 63.5160(d)(1)(vi)(B)]
   (B) The control device is an oxidizer, but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or [40 CFR 63.5160(d)(1)(vi)(C)]
   (C) The control device is an oxidizer, but because of the high efficiency of the control device, the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration. [40 CFR 63.5160(d)(1)(vi)(D)]
7) Each performance test must consist of three separate runs, except as provided by 40 CFR 63.7(e)(3); each run must be conducted for at least 1 hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining volatile organic matter concentrations and mass flow rates, the average of the results of all runs will apply. If the permittee is demonstrating compliance with the outlet organic HAP concentration limit in 40 CFR 63.5120(a)(3), only the average outlet volatile organic matter concentration must be determined. [40 CFR 63.5160(d)(1)(vii)]
8) If the permittee is determining the control device destruction or removal efficiency, for each run, determine the volatile organic matter mass flow rates using Equation 1 of 40 CFR 63.5160: [40 CFR 63.5160(d)(1)(viii)]

$$M_f = Q_{sd} C_C (12)(0.0416)(10^{-6})$$

Where:

M_f = total organic volatile matter mass flow rate, kg/per hour (h).

C_c = concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis.

Q_{sd} = volumetric flow rate of gases entering or exiting the control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters (dscm)/h.

0.0416 = conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

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

9) For each run, determine the control device destruction or removal efficiency, DRE, using Equation 2 of 40 CFR 63.5160: [40 CFR 63.5160(d)(1)(ix)]

$$DRE = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100$$

Where:

DRE = organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = organic volatile matter mass flow rate at the inlet to the control device, kg/h.

M_{fo} = organic volatile matter mass flow rate at the outlet of the control device, kg/h.

10) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of 40 CFR 63.5160. [40 CFR 63.5160(d)(1)(x)]

ii. The permittee must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. The permittee must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of start-up, shutdown, or nonoperation do not constitute representative conditions for the purpose of a performance test. The permittee may not conduct performance tests during periods of malfunction. The permittee must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, the permittee must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. [40 CFR 63.5160(d)(2)]

iii. *Operating limits.* If the permittee is using a capture system and add-on control device to comply with the requirements in 40 CFR 63.5120, the permittee must establish the applicable operating limits required by 40 CFR 63.5121. These operating limits apply to each capture system and to each add-on emission control device that is not monitored by CEMS, and the permittee must establish the operating limits during performance tests required by 40 CFR 63.5160(d) according to the requirements in 40 CFR 63.5160(d)(3)(i) through (iii). [40 CFR 63.5160(d)(3)]

1) *Thermal oxidizer.* If the add-on control device is a thermal oxidizer, establish the operating limits according to 40 CFR 63.5160(d)(3)(i)(A) and (B). [40 CFR 63.5160(d)(3)(i)]

(A) During performance tests, the permittee must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. [40 CFR 63.5160(d)(3)(i)(A)]

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for the thermal oxidizer. [40 CFR 63.5160(d)(3)(i)(B)]

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

2) If the permittee wishes to monitor an alternative parameter and comply with a different operating limit, the permittee must apply to the Administrator for approval of alternative monitoring under 40 CFR 63.8(f). [40 CFR 63.5160(d)(3)(iii)]

k. If the permittee is required to determine capture efficiency to meet the requirements of 40 CFR 63.5170(e)(2), (f)(1) and (2), (g)(2) through (4), or (i)(2) and (3), the permittee must determine capture efficiency using the procedures in 40 CFR 63.5160(e)(1), (2), or (3), as applicable. [40 CFR 63.5160(e)]
   i. For an enclosure that meets the criteria for a PTE, the permittee may assume it achieves 100 percent capture efficiency. The permittee must confirm that the capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of 40 CFR part 51, appendix M (or an EPA approved alternative method), and that all exhaust gases from the enclosure are delivered to a control device. [40 CFR 63.5160(e)(1)]
   ii. The permittee may determine capture efficiency, CE, according to the protocols for testing with temporary total enclosures that are specified in Method 204A through F of 40 CFR part 51, appendix M. [40 CFR 63.5160(e)(2)]
   iii. As an alternative to the procedures specified in 40 CFR 63.5160(e)(1) and (2), if the permittee is required to conduct a capture efficiency test, the permittee may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A to 40 CFR 63, Subpart KK. [40 CFR 63.5160(e)(3)]

l. No later than December 31, 2020, and every 5 years thereafter, the permittee shall perform a stack test for PM, NO_x, and VOC emissions using the following methods:
   i. U.S. EPA Method 5 for PM;
   ii. U.S. EPA Method 7E for NO_x; and
   iii. U.S. EPA Method 25A for VOC;
   iv. An alternate method as approved by the Division;

m. 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. <u>Specific Monitoring Requirements:</u>

a. The permittee shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with 40 CFR 60.462(a)(3). This device shall have an accuracy of ±2.5 °C. or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. [40 CFR 60.464(c)]

b. To demonstrate continuing compliance with the standards, the permittee must monitor and inspect each capture system and each control device required to comply with 40 CFR 63.5120 following the date on which the initial performance test of the capture system and control device is completed. The permittee must install and operate the monitoring

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

equipment as specified in 40 CFR 63.5150(a)(1) through (4). The permittee must also maintain the monitoring equipment at all times in accordance with 40 CFR 63.5140(b) and keep the necessary parts readily available for routine repairs of the monitoring equipment. [40 CFR 63.5150(a)]

c. *Continuous emission monitoring system (CEMS).* If the permittee is demonstrating continuous compliance with the standards in 40 CFR 63.5120(a)(1) or (2) through continuous emission monitoring of a control device, the permittee must install, calibrate, operate, and maintain continuous emission monitors to measure the total organic volatile matter concentration at both the control device inlet and outlet, and the permittee must continuously monitor flow rate. If the permittee is demonstrating continuous compliance with the outlet organic HAP concentration limit in 40 CFR 63.5120(a)(3), the permittee must install, calibrate, operate, and maintain a continuous emission monitor to measure the total organic volatile matter concentration at the control device outlet. [40 CFR 63.5150(a)(2)]

   i. All CEMS must comply with performance specification 8 or 9 of 40 CFR part 60, appendix B, as appropriate for the detection principle chosen. The requirements of 40 CFR part 60, procedure 1, appendix F must also be followed. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, the permittee must use compounds representative of the gaseous emission stream being controlled. [40 CFR 63.5150(a)(2)(i)]

   ii. As specified in 40 CFR 63.8(c)(4)(ii), each CEMS and each flow rate monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Information which must be determined for recordkeeping purposes, as required by 40 CFR 63.5190(a)(1)(i) includes: [40 CFR 63.5150(a)(2)(ii)]

      1) The hourly average of all recorded readings; [40 CFR 63.5150(a)(2)(ii)(A)]
      2) The daily average of all recorded readings for each operating day; and [40 CFR 63.5150(a)(2)(ii)(B)]
      3) The monthly average for each month during the semiannual reporting period. [40 CFR 63.5150(a)(2)(ii)(C)]

d. *Temperature monitoring of oxidizers.* If you are complying with the requirements of the standards in 40 CFR 63.5120 through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter, the permittee must comply with 40 CFR 63.5150(a)(3)(i) through (iii). [40 CFR 63.5150(a)(3)]

   i. Install, calibrate, maintain, and operate temperature monitoring equipment according to manufacturer's specifications. The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months; or the chart recorder, data logger, or temperature indicator must be replaced. The permittee must replace the equipment either if the permittee chooses not to perform the calibration, or if the equipment cannot be calibrated properly. Each temperature monitoring device must be equipped with a continuous recorder. The device must have an accuracy of ±1 percent of the temperature being monitored in degrees Celsius, or ±1 °Celsius, whichever is greater. [40 CFR 63.5150(a)(3)(i)]

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

ii. For an oxidizer other than a catalytic oxidizer, to demonstrate continuous compliance with the operating limit established according to 40 CFR 63.5160(d)(3)(i), the permittee must install the thermocouple or temperature sensor in the combustion chamber at a location in the combustion zone. [40 CFR 63.5150(a)(3)(ii)]

e. *Capture system monitoring.* If the permittee is complying with the requirements of the standards in 40 CFR 63.5120 through the use of a capture system and control device, the permittee must develop a capture system monitoring plan containing the information specified in 40 CFR 63.5150(a)(4)(i) and (ii). The permittee must monitor the capture system in accordance with 40 CFR 63.5150(a)(4)(iii). The permittee must make the monitoring plan available for inspection by the Division upon request. [40 CFR 63.5150(a)(4)]

i. The monitoring plan must identify the operating parameter to be monitored to ensure that the capture efficiency measured during compliance tests is maintained, explain why this parameter is appropriate for demonstrating ongoing compliance, and identify the specific monitoring procedures. [40 CFR 63.5150(a)(4)(i)]

ii. The plan also must specify operating limits at the capture system operating parameter value, or range of values, that demonstrates compliance with the standards in 40 CFR 63.5120. The operating limits must represent the conditions indicative of proper operation and maintenance of the capture system. [40 CFR 63.5150(a)(4)(ii)]

iii. The permittee must conduct monitoring in accordance with the plan. [40 CFR 63.5150(a)(4)(iii)]

f. If an operating parameter monitored in accordance with 40 CFR 63.5150(a)(3) and (4) is out of the allowed range specified in Table 1 to 40 CFR 63, Subpart SSSS it will be considered a deviation from the operating limit. [40 CFR 63.5150(b)]

g. The permittee shall maintain and operate each CMS as specified in 40 CFR 63.8, or in 40 CFR 63, Subpart SSSS, and in a manner consistent with good air pollution control practices. [40 CFR 63.8(c)(1)]

i. The permittee shall maintain and operate each CMS as specified in 40 CFR 63.6(e)(1). [40 CFR 63.8(c)(1)(i)]

ii. The permittee shall keep the necessary parts for routine repairs of the affected CMS equipment readily available. [40 CFR 63.8(c)(1)(ii)]

iii. The permittee shall develop a written startup, shutdown, and malfunction plan for CMS as specified in 40 CFR 63.6(e)(3). [40 CFR 63.8(c)(1)(iii)]

h. All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. [40 CFR 63.8(c)(2)(i)]

i. The permittee shall ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment. [40 CFR 63.8(c)(2)(ii)]

j. All CMS shall be installed, operational, and the data verified as specified in 40 CFR 63, Subpart SSSS either prior to or in conjunction with conducting performance tests under

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

40 CFR 63.7. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system. [40 CFR 63.8(c)(3)]

k. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

l. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly process weight rate in tons/hr;
   ii. The monthly and 12-month rolling total material processed in tons;
   iii. The monthly and 12-month rolling coating usage in Mgal;
   iv. The monthly and 12-month rolling MEK usage in Mgal;
   v. The monthly hours of operation;
   vi. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vii. The monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   viii. The monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons;
   ix. The monthly and 12-month rolling natural gas usage in MMscf;
   x. The monthly and 12-month rolling propane usage in Mgal.

m. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in the thermal incinerator remains more than 28 °C (50 °F) below the temperature at which compliance with 40 CFR 60.462(a)(3) was demonstrated during the most recent measurement of incinerator efficiency required by 40 CFR 60.8 The records required by 40 CFR 60.7 shall identify each such occurrence and its duration. [40 CFR 60.464(c)]

b. The permittee shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the incinerator temperature drops as defined under 40 CFR 60.464(c). If no such periods occur, the permittee shall state this in the report. [40 CFR 60.465(d)]

c. The permittee shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. Where compliance is achieved through the use of thermal incineration, the permittee shall maintain, at the source, daily records of the incinerator combustion temperature. [40 CFR 60.465(e)]

d. The permittee shall maintain the records specified in 40 CFR 63.5190(a) in accordance with 40 CFR 63.10(b)(1): [40 CFR 63.5190(a)]
   i. Records of the coating lines on which the permittee used each compliance option and the time periods (beginning and ending dates and times) the permittee used each option. [40 CFR 63.5190(a)(1)]

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

ii. Records specified in 40 CFR 63.10(b)(2) of all measurements needed to demonstrate compliance with 40 CFR 63, Subpart SSSS, including: [40 CFR 63.5190(a)(2)]
   1) Continuous emission monitor data in accordance with 40 CFR 63.5150(a)(2); [40 CFR 63.5190(a)(2)(i)]
   2) Control device and capture system operating parameter data in accordance with 40 CFR 63.5150(a)(1), (3), and (4); [40 CFR 63.5190(a)(2)(ii)]
   3) Organic HAP content data for the purpose of demonstrating compliance in accordance with 40 CFR 63.5160(b); [40 CFR 63.5190(a)(2)(iii)]
   4) Volatile matter and solids content data for the purpose of demonstrating compliance in accordance with 40 CFR 63.5160(c); [40 CFR 63.5190(a)(2)(iv)]
   5) Overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with 40 CFR 63.5160(d), (e), and (f); and [40 CFR 63.5190(a)(2)(v)]
   6) Material usage, HAP usage, volatile matter usage, and solids usage and compliance demonstrations using these data in accordance with 40 CFR 63.5170(a), (b), and (d); [40 CFR 63.5190(a)(2)(vi)]

iii. Records specified in 40 CFR 63.10(b)(3); and [40 CFR 63.5190(a)(3)]

iv. Additional records specified in 40 CFR 63.10(c) for each continuous monitoring system operated by the permittee in accordance with 40 CFR 63.5150(a)(2). [40 CFR 63.5190(a)(4)]

v. For each deviation from an emission limitation reported under 40 CFR 63.5180(h) or (i), a record of the information specified in 40 CFR 63.5150(a)(5)(i) through (iv), as applicable. [40 CFR 63.5190(a)(5)]
   1) The date, time, and duration of the deviation, as reported under 40 CFR 63.5180(h) and (i). [40 CFR 63.5190(a)(5)(i)]
   2) A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation, as reported under 40 CFR 63.5180(h) and (i). [40 CFR 63.5190(a)(5)(ii)]
   3) An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit in 40 CFR 63.5120 or any applicable operating limit established according to 40 CFR 63.5121, and a description of the method used to calculate the estimate, as reported under 40 CFR 63.5180(h) and (i). [40 CFR 63.5190(a)(5)(iii)]
   4) A record of actions taken to minimize emissions in accordance with 40 CFR 63.5140(b) and any corrective actions taken to return the affected unit to its normal or usual manner of operation. [40 CFR 63.5190(a)(5)(iv)]

e. Any records required to be maintained by 40 CFR 63, Subpart SSSS that are in reports that were submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation. [40 CFR 63.5190(c)]

f. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings

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

taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

g. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly process weight rate in tons/hr;
   ii. The monthly and 12-month rolling total material processed in tons;
   iii. The monthly and 12-month rolling coating usage in Mgal;
   iv. The monthly and 12-month rolling MEK usage in Mgal;
   v. The monthly hours of operation;
   vi. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vii. The monthly and 12-month rolling emissions of PM, VOC, and NOx in tons;
   viii. The monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons;
   ix. The monthly and 12-month rolling natural gas usage in MMscf;
   x. The monthly and 12-month rolling propane usage in Mgal;
   xi. Monthly amounts of all materials containing HAP(s) used for the coating operation; The record shall include the product type, amount used and the weight percentages of all individual HAPs as listed in the SDS;
   xii. SDSs of all materials used.

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

6. Specific Reporting Requirements:

a. Where compliance with 40 CFR 60.462(a)(3) is achieved through the use of an emission control device that destroys VOC's, the permittee shall include the following data in the initial compliance report required by 40 CFR 60.8: [40 CFR 60.465(b)]
   i. The overall VOC destruction rate used to attain compliance with 40 CFR 60.462(a)(3); and [40 CFR 60.465(b)(1)]
   ii. The combustion temperature of the thermal incinerator used to attain compliance with 40 CFR 60.462(a)(3). [40 CFR 60.465(b)(2)]

b. The permittee shall report excess volume-weighted average of the local mass VOC emissions per volume of applied coating solids on a quarterly basis. If no such instances have occurred during a particular quarter, a semiannual report shall be submitted which states this. [40 CFR 60.465(c)]

c. The permittee shall also submit reports at the frequency specified in 40 CFR 60.7(c) when the incinerator temperature drops as defined under 40 CFR 60.464(c). If no such periods occur, the permittee shall state this in the report. [40 CFR 60.465(d)]

d. The permittee shall submit the reports specified in 40 CFR 63.5180(b) through (i) to the EPA Regional Office that serves Kentucky and to the delegated State agency. [40 CFR 63.5180(a)]

e. The permittee shall submit a Notification of Performance Test as specified in 40 CFR 63.7 and 63.9(e) if the permittee is complying with the emission standard using a control device. This notification and the site-specific test plan required under 40 CFR 63.7(c)(2)

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

must identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The permittee may consider the operating parameter identified in the site-specific test plan to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter. [40 CFR 63.5180(c)]

f. The permittee shall submit a Notification of Compliance Status as specified in 40 CFR 63.9(h). The permittee shall submit the Notification of Compliance Status no later than 30 calendar days following the end of the initial 12-month compliance period described in 40 CFR 63.5130. [40 CFR 63.5180(d)]

g. The permittee shall submit the performance test reports as specified in 40 CFR 63.10(d)(2) if the permittee is complying with the emission standard using a control device and has not obtained a waiver from the performance test requirement. [40 CFR 63.5180(e)]

h. The permittee shall submit semi-annual reports according to the requirements in **Section F.5.** The semi-annual report shall contain the following information: [40 CFR 63.5180(g)]
   i. Company name and address. [40 CFR 63.5180(g)(2)(i)]
   ii. Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. [40 CFR 63.5180(g)(2)(ii)]
   iii. Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation. [40 CFR 63.5180(g)(2)(iii)]
   iv. Identification of the compliance option or options specified in Table 1 to 40 CFR 63.5170 that were used on each coating operation during the reporting period. If the permittee switched between compliance options during the reporting period, the permittee must report the beginning dates the permittee used each option. [40 CFR 63.5180(g)(2)(iv)]
   v. A statement that there were no deviations from the applicable emission limit in 40 CFR 63.5120 or the applicable operating limit(s) established according to 40 CFR 63.5121 during the reporting period, and that no CEMS were inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted. [40 CFR 63.5180(g)(2)(v)]

i. The permittee shall submit, for each deviation occurring at an affected source where the permittee is not using CEMS to comply with the standards in 40 CFR 63, Subpart SSSS, the semi-annual compliance report containing the information in 40 CFR 63.5180(g)(2)(i) through (iv) and the information in 40 CFR 63.5180(h)(1) through (4): [40 CFR 63.5180(h)]
   i. The total operating time of each affected source during the reporting period. [40 CFR 63.5180(h)(1)]
   ii. The permit must provide information on the number, date, time, duration, and cause of deviations from an emission limit in 40 CFR 63.5120 or any applicable operating

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

limit established according to 40 CFR 63.5121 (including unknown cause, if applicable) as applicable, and the corrective action taken. [40 CFR 63.5180(h)(2)]

iii. The permittee must provide the information specified in 40 CFR 63.5180(h)(3)(i) and (ii). [40 CFR 63.5180(h)(3)]
   1) Number, date, time, duration, cause (including unknown cause), and descriptions of corrective actions taken for continuous parameter monitoring systems that are inoperative (except for zero (low-level) and high-level checks). [40 CFR 63.5180(h)(3)(i)]
   2) Number, date, time, duration, cause (including unknown cause), and descriptions of corrective actions taken for continuous parameter monitoring systems that are out of control as specified in 40 CFR 63.8(c)(7). [40 CFR 63.5180(h)(3)(ii)]

iv. For each deviation from an emission limit in 40 CFR 63.5120 or any applicable operating limit established according to 40 CFR 63.5121, the permittee must provide a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.5120, a description of the method used to estimate the emissions, and the actions the permittee took to minimize emissions in accordance with 40 CFR 63.5140(b). [40 CFR 63.5180(h)(4)]

j. The permittee must submit, for each deviation from the applicable emission limit in 40 CFR 63.5120 or the applicable operation limit(s) established according to 40 CFR 63.5121 occurring at an affected source where the permittee is using CEMS to comply with the standards in 40 CFR 63, Subpart SSSS, the semi-annual compliance report containing the information in 40 CFR 63.5180(g)(2)(i) through (iv), and the information in 40 CFR 63.5180(i)(1) through (12): [40 CFR 63.5180(i)]
   i. The date and time that each malfunction of the capture system or add-on control devices started and stopped. [40 CFR 63.5180(i)(1)]
   ii. For each instance that the CEMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CEMS was inoperative; the cause (including unknown cause) for the CEMS being inoperative; and a description of corrective actions taken. [40 CFR 63.5180(i)(2)]
   iii. For each instance that the CEMS was out-of-control, as specified in 40 CFR 63.8(c)(7), the date, time, and duration that the CEMS was out-of-control; the cause (including unknown cause) for the CEMS being out-of-control; and descriptions of corrective actions taken. [40 CFR 63.5180(i)(3)]
   iv. The date, time, and duration of each deviation from an emission limit in 40 CFR 63.5120. For each deviation, an estimate of the quantity of each regulated pollutant emitted over any emission limit in 40 CFR 63.5120, and a description of the method used to estimate the emissions. [40 CFR 63.5180(i)(4)]
   v. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period. [40 CFR 63.5180(i)(5)]
   vi. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes. [40 CFR 63.5180(i)(6)]

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

vii. A summary of the total duration of CEMS downtime during the reporting period, and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period. [40 CFR 63.5180(i)(7)]

viii. A breakdown of the total duration of CEMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes. [40 CFR 63.5180(i)(8)]

ix. A list of the affected source or equipment, including a brief description of the metal coil coating line. [40 CFR 63.5180(i)(9)]

x. The monitoring equipment manufacturer(s) and model number(s). [40 CFR 63.5180(i)(10)]

xi. The date of the latest CEMS certification or audit. [40 CFR 63.5180(i)(11)]

xii. A description of any changes in CEMS, processes, or controls since the last reporting period. [40 CFR 63.5180(i)(12)]

k. The permittee must submit the results of each performance test as required in 40 CFR 63.5180(e) following the procedure specified in 40 CFR 63.5181(a)(1) through (3). [40 CFR 63.5181(a)]

l. The permittee shall submit the initial notifications required in 40 CFR 63.9(b) and the notification of compliance status required in 40 CFR 63.9(h) and 63.5180(d) to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (https://cdx.epa.gov). The permittee must upload to CEDRI an electronic copy of each applicable notification in PDF. The applicable notification must be submitted by the deadline specified in 40 CFR 63, Subpart SSSS, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall 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 file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.5181(b)]

m. Beginning on March 25, 2021, or once the reporting template has been available on the CEDRI website for 1 year, whichever date is later, the permittee shall submit the semiannual compliance report required in 40 CFR 63.5180(g) through (i), as applicable, to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (https://cdx.epa.gov). The permittee must use the appropriate electronic template on the CEDRI website for 40 CFR 63, Subpart SSSS (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri). The date on which the report templates become available will be listed on the CEDRI website. If the reporting form for the semiannual compliance report specific to 40 CFR 63, Subpart SSSS is not available in CEDRI at the time that the report is due, the permittee

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

must submit the report to the Administrator at the appropriate addresses listed in 40 CFR 63.13. Once the form has been available in CEDRI for 1 year, the permittee must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in 40 CFR 63, Subpart SSSS, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall 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 file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph. [40 CFR 63.5181(c)]

n. If the permittee is required to electronically submit a report through the CEDRI in the EPA's CDX, the permittee may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.5181(d)(1) through (7). [40 CFR 63.5181(d)]

o. If the permittee is required to electronically submit a report through CEDRI in the EPA's CDX, the permittee may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, the permittee must meet the requirements outlined in 40 CFR 63.5181(h)(1) through (5). [40 CFR 63.5181(e)]

p. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The permittee shall install, maintain, and operate the RTO, during all times that Coating Line 1 is operating, according to the requirements in 40 CFR 60, Subpart TT, 40 CFR 63, Subpart SSSS, and the manufacturer's specifications. [401 KAR 52:020, Section 10]

b. Refer to **Section E.**

8. Alternate Operating Scenarios:

The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

GROUP 11 REQUIREMENTS: Boilers #1, #2, #3, & #4
EP15-A, B, & C (4021-A) & EP200

Description:
These industrial boilers provide steam for the plant and are classified as units designed to burn gas 1 fuels. The boilers use natural gas as the primary fuel, but have the ability to use propane as a backup fuel in case of natural gas curtailment. EP15-A, B, and C are considered existing units for the purposes of 40 CFR 63, Subpart DDDDD. These units are uncontrolled.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (MMBTU/hr)	Fuels (Primary/ Secondary)	Control Device	Construction Commenced
15-A (4021-A)	Boiler #1	22	NG/Propane	None	6/15/1981
15-B (4021-A)	Boiler #2	22	NG/Propane	None	6/15/1981
15-C (4021-A)	Boiler #3	22	NG/Propane	None	6/15/1981
200	Boiler #4	22	NG/Propane	None	2022

APPLICABLE REGULATIONS:
401 KAR 59:015, ***New indirect heat exchangers***
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*
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 EP200.

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* applies to EP15-A, B, & C for PM, VOC, & NOx

1. Operating Limitations:

a. 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 Division 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)]

b. The permittee shall conduct a tune-up of EP15-A, B, & C no later than January 31, 2016 and annually thereafter, as specified in 40 CFR 63.7540(a)(10)(i) through (vi). [40 CFR 63.7510(e); 40 CFR 63.7540(a)(10); 40 CFR 63, Subpart DDDDD, Table 3]

c. For EP200, the permittee must demonstrate initial compliance with the applicable work practice standards in Table 3 to 40 CFR 63, Subpart DDDDD within the applicable

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

annual schedule as specified in 40 CFR 63.7515(d) following the initial compliance date specified in 40 CFR 63.7495(a). Thereafter, the permittee is required to complete the applicable annual tune-up as specified in 40 CFR 63.7515(d). [40 CFR 63.7510(g); 40 CFR 63.7540(a)(10); 40 CFR 63, Subpart DDDDD, Table 3]

d. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be conducted no more than 13 months after the previous tune-up. For EP200, the first annual tune-up must be no later than 13 months after the initial startup of EP200. [40 CFR 63.7515(d)]

e. The required tune-ups of the process heaters shall demonstrate continuous compliance by meeting the requirements as specified in 40 CFR 63.7540(a)(10)(i) through (vi), below: [40 CFR 63.7540(a)(10)]
   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)(1)(v)]
   vi. Maintain on-site and submit, if requested by the Division, an annual 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; and [40 CFR 63.7540(a)(10)(vi)(B)]
      3) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. [40 CFR 63.7540(a)(10)(vi)(C)]

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

f. 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)]

g. For EP15-A, B, & C, the permittee shall complete the one-time energy assessment specified in 40 CFR 63, Subpart DDDDD, Table 3 no later than January 31, 2016. [40 CFR 63.7510(e)]

h. For EP15-A, B, & C, the permittee shall have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in 40 CFR 63, Subpart DDDDD, Table 3, satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in 40 CFR 63.7575. [40 CFR 63, Subpart DDDDD, Table 3(4)]
   i. A visual inspection of the boiler or process heater system. [40 CFR 63, Subpart DDDDD, Table 3(4)(a)]
   ii. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. [40 CFR 63, Subpart DDDDD, Table 3(4)(b)]
   iii. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator. [40 CFR 63, Subpart DDDDD, Table 3(4)(c)]
   iv. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. [40 CFR 63, Subpart DDDDD, Table 3(4)(d)]
   v. A review of the facility's energy management practices and provide recommendations for improvements consistent with the definition of energy management practices, if identified. [40 CFR 63, Subpart DDDDD, Table 3(4)(e)]
   vi. A list of cost-effective energy conservation measures that are within the facility's control. [40 CFR 63, Subpart DDDDD, Table 3(4)(f)]
   vii. A list of the energy savings potential of the energy conservation measures identified. [40 CFR 63, Subpart DDDDD, Table 3(4)(g)]
   viii. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. [40 CFR 63, Subpart DDDDD, Table 3(4)(h)]

i. During a startup period or a shutdown period, an owner or operator shall comply with the work practice standards established in 401 KAR 59:015, Section 7. [401 KAR 59:015, Section 7]
   i. The owner or operator 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)]

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

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 of each affected facility during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence; and [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 of the affected facility. [401 KAR 59:015, Section 7(1)(e)(2.)]

j. Refer to **Section H** if propane is used as alternative fuel in any of the emission points in Group 11.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** through **(h),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (i),** the permittee shall demonstrate compliance by meeting the requirements in **5**. **Specific Recordkeeping Requirements (f)**.

2. Emission Limitations:

a. Except as established in 401 KAR 59:015, Sections 3(3) and 7, the permittee shall not cause emissions of particulate matter in excess of: [401 KAR 59:015, Section 4(1)(c)]

i. For EP15 A, B, & C: 0.36 lb/MMBtu; and

ii. For EP200: 0.34 lb/MMBtu.

b. Except as established in 401 KAR 59:015, Sections 3(3) and 7, the permittee shall not cause emissions in excess of twenty (20) percent opacity. [401 KAR 59:015, Section 4(2)]

c. Except as established in 401 KAR 59:015, Sections 3(3) and 7, the permittee shall not cause emissions of gases that contain sulfur dioxide in excess of: [401 KAR 59:010, Section 5(1)(c)]

i. For EP15 A, B, & C: 1.38 lb/MMBtu; and

ii. For EP200: 1.23 lb/MMBtu.

d. For EP15-A, B, & C, refer to **Section D.4.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

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

Compliance Demonstration Method:
For **2. Emission Limitations (a) – (c),** the permittee is assumed to be in compliance when combusting natural gas or propane as fuel.

3. Testing Requirements:
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. For each boiler, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. For EP15-A, B, & C, the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   ii. The monthly and 12-month rolling natural gas usage in MMscf;
   iii. The monthly and 12-month rolling propane usage in Mgal.

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

5. Specific Recordkeeping Requirements:

a. For EP200: Except as provided under 40 CFR 60.48c(g)(2) and (g)(3), the permittee shall record and maintain records of the amount of each fuel combusted during each operating day. [40 CFR 60.48c(g)(1)]
   i. As an alternative to meeting the requirements of 40 CFR 60.48c(g)(1), the permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60.48c(g)(2)]

b. The permittee shall keep the following 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 was 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)]

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

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

e. The permittee shall 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

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

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)]

f. For each boiler, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. For EP15-A, B, & C, the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons;
   ii. The monthly and 12-month rolling natural gas usage in MMscf;
   iii. The monthly and 12-month rolling propane usage in Mgal;
   iv. The manufacturer's recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken.

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

6. Specific Reporting Requirements:

a. The permittee shall include with the Notification of Compliance Status a signed certification that the energy assessment was completed according to 40 CFR 63, Subpart DDDDD, Table 3 and is an accurate depiction of the facility at the time of the assessment. [40 CFR 63.7530(e)]

b. The permittee shall submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.7545(e). [40 CFR 63.7530(f)]

c. The permittee shall report each instance in which the permittee did not meet each emission limit and operating limit in 40 CFR 63, Subpart DDDDD, Tables 1 through 4 or 11 through 13 that apply. 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)]

d. For the initial compliance demonstration for each boiler or process heater, the permittee shall submit the Notification of Compliance Status before the close of business on the 60th day following the completion of all initial compliance demonstrations for all boiler or process heaters at the facility according to 40 CFR 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in 40 CFR 63.7545(e)(1) through (8), below, as applicable. [40 CFR 63.7545(e)]
   i. A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with 40 CFR 63, Subpart DDDDD, description of the fuel(s) burned, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of 40 CFR 241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration. [40 CFR 63.7545(e)(1)]

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

ii. A signed certification that the permittee has met all applicable emission limits and work practice standards. [40 CFR 63.7545(e)(6)]
iii. If there was a deviation from any emission limit, work practice standard, or operating limit, the permittee shall also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report. [40 CFR 63.7545(e)(7)]
iv. In addition to the information required in 40 CFR 63.9(h)(2), the notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.7545(e)(8)]
    1) "This facility complies with the required initial tune-up according to the procedures in 40 CFR 63.7540(a)(10)(i) through (vi)." [40 CFR 63.7545(e)(8)(i)]
    2) "This facility has had an energy assessment performed according to 40 CFR 63.7530(e)." [40 CFR 63.7545(e)(8)(ii)]
    3) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.7545(e)(8)(iii)]

e. Each annual compliance report shall cover the applicable 1-year period from January 1 to December 31. [40 CFR 63.7550(b)(3)]

f. Each annual compliance report shall be postmarked or submitted no later than January 31. [40 CFR 63.7550(b)(4)]

g. A compliance report shall contain the following information: [40 CFR 63.7550(c)]
i. Since 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 (iv) and (xiv). [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. If there are no deviations from any emission limits or operating limits in 40 CFR 63, Subpart DDDDD that apply, a statement that there were no deviations from the emission limits or operating limits during the reporting period. [40 CFR 63.7550(c)(5)(xi)]
vi. If a malfunction occurred during the reporting period, the report shall include 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 during a malfunction of a boiler, process heater to minimize emissions in accordance with 40 CFR 63.7500(a)(3), including actions taken to correct the malfunction. [40 CFR 63.7550(c)(5)(xiii)]
vii. 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).

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

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)]

viii. 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)]

h. The permittee shall submit the reports according to the procedures specified in paragraphs 40 CFR 63.7550(h)(1) through (3). [40 CFR 63.7550(h)]

i. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:
None.

8. Alternate Operating Scenarios:
The permittee may use propane as fuel during periods of natural gas curtailment. Refer to **Section H.**

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

Emission Point: EP46 (4021-5) Propane Flare

Description:
The Propane Flare is used periodically to test onsite propane mix.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (MMBtu/hr)	Construction Commenced
46 (4021-5)	Propane Flare	100.0	6/15/1981

APPLICABLE REGULATION:
401 KAR 63:015, *Flares*

PRECLUDED REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality*, for PM, VOC, & NO_x

1. **Operating Limitations:**
   None

2. **Emission Limitations:**
   a. The permittee shall not cause, suffer, or allow the emission into the open air of particulate matter from any flare which is greater than twenty (20) percent opacity for more than three (3) minutes in any one (1) day. [401 KAR 63:015, Section 3]

   b. Refer to **Section D.4.** for group PM, VOC, and NO_x emissions limitations. [To preclude 401 KAR 51:017]

   Compliance Demonstration Method:
   For **2. Emission Limitations (a)**, the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements.**

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 visible emissions from the flare once during each day of flare operation using U.S. EPA Reference Method 9. If flare is not in operation during a day, a U.S. EPA Reference Method 9 reading is not required, and the permittee shall maintain records documenting that the flare was not in use that day. [401 KAR 52:020, Section 10]

   b. The permittee shall monitor the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons. [401 KAR 52:020, Section 10]

   c. 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 shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of monthly flare operation and propane usage. [401 KAR 52:020, Section 10]

c. The permittee shall maintain records of the monthly and 12-month rolling emissions of PM, VOC, and NO_x in tons. [401 KAR 52:020, Section 10]

d. 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:

None.

8. Alternate Operating Scenarios:

Refer to **Section H** for site-wide restriction on propane usage.

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

Emission Point: EP49 (4021-11) Cooling Tower 1

Description:
The Cooling Tower removes heat from process water.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (gal/min)	Construction Commenced
49 (4021-11)	Cooling Tower 1	40,000	6/15/1981

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

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality****,* for PM
401 KAR 63:002, Section 2(4)(j), 40 C.F.R. 63.400 to 63.407, Table 1 (Subpart Q), *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*

1. **Operating Limitations:**
   The permittee shall not use chromium-based water treatment chemicals. [To preclude 40 CFR 63, Subpart Q]

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
      ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
      iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$
      Where:
      E = rate of emission in lb/hr; and
      P = process weight rate in tons/hr, as defined in 401 KAR 59:010, Section 2(2)

   c. Refer to **Section D.4.** for group PM emissions limitations. [To preclude 401 KAR 51:017]

   Compliance Demonstration Method:
   1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

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

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3. Testing Requirements:
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 perform a qualitative visual observation of the opacity of emissions from the stack no less frequently than once every calendar week while the affected facility is operating. If visible emissions from the stack are observed (not including condensed water in the plume), then 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. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly rolling process weight rate in tons/hr;
   ii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   iii. The monthly and 12-month rolling emissions of PM in tons.

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

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of 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 Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly process weight rate in tons/hr;
   ii. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   iii. The monthly and 12-month rolling emissions of PM in tons.

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

c. 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)

GROUP 12 REQUIREMENTS: Petroleum Liquid Storage Tanks > 40,000 gal
EP48 (4021-10) & EP58 (2015-3)

Description:
Water Services Tank 6A stores emulsified waste oil and Hot Mill Tank 2 store mineral coolant used in the Reversing Mill.

Emission Point (Unit ID)	Unit Name	Tank Capacity (gallons)	Construction Commenced
48 (4021-10A)	Water Services Tank 6A	42,000	6/15/1981
58 (2015-3)	Hot Mill Tank 2	120,000	6/15/1981

APPLICABLE REGULATIONS:
401 KAR 59:050, ***New storage vessels for petroleum liquids***
401 KAR 60:005, Section 2(2)(q), 40 C.F.R. 60.110a to 60.115a (Subpart Ka), *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984*

STATE-ORIGIN REGULATION:
401 KAR 63:021, ***Existing sources emitting toxic air pollutants***

PRECLUDED REGULATION:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for EP48 for VOC

1. **Operating Limitations:**
   a. The permittee shall only store petroleum liquids with a Reid vapor pressure of less than six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia) provided the maximum true vapor pressure does not exceed six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia). [40 CFR 60.115a(d)(1) and 401 KAR 59:050, Section 5(4)]

   b. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]

   c. All openings shall be equipped with covers, lids, or seals such that the cover, lid, or seal is in the closed position at all times (i.e., no visible gap). [401 KAR 59:050, Section 4(2)(a)]

2. **Emission Limitations:**
   a. For EP48, refer to **Section D.4.** for group VOC emissions limitations. [To preclude 401 KAR 51:017]

   b. For EP48, refer to **Section B**, Group 13 requirements for group emission limitations related to 401 KAR 63:021.

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

3. Testing Requirements:
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. For EP48, the permittee shall monitor the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

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

5. Specific Recordkeeping Requirements:

a. For EP48, the permittee shall maintain records of the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

b. 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:
None.

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

Emission Point: EP50 (4021-15) Gasoline Tank

Description:
Petroleum storage.

Emission Point (Unit ID)	Unit Name	Tank Capacity (gallons)	Construction Commenced
50 (4021-15)	Gasoline Tank	4,000	6/15/1990

APPLICABLE REGULATIONS:
401 KAR 59:050, ***New storage vessels for petroleum liquids***

1. **Operating Limitations:**
   a. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]

   b. All openings shall be equipped with covers, lids, or seals such that the cover, lid, or seal is in the closed position at all times (i.e., no visible gap). [401 KAR 59:050, Section 4(2)(a)]

2. **Emission Limitations:**
   None.

3. **Testing Requirements:**
   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:**
   Refer to **Section F** for general monitoring requirements.

5. **Specific Recordkeeping Requirements:**
   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:**
   a. The gasoline tank shall, as a minimum, be equipped with a permanent submerged fill pipe. [401 KAR 59:050, Section 3(2)]

   b. Refer to **Section E**.

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

GROUP 13 REQUIREMENTS: Existing Sources Emitting Toxic Air Pollutants

Description:

Emission Point (Unit ID)	Unit Name	Construction Commenced
01 (1002-1&2)	Aluminum Skimming House	6/15/1981
02 (1005-1A&B)	Melt Furnace (East) & Pre-Heater (DC1)	6/15/1981
03 (1005-4A&B)	Melt Furnace (West) & Pre-Heater (DC2)	6/15/1981
04 (1005-2)	Hold Furnace (East) (DC1)	6/15/1981
06 (2010-A)	Carbottom Furnaces 1 - 3	6/15/1981
07 (2015-1)	Reversing Mill	6/15/1981; Modified 2017
08 (2015-2)	Finishing Mill	6/15/1981; Modified 2011 & 2017
09 (6020-A)	Coating Line 1	6/15/1981; RTO Installed 9/2012
17 (1005-5)	Hold Furnace (West) (DC2)	6/15/1981
18 (2011-A)	Pusher Furnaces 1 & 2	1/16/1990
19 (2011-B)	Pusher Furnace 3	10/1999
22-A (1001-1)	Flux Box (DC1)	6/15/1981
22-B (1001-1)	Flux Box (DC2)	6/15/1981
22-C (1001-1)	Flux Box (DC3)	11/26/1991
25 (1009-1C)	Chip Conveyor for Swarf Furnace	11/15/1997
26 (1009-1A, B, & D)	Swarf Furnace (Sidewell, Drossing & Main Hearth)	11/15/1997
27 (1008-1)	Reservoir Furnace	10/2/1997
40 (1006-2)	Melt Furnace (DC3)	11/26/1991
42 (1006-2)	Hold Furnace (DC3)	11/26/1991
48 (4021-10A)	Water Services Tank 6A	6/15/1981
51 (6035-A)	Coating Tanks A, B, & C	6/9/1992
190 (4021-10B)	Water Services Tank 4	6/15/1981

STATE-ORIGIN REGULATION:

401 KAR 63:021, *Existing sources emitting toxic air pollutants*, for the emission points listed above only.

1. **Operating Limitations:**
   Refer to specific operating limitations under each individual emission point listed in **Section B**.

2. **Emission Limitations:**
   The combined emission rates for the affected facilities listed above shall not exceed the following limits based on a monthly average: [401 KAR 63:021]

Pollutant	Allowable (lb/hr)
Aluminum metal & oxide	100.2
Arsenic	2.0

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

Pollutant	Allowable (lb/hr)
Cadmium	5.0
Chromium metal	5.0
Cobalt	1.0
Copper	10.0
Formaldehyde	19.8
Hydrogen chloride	227.5
Selenium	2.0
Phosphoric acid	39.6
Potassium hydroxide	79.3

Compliance Demonstration Method:
The permittee shall meet the requirements in **5. Specific Recordkeeping Requirements**. The permittee shall continue to comply with all conditions based on 401 KAR 63:021 unless they can demonstrate that a condition is no longer necessary to protect human health and the environment. The permittee is assumed to be in compliance based on the combined potential to emit calculated for the emission units listed above.

3. Testing Requirements:
Refer to specific testing requirements in **Section B** for each individual emission point listed.

4. Specific Monitoring Requirements:
Refer to specific monitoring requirements in **Section B** for each individual emission point listed.

5. Specific Recordkeeping Requirements:

a. Refer to specific recordkeeping requirements in **Section B** for each individual emission point listed.

b. The permittee shall maintain records of SDSs for paints, solvent, mineral spirits and any other chemical or metal containing toxic air pollutants used in the emission points listed above. [401 KAR 52:020, Section 10]

c. The permittee shall maintain a record of the emissions evaluation submitted to the Division with the December 17, 2007 Title V permit renewal application. [401 KAR 52:020, Section 10]

d. 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 specific control equipment conditions in **Section B** for each individual emission point listed.

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

GROUP 14 REQUIREMENTS: New Emergency CI RICE Less Than 500 HP
EP121 (4021-25), EP123 (4021-27), EP150 (4021-28), EP151 (4021-24), & EP188 (4021-9)

Description:
Diesel-fired emergency use engines.

Emission Point (Unit ID)	Unit Name	Power Output (HP)	Displacement (L/cylinder)	Construction Commenced
121 (4021-25)	Wetlands Emergency Generator Engine	134	1.125	9/2009
123 (4021-27)	Sanitary System Emergency Generator Engine	32	0.5	2013
150 (4021-28)	CM2 Computer Room Generator Engine	93	1.125	9/1/2017
151 (4021-24)	Gatehouse Emergency Generator Engine	56	1.125	1/26/2017
188 (4021-9)	Fire Water Loop Pump Engine - East	399	1.50	2018

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 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 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 60.4211(f)(2)(ii)-(iii) and 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

PRECLUDED REGULATION:

401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for EP123, EP150, and EP151 for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The permittee shall meet the requirements of 40 CFR 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 63. [40 CFR 63.6590(c)(6)]

   b. The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel. [40 CFR 60.4207(b)]

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

c. The permittee shall install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]

d. The permittee shall operate each emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60, Subpart IIII and shall meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]
   i. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]
   ii. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2). [40 CFR 60.4211(f)(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 60.4211(f)(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 and emergency demand response provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]

e. If the permittee does not install, configure, operate, and maintain the permittee's 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 shall demonstrate compliance as follows: [40 CFR 60.4211(g)]
   i. For EPs 123, 150, and 151, the permittee shall keep a maintenance plan and records of conducted maintenance to demonstrate compliance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air

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

pollution control practice for minimizing emissions. In addition, if the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action. [40 CFR 60.4211(g)(1)]

ii. For EPs 121 and 188, the permittee shall keep a maintenance plan and records of conducted maintenance and shall 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 shall 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)]

f. The permittee shall limit the operation of EP123, EP150, and EP151 as necessary to comply with the emission standards in **Section D.6.**

2. Emission Limitations:

a. For EPs 121, 123, 150, and 151, the permittee shall comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [40 CFR 60.4205(b)]

b. For EP188, the permittee shall comply with the emission standards in table 4 to 40 CFR 60, Subpart IIII, for all pollutants. [40 CFR 60.4205(c)]

Emission Point	NMHC + NO_x (g/HP-hr)	CO (g/HP-hr)	PM (g/HP-hr)
EP188	3.0	2.6	0.15

c. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 over the entire life of the engine. [40 CFR 60.4206]

d. Refer to **Section D.6.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations for EP123, EP150, and EP151. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) The permittee shall do all of the following, except as permitted under 40 CFR 60.4211(g): [40 CFR 60.4211(a)]
   A. 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)]

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

B. Change only those emission-related settings that are permitted by the manufacturer; and [40 CFR 60.4211(a)(2)]
C. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply. [40 CFR 60.4211(a)(3)]

2) The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]

3. Testing Requirements:

a. If the permittee conducts performance tests pursuant to 40 CFR 60, Subpart IIII, the permittee must do so according to 40 CFR 60.4212(a) through (e). [40 CFR 60.4212]

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:

Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of the operation of each engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

b. For EPs 123, 150, and 151, the permittee shall maintain records of the monthly and 12-month rolling emissions of PM, PM_{10}, and $PM_{2.5}$ in tons. [401 KAR 52:020, Section 10]

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

6. Specific Reporting Requirements:

a. If the permittee owns or operates an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements specified below: [40 CFR 60.4214(d)]

i. The report shall contain the following information: [40 CFR 60.4214(d)(1)]

1) Company name and address where the engine is located. [40 CFR 60.4214(d)(1)(i)]
2) Date of the report and beginning and ending dates of the reporting period. [40 CFR 60.4214(d)(1)(ii)]
3) Engine site rating and model year. [40 CFR 60.4214(d)(1)(iii)]

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

4) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [40 CFR 60.4214(d)(1)(iv)]
5) Hours operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii). [40 CFR 60.4214(d)(1)(v)]
6) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f) (2) (ii) and (iii). [40 CFR 60.4214(d)(1)(vi)]
7) Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [40 CFR 60.4214(d)(1)(vii)]

ii. Annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year. [40 CFR 60.4214(d)(2)]
iii. The annual report shall be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to 40 CFR 60, Subpart IIII, is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4. [40 CFR 60.4214(d)(3)]

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

7. Specific Control Equipment Operating Conditions:

None.

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

GROUP 15 REQUIREMENTS: Existing Emergency CI RICE Less Than 500HP
EP60 (4021-21), EP61 (3040-6), EP62 (4021-22), & EP63 (4021-23)

Description:
Various Diesel-Fired emergency engines around the plant to provide back-up power in case of a power loss or provide water in case of a fire.

Emission Point (Unit ID)	Unit Name	Power Output (HP)	Manufacture Date
60 (4021-21)	Boiler Room Emergency Generator Engine	134	Prior to 1993
61 (3040-6)	CM3 Autogen Emergency Generator Engine	186	11/2004
62 (4021-22)	Fire Water Loop Pump Engine - North	290	6/2004
63 (4021-23)	Fire Water Loop Pump Engine - South	290	6/2004

APPLICABLE REGULATIONS:

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

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

1. **Operating Limitations:**
   a. The permittee shall comply with the emission limitations and other requirements in Table 2c to 40 CFR 63, Subpart ZZZZ which apply. For each emergency CI RICE: [40 CFR 63.6602]
      i. Change oil and filter every 500 hours of operation or annually, whichever comes first; [40 CFR 63, Subpart ZZZZ, Table 2c(1)(a)]
      ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [40 CFR 63, Subpart ZZZZ, Table 2c(1)(b)]
      iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ, Table 2c(1)(c)]
      iv. During periods of startup, the permittee shall 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)]
      v. If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2c of 40 CFR 63, Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has

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

abated. The management 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 management 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]

vi. 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]

Compliance Demonstration Method:
The permittee has the option of utilizing an oil analysis program in order to extend the specified oil 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 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. If any of the limits are exceeded, the permittee must change the oil 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 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 changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]

b. If the permittee operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in 40 CFR 63.6640(f)(4)(ii), the permittee must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. [40 CFR 63.6604(b)]

c. The permittee shall 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)]

d. 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. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not

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

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)]

e. The permittee shall 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)]

f. The permittee shall install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]

g. The permittee shall 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 to 40 CFR 63, Subpart ZZZZ. [40 CFR 63.6640(a)]

h. The permittee shall 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 emergency operation, maintenance and testing, emergency demand response, 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 shall 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 any combination of the purposes specified in 40 CFR 63.6640(f)(2)(i) through (iii) 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 and

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

emergency demand response 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)]

i. As stated in 40 CFR 63.6640, the permittee shall continuously comply with the emissions and operating limitations and work or management practices as required by: [40 CFR 63, Subpart ZZZZ, Table 6]
   i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or [40 CFR 63, Subpart ZZZZ, Table 6(9)(a)(i)]
   ii. Developing and following 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, Subpart ZZZZ, Table 6(9)(a)(ii)]

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:
Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:
a. The permittee shall keep the records described in 40 CFR 63.6655(a)(1) through (a)(5), (b)(1) through (b)(3) and (c). [40 CFR 63.6655(a)]
   i. A copy of each notification and report submitted to comply with 40 CFR 63, Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status 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 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)]

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

b. The permittee shall 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 shall 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 shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in 40 CFR 63.6640(f)(2)(ii) or (iii) or 40 CFR 63.6640(f)(4)(ii), permittee shall keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. [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)]

f. As specified in 40 CFR 63.10(b)(1), the permittee shall 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 shall 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 shall report each instance in which the permittee did not meet 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. 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. The permittee shall also report each instance in which the permittee did not meet the requirements in Table 8 to 40 CF R63, Subpart ZZZZ that apply. [40 CFR 63.6640(e)]

c. For an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in 40 CFR 63.6640(f) (4)(ii), the permittee shall submit an annual

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

report according to the requirements in 40 CFR 63.6650(h)(1) through (3). [40 CFR 63.6650(h)]

i. The report must contain the following information: [40 CFR 63.6650(h)(1)]
   1) Company name and address where the engine is located. [40 CFR 63.6650(h)(1)(i)]
   2) Date of the report and beginning and ending dates of the reporting period. [40 CFR 63.6650(h)(1)(ii)]
   3) Engine site rating and model year. [40 CFR 63.6650(h)(1)(iii)]
   4) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [40 CFR 63.6650(h)(1)(iv)]
   5) Hours operated for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii). [40 CFR 63.6650(h)(1)(v)]
   6) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 63.6640(f) (2) (ii) and (iii). [40 CFR 63.6650(h)(1)(vi)]
   7) Hours spent for operation for the purpose specified in 40 CFR 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [40 CFR 63.6650(h)(1)(vii)]
   8) If there were no deviations from the fuel requirements in 40 CFR 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period. [40 CFR 63.6650(h)(1)(viii)]
   9) If there were deviations from the fuel requirements in 40 CFR 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken. [40 CFR 63.6650(h)(1)(ix)]

ii. Annual reports for each calendar year must be submitted no later than March 31 of the following calendar year. [40 CFR 63.6650(h)(2)]

iii. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting forms specific to 40 CFR 63, Subpart ZZZZ are not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.6650(h)(3)]

d. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

None.

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GROUP 16 REQUIREMENTS: New Emergency CI RICE Greater Than 500 HP
EP122 (4021-26)

Description:
Diesel-fired emergency use non-fire pump engine.

Emission Point (Unit ID)	Unit Name	Power Output (HP)	Displacement (L/cylinder)	Construction Commenced
122 (4021-26)	Admin/IS Emergency Generator Engine	560	2.15	2011

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 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 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 60.4211(f)(2)(ii)-(iii) and 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

1. **Operating Limitations:**
   a. The permittee does not have to meet the requirements of 40 CFR 63, Subpart ZZZZ and of 40 CFR 63, Subpart A except for the initial notification requirements of 40 CFR 63.6645(f) if the emergency stationary RICE does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii). [40 CFR 63.6590(b)(1)]

   b. The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel. [40 CFR 60.4207(b)]

   c. The permittee shall install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]

   d. The permittee shall operate each emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be

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

considered an emergency engine under 40 CFR 60, Subpart IIII and shall meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]

i. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]

ii. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2). [40 CFR 60.4211(f)(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 60.4211(f)(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 and emergency demand response provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]

e. If the permittee does not install, configure, operate, and maintain the permittee's 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 shall demonstrate compliance as follows: [40 CFR 60.4211(g)]

i. The permittee shall 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 shall 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's changes emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [40 CFR 60.4211(g)(3)]

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

2. Emission Limitations:

a. The permittee shall comply with the emission standards for new non-road CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [40 CFR 60.4205(b)]

b. The permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 over the entire life of the engine. [40 CFR 60.4206]

Compliance Demonstration Method:

1) The permittee shall do all of the following, except as permitted under 40 CFR 60.4211(g): [40 CFR 60.4211(a)]
   A. 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)]
   B. Change only those emission-related settings that are permitted by the manufacturer; and [40 CFR 60.4211(a)(2)]
   C. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply. [40 CFR 60.4211(a)(3)]
2) The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]

3. Testing Requirements:

a. If the permittee conducts performance tests pursuant to 40 CFR 60, Subpart IIII, the permittee must do so according to 40 CFR 60.4212(a) through (e). [40 CFR 60.4212]

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:

Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of the operation of each engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

b. 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. If the permittee operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements specified below: [40 CFR 60.4214(d)]

i. The report shall contain the following information: [40 CFR 60.4214(d)(1)]

1) Company name and address where the engine is located. [40 CFR 60.4214(d)(1)(i)]
2) Date of the report and beginning and ending dates of the reporting period. [40 CFR 60.4214(d)(1)(ii)]
3) Engine site rating and model year. [40 CFR 60.4214(d)(1)(iii)]
4) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place. [40 CFR 60.4214(d)(1)(iv)]
5) Hours operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii). [40 CFR 60.4214(d)(1)(v)]
6) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f) (2) (ii) and (iii). [40 CFR 60.4214(d)(1)(vi)]
7) Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine. [40 CFR 60.4214(d)(1)(vii)]

ii. Annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year. [40 CFR 60.4214(d)(2)]

iii. The annual report shall be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to 40 CFR 60, Subpart IIII, is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4. [40 CFR 60.4214(d)(3)]

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

7. Specific Control Equipment Operating Conditions:

None.

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

GROUP 17 REQUIREMENTS: New Emergency SI RICE Less Than 500 HP
EP124 (1012-1), EP141 (9030G1), EP142 (9030G2), & EP152 (1013-1)

Description:
Natural gas fired emergency use non-fire pump engines.
EP141 & EP142 are 4-stroke rich burn engines.

Emission Point (Unit ID)	Unit Name	Power Output (HP)	Construction Commenced
124 (1012-1)	Remelt UPS Emergency Generator Engine	231	2014
141 (9030G1)	DC4 Generator Engine #1	47	2016
142 (9030G2)	DC4 Generator Engine #2	47	2016
152 (1013-1)	Recycle UPS Generator Motor	230	9/14/2017

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*, for EP141 and EP142, for NO_x, CO, VOC, & GHG

401 KAR 60:005, Section 2(2)(eeee), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 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 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 60, Subpart JJJJ and 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 60.4243(d)(2)(ii)-(iii) and 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

PRECLUDED REGULATION:

401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for EP124, EP141, EP142, and EP152 for PM, PM_{10}, & $PM_{2.5}$

1. Operating Limitations:

a. The permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ 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 63, Subpart ZZZZ. [40 CFR 63.6590(c)(6)]

b. If the emergency stationary SI internal combustion engine does not meet the standards applicable to non-emergency engines, the permittee shall install a non-resettable hour meter. [40 CFR 60.4237(b) & (c)]

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

c. The permittee shall 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, emergency demand response, 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)]

ii. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4243(d)(2)(i) through (iii) 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 and emergency demand response 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. [40 CFR 60.4243(d)(3)]

d. The permittee may operate stationary SI natural gas fired engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee is required to conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233. [40 CFR 60.4243(e)]

e. If the permittee purchases a non-certified engine or 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

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

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)]

f. The permittee shall prepare and maintain for EP141 and EP142, within 90 days of startup, a good combustion and operation practices (GCOP) plan that defines, measures and verifies the use of operational and design practices determined as BACT for minimizing NO_x, CO, VOC, and GHG emissions. Any revisions requested by the Division shall be made and the revisions shall be maintained on site. The permittee shall operate according to the provisions of this plan at all times, including periods of startup, shutdown, and malfunction. The plan shall be incorporated into the plant standard operating procedures (SOP) and shall be made available for the Division's inspection. The plan shall include, but not be limited to: [401 KAR 51:017]
   i. A list of combustion optimization practices and a means of verifying the practices have occurred.
   ii. A list of combustion and operation practices to be used to lower energy consumption and a means of verifying the practices have occurred.
   iii. A list of the design choices determined to be BACT and verification that designs were implemented in the final construction.

g. The permittee shall limit the operation of EP124, EP141 and EP142 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

Compliance Demonstration Method:
For **1. Operating Limitations (f),** the permittee shall demonstrate compliance for EP141 and EP142 as follows:
1) The facility construction shall be completed in accordance with the approved GCOP plan. See **6. Specific Reporting Requirements (b)**.
2) Prepare, maintain, and implement the GCOP plan. Refer to **1. Operating Limitations (f)**, **5. Specific Recordkeeping Requirements (c)** and **(d),** and **6. Specific Reporting Requirements (a).**

2. Emission Limitations:

a. Stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in 40 CFR 60, Subpart JJJJ, Table 1 for their emergency stationary SI ICE. [40 CFR 60.4233(d)]

b. Stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in 40 CFR 60, Subpart JJJJ, Table 1 for their stationary SI ICE. [40 CFR 60.4233(e)]

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

c. The permittee shall 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]

Compliance Demonstration Method:

1) The permittee shall demonstrate compliance with 40 CFR 60.4233(d) and (e) by purchasing an engine certified according to procedures specified in 40 CFR 60, Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 63.4243(a). [40 CFR 60.4243(b)(1)]
2) The permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. [40 CFR 60.4243(a)]
   A. 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 shall 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)]
   B. 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 shall demonstrate compliance according to 40 CFR 60.4243(a)(2)(i) through (iii), as appropriate. [40 CFR 60.4243(a)(2)]

d. For EP141 and EP142, the permittee shall not cause or contribute to emissions of NOx that, individually, exceed 1.57 grams of NO_x per hp-hr and 0.041 tons of NO_x per year, on a rolling 12-month basis. [401 KAR 51:017]

e. For EP141 and EP142, the permittee shall not cause or contribute to emissions of CO that, individually, exceed 133.4 grams of CO per hp-hour and 3.46 tons of CO per year. [401 KAR 51:017]

f. For EP141 and EP142, the permittee shall not cause or contribute to emissions of VOC that, individually, exceed 2.87 grams of VOC per hp-hour and 0.075 tons of VOC per year. [401 KAR 51:017]

g. For EP141 and EP142, during periods of non-emergency operation, the permittee shall not cause or contribute to emissions of CO_2e that exceed 14.53 tons of CO_2e per year, on a rolling 12-month basis. [401 KAR 51:017]

h. For EP124, EP141, EP142, and EP152, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

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

Compliance Demonstration Method:

1) For **2. Emission Limitations (d), (e),** and **(f)**, the permittee shall demonstrate compliance by purchasing engines certified by the manufacturer to meet the emission limitations and comply with the appropriate operating limitations and associated monitoring, recordkeeping, and reporting requirements of 40 CFR 63, Subpart JJJJ.

2) For **2. Emission Limitations (g)**, the permittee shall demonstrate compliance by maintaining fuel usage records and using emission factors obtained from 40 CFR 98, Subpart C to calculate the emissions according to **4. Specific Monitoring Requirements (a).**

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 following: [401 KAR 52:020, Section 10]
   i. For EP141 & EP142, the monthly and 12-month rolling NOx, CO, VOC, and CO_2e emissions in tons;
   ii. The monthly and 12-month rolling PM, PM_{10}, and $PM_{2.5}$ in tons.

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

5. Specific Recordkeeping Requirements:

a. The permittee shall 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. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable. [40 CFR 60.4245(a)(3)]
   iv. If the stationary SI internal combustion engine is not a certified engine 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. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for

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

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. The permittee shall maintain a copy of the GCOP plan required by **1. Operating Limitations (f)** as well as any revisions. [401 KAR 51:017]

d. The permittee shall maintain records of any time that EP141 or EP142 was not operated according to the GCOP plan required by **1. Operating Limitations (f)** with a description of the situation and actions taken to remedy the issue. [401 KAR 51:017]

e. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. For EP141 & EP142, the monthly and 12-month rolling CO, NOx, VOC, and CO_2e emissions in tons;
   ii. The monthly and 12-month rolling PM, PM_{10}, and $PM_{2.5}$ in tons;
   iii. Maintenance and non-maintenance hours of operation.

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

6. Specific Reporting Requirements:

a. The permittee shall include, in the semi-annual report, any time that EP141 or EP142 was not operated according to the GCOP plan required by **1. Operating Limitations (f)** with a description of the situation and actions taken to remedy the issue. Refer to **5. Specific Recordkeeping Requirements (d)**. [401 KAR 51:017]

b. The permittee shall submit certification that the design elements proposed as BACT for EP141 and EP142 have been implemented in the final construction. Any deviations from the design elements proposed in the application shall be analyzed for changes in air emissions profile. Design changes and emission analysis shall be submitted in a report to the Division prior to construction of the changed element. Any changes shall also be incorporated into the GCOP plan. [401 KAR 51:017]

7. Specific Control Equipment Operating Conditions:

None.

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

GROUP 18 REQUIREMENTS: Decoating Kilns
EP128 (9033) & EP134 (9037)

Description:
Decoaters A & B are charged with shredded aluminum scrap from the shredding systems. The indirect-fired rotary decoating kilns remove lacquers, oils, water, dust, and fines from aluminum scrap prior to charging to one of the sidewell melt furnaces in the DC4 casting line.

The rotary decoaters are new affected sources subject to 40 CFR 63, Subpart RRR, and are classified as scrap dryers/delacquering kilns/decoating kilns.

Emissions from these decoaters are controlled by a lime-injected baghouse for PM and HCl and afterburner for CO and VOCs. The afterburner has a burner rating of 30.2 MMBtu/hr, a combustion chamber temperature of at least 1400°F, and a minimum residence time of 1.0 seconds.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
128 (9033)	Decoater A	22.5	30.2	Baghouse (C-9097_BH); Afterburner (C-9033_TO)	7/12/2016
134 (9037)	Decoater B	22.5	30.2	Baghouse (C-9098_BH); Afterburner (C-9037_TO)	10/1/2016

APPLICABLE REGULATIONS:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for NO_x, CO, VOC, & GHG
401 KAR 59:010, *New process operations*
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 to 63.1519, Tables 1 to 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*
40 CFR 64, *Compliance Assurance Monitoring (CAM)* for PM, PM_{10}, & $PM_{2.5}$

PRECLUDED REGULATION:
401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for PM, PM_{10}, and $PM_{2.5}$.

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.

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

Determination of whether such operation 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, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.1506(a)(5)]

b. The permittee shall provide and maintain easily visible labels posted at each of the Decoaters that identify 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. decoating kiln). [40 CFR 63.1506(b)(1)]
   ii. The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace, 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)]
   iii. The afterburner operating temperature and design residence time for the decoating kilns. [40 CFR 63.1506(b)(3)]

c. The permittee shall: [40 CFR 63.1506(c)]
   i. Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see 40 CFR 63.14); [40 CFR 63.1506(c)(1)]
   ii. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to the baghouse; and [40 CFR 63.1506(c)(2)]
   iii. Operate each capture/collection system according to the procedures and requirements in the OM&M plan. [40 CFR 63.1506(c)(3)]

d. The permittee shall: [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. [40 CFR 63.1506(d)(3)]

e. The permittee shall: [40 CFR 63.1506(g)]
   i. For each afterburner, [40 CFR 63.1506(g)(1)]
      1) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test. [40 CFR 63.1506(g)(1)(i)]
      2) Operate each afterburner in accordance with the OM&M plan. [40 CFR 63.1506(g)(1)(ii)]

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

ii. If a bag leak detection system is used to meet the fabric filter monitoring requirements in 40 CFR 63.1510, [40 CFR 63.1506(g)(2)]
   1) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(g)(2)(i)]
   2) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the permittee takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the permittee to initiate corrective action. [40 CFR 63.1506(g)(2)(ii)]

iii. If a continuous opacity monitoring system is used to meet the monitoring requirements in 40 CFR 63.1510, initiate corrective action within 1-hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan. [40 CFR 63.1506(g)(3)]

iv. Maintain the 3-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14 °C (plus 25 °F). [40 CFR 63.1506(g)(4)]

v. For a continuous injection device, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the performance test. [40 CFR 63.1506(g)(5)]

f. 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 shall 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)]

g. The permittee shall prepare and implement for each decoating kiln, a written operation, maintenance, and monitoring (OM&M) plan. The permittee shall submit the OM&M plan to the Division within 90 days after a successful initial performance test under 40 CFR 63.1511(b). 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. The permittee shall 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 procedures in **6. Specific Reporting Requirements (b)**. Each plan shall contain the following information: [40 CFR 63.1510(b)]

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

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 and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, 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 or add-on control device 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 and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [40 CFR 63.1510(b)(7)]

h. For EP128 and EP134, the BACT determination for Greenhouse Gases (CO_2e) requires the facility to meet the following design and operational requirements: [401 KAR 51:017]
    i. The facility design shall include ultra-low NO_x cold air baffle burners,
    ii. Monitoring of afterburner temperature, kiln temperature, combustion fuel/air ratios, kiln inlet O_2, and kiln operating pressure as part of an overall control system to minimize the amount of natural gas supplied to the kiln and maximize the amount of heat generated from the partial oxidation of coatings on the incoming scrap stream,
    iii. Installing and maintaining kiln feed and discharge airlocks and seals to minimize tramp air inflow,
    iv. Maintaining low external surface temperatures of rotary drums through installation and maintenance of adequate refractory/insulation lining to minimize convective and radiant heat losses.

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

i. The permittee shall prepare and maintain for EP128 and EP134, within 90 days of startup, a good combustion and operation practices (GCOP) plan that defines, measures and verifies the use of operational and design practices determined as BACT for minimizing NO_x, CO, VOC, and GHG emissions. Any revisions requested by the Division shall be made and the revisions shall be maintained on site. The permittee shall operate according to the provisions of this plan at all times, including periods of startup, shutdown, and malfunction. The plan shall be incorporated into the plant standard operating procedures (SOP) and shall be made available for the Division's inspection. The plan shall include, but not be limited to: [401 KAR 51:017]
   i. A list of combustion optimization practices and a means of verifying the practices have occurred.
   ii. A list of combustion and operation practices to be used to lower energy consumption and a means of verifying the practices have occurred.
   iii. A list of the design choices determined to be BACT and verification that designs were implemented in the final construction.

j. The permittee shall limit the operation of EP128 and EP134 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)** through **(g),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (h)** and **(i),** the permittee shall demonstrate compliance as follows:
   A. The facility construction shall be completed in accordance with the approved GCOP plan. Refer to **6. Specific Reporting Requirements (l)**.
   B. Prepare, maintain, and implement the GCOP plan. Refer to **1. Operating Limitations (i)**, **5. Specific Recordkeeping Requirements (c)** and **(d),** and **6. Specific Reporting Requirements (k).**
   C. The permittee shall perform testing for NO_x, CO, and VOC. Refer to **3. Testing Requirements (q)** and **(r).**

2. Emission Limitations:

a. The permittee shall not discharge or cause to be discharged to the atmosphere emissions in excess of: [40 CFR 63.1505(d)(1)]
   i. 0.03 kg of THC, as propane, per Mg (0.06 lb of THC, as propane, per ton) of feed/charge; [40 CFR 63.1505(d)(1)(i)]
   ii. 0.04 kg of PM per Mg (0.08 lb per ton) of feed/charge; [40 CFR 63.1505(d)(1)(ii)]
   iii. 0.25 µg of D/F TEQ per Mg (3.5×10^{-6} gr of D/F TEQ per ton) of feed/charge; and [40 CFR 63.1505(d)(1)(iii)]
   iv. 0.40 kg of HCl per Mg (0.80 lb per ton) of feed/charge. [40 CFR 63.1505(d)(1)(iv)]

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

b. The permittee may choose to comply with the emission limits 40 CFR 63.1505(e), below, as an alternative to the limits in 40 CFR 63.1505(d), above, if the scrap dryer/delacquering kiln/decoating kiln is equipped with an afterburner having a design residence time of at least 1 second and the afterburner is operated at a temperature of at least 760 °C (1400 °F) at all times. [40 CFR 63.1505(e)]

c. If the compliance option in **2. Emission Limitations (b)** is chosen, the permittee shall not discharge or cause to be discharged to the atmosphere emissions in excess of: [40 CFR 63.1505(e)(1)]
   i. 0.10 kg of THC, as propane, per Mg (0.20 lb of THC, as propane, per ton) of feed/charge; [40 CFR 63.1505(e)(1)(i)]
   ii. 0.15 kg of PM per Mg (0.30 lb per ton) of feed/charge; [40 CFR 63.1505(e)(1)(ii)]
   iii. 5.0 µg of D/F TEQ per Mg (7.0×10^{-5} gr of D/F TEQ per ton) of feed/charge; and [40 CFR 63.1505(e)(1)(iii)]
   iv. 0.75 kg of HCl per Mg (1.50 lb per ton) of feed/charge. [40 CFR 63.1505(e)(1)(iv)]

d. The permittee shall not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option. [40 CFR 63.1505(d)(2); 40 CFR 63.1505(e)(2)]

e. 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)]

f. 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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   Where:
   E = rate of emission in lb/hr; and
   P = process weight rate in tons/hr.

g. For EP128 and EP134, the permittee shall not cause or contribute to total emissions of NOx that, individually, exceed 6.5 pounds of NO_x per hour and 28.47 tons of NO_x per year, on a rolling 12-month basis. [401 KAR 51:017]

h. For EP128 and EP134, the permittee shall not cause or contribute to total emissions of CO that, individually, exceed 14.14 pounds of CO per hour and 61.94 tons of CO per year, on a rolling 12-month basis. [401 KAR 51:017]

i. For EP128 and EP134, the permittee shall not cause or contribute to total emissions of VOC that, individually, exceed 1.99 pounds of VOC per hour and 8.72 tons of VOC per year, on a rolling 12-month basis. [401 KAR 51:017]

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

j. For EP128 and EP134, the permittee shall not cause or contribute to total emissions of CO_2e that, individually, exceed 27,662 tons of CO_2e per year, on a rolling 12-month basis. [401 KAR 51:017]

k. For EP128 and EP134, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a)** and **(c),** the permittee shall demonstrate compliance using the equations in 40 CFR 63.1513 and by meeting the requirements in **2. Emission Limitations (b), 3. Testing Requirements, 4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements,** and **6. Specific Reporting Requirements.**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (f), (g),** and **(h), 5. Specific Recordkeeping Requirements (b),** and **6. Specific Reporting Requirements.**

3) For **2. Emission Limitations (e),** compliance is assumed when complying with **2. Emission Limitations (d).** However, if a COM is not chosen as the monitoring option, compliance with **2. Emission Limitations (e)** must be demonstrated by complying with **4. Specific Monitoring Requirements (o)** and **5. Specific Recordkeeping Requirements (f).**

4) For **2. Emission Limitations (f)**, the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:

i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

5) For **2. Emission Limitations (g), (h), (i),** and **(j)**, the permittee shall demonstrate compliance by meeting the requirements in **1. Operating Limitations (i)**, **3. Testing Requirements (q)** and **(r), 4. Specific Monitoring Requirements (n),** and **5. Specific Recordkeeping Requirements (e).**

3. Testing Requirements:

a. Prior to conducting any performance test required by 40 CFR 63, Subpart RRR, the permittee shall prepare a site-specific test plan which satisfies all of the rule

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

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 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 63.1511(a)]

b. Following approval of the site-specific test plan, the permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source in Group 18, and report the results in the notification of compliance status report as described in 40 CFR 63.1515(b). The permittee shall conduct this initial performance test within 180 days after startup of each emission unit in Group 18. Except for the date by which the performance test must be conducted, 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 continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours. [40 CFR 63.1511(b)(2)]
   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), above, 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. The permittee shall 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)]

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

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 23 for the concentration of D/F. [40 CFR 63.1511(c)(7)]
viii. Method 25A for the concentration of THC, as propane. [40 CFR 63.1511(c)(8)]
ix. 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. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the permittee shall measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system. [40 CFR 63.1511(c)(9)]

d. The permittee may use alternative test methods as provided in 40 CFR 63.1511(d)(1) through (3), below: [40 CFR 63.1511(d)]
   i. In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the permittee may use Method 204 in 40 CFR 51, Appendix M, to conduct annual verification of a permanent total enclosure for the affected source/emission unit. [40 CFR 63.1511(d)(2)]
   ii. The permittee may use an alternative test method approved by the Administrator. [40 CFR 63.1511(d)(3)]

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

f. The permittee shall 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 shall 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)]

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

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 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), above, must be met. [40 CFR 63.1511(g)(5)]

g. With the prior approval of the Division, the permittee may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements: [40 CFR 63.1511(i)]
   i. All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit; [40 CFR 63.1511(i)(1)]
   ii. All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units; [40 CFR 63.1511(i)(2)]
   iii. The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device; [40 CFR 63.1511(i)(3)]
   iv. All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and [40 CFR 63.1511(i)(4)]
   v. For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device. [40 CFR 63.1511(i)(5)]

h. The permittee shall conduct performance tests to measure emissions of THC, D/F, HCl, and PM at the outlet of the control device for each emission unit in Group 18. [40 CFR 63.1512(c)]
   i. If the decoating kiln is subject to the alternative emission limits in 40 CFR 63.1505(e), the average afterburner operating temperature in each 3-hour block period must be maintained at or above 760 °C (1400 °F) for the test. [40 CFR 63.1512(c)(1)]
   ii. The permittee of a decoating kiln subject to the alternative limits in 40 CFR 63.1505(e) must submit a written certification in the notification of compliance status report containing the information required by 40 CFR 63.1515(b)(7). [40 CFR 63.1512(c)(2)]

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

i. 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 for each of the three test runs and calculate and record the total weight. If the permittee chooses to demonstrate compliance on the basis of the aluminum production weight, the weight of aluminum produced by the affected source shall be measured instead of the feed/charge weight. [40 CFR 63.1512(k)]

j. If the permittee uses a continuous opacity monitoring system, the permittee shall conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in 40 CFR 60, Appendix B. Following the performance evaluation, the permittee shall measure and record the opacity of emissions from each exhaust stack for all consecutive 6-minute periods during the PM emission test. [40 CFR 63.1512(l)]

k. If the permittee uses the afterburner to comply with the alternative emission limits in 40 CFR 63.1505(e): [40 CFR 63.1512(m)]
   i. Prior to the initial performance test, the permittee shall conduct a performance evaluation for the temperature monitoring device according to the requirements of 40 CFR 63.8. [40 CFR 63.1512(m)(1)]
   ii. The permittee shall use the following procedures to establish an operating parameter value or range for the afterburner operating temperature: [40 CFR 63.1512(m)(2)]
      1) Continuously measure and record the operating temperature of each afterburner every 15 minutes during the THC and D/F performance tests; [40 CFR 63.1512(m)(2)(i)]
      2) Determine and record the 15-minute block average temperatures for the three test runs; and [40 CFR 63.1512(m)(2)(ii)]
      3) Determine and record the 3-hour block average temperature measurements for the 3 test runs. [40 CFR 63.1512(m)(2)(iii)]

l. The permittee shall use the following procedures to establish an operating parameter value or range for the inlet gas temperature of the lime-injected fabric filter: [40 CFR 63.1512(n)]
   i. Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests; [40 CFR 63.1512(n)(1)]
   ii. Determine and record the 15-minute block average temperatures for the 3 test runs; and [40 CFR 63.1512(n)(2)]
   iii. Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs. [40 CFR 63.1512(n)(3)]

m. The permittee shall use the following procedures during the HCl and D/F tests to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test. [40 CFR 63.1512(p)]
   i. For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and [40 CFR 63.1512(p)(1)]

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

ii. Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary during the runs, determine and record the average feed rate and lime injection rate from the 3 runs. [40 CFR 63.1512(p)(2)]

n. To determine compliance with the emission limitations in **2. Emission Limitations (a)**, above, the following equations shall be used: [40 CFR 60.1513(a) & (b)]

i. To determine compliance with an emission limit for THC, the following equation shall be used: [40 CFR 60.1513(a)]

$$E = \frac{C \times MW \times Q \times K_1 \times K_2}{M_v \times P \times 10^6}$$

Where:
E = Emission rate of measured pollutant, lb/ton (kg/Mg) of feed;
C = Measured volume fraction of pollutant, ppmv;
MW = Molecular weight of measured pollutant, lb/lb-mole (g/g-mole):
THC (as propane) = 44.11;
Q = Volumetric flow rate of exhaust gases, dscf/hr (dscm/hr);
K_1 = Conversion factor, 1 lb/lb (1 kg/1,000 g);
K_2 = Conversion factor, 1 ft3/ft3 (1,000 L/m3);
M_v = Molar volume, 385.3 ft3/lb-mole (24.45 L/g-mole); and
P = Production rate, ton/hr (Mg/hr).

ii. To determine compliance with an emission limit for PM, HCL, or HF, the following equation shall be used: [40 CFR 60.1513(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).

iii. To determine compliance with an emission limit for D/F, the following equation shall be used: [40 CFR 60.1513(b)(2)]

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

Where:
E = Emission rate of D/F, gr/ton (µg/Mg) of feed;
C = Concentration of D/F, gr/dscf (µg/dscm);
Q = Volumetric flow rate of exhaust gases, dscf/hr (dscm/hr); and
P = Production rate, ton/hr (Mg/hr).

o. To convert D/F measurements to TEQ units, the permittee shall use the procedures and equations in "Interim Procedures for Estimating Risks Associated with Exposures to

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

Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update", incorporated by reference see 40 CFR 63.14. [40 CFR 63.1513(d)]

p. For the decoating kilns, the permittee shall 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). [40 CFR 63.1513(f)]
   i. 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)]
   ii. 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)]

Remelt 2 Project Testing (q., r., and s., below)

q. No later than December 31, 2023, and every 5 years thereafter, the permittee shall perform stack testing for NO_x, VOC and CO emissions from EP134 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 7E for NO_x;
   ii. U.S. EPA Method 25A for VOC; and
   iii. U.S. EPA Method 10 for CO;
   iv. An alternate method as approved by the Division;
   v. This testing shall establish an emission factor for EP128 and EP134 for NO_x, VOC, and CO in lb/ton of aluminum and demonstrate compliance with the emission limits in **2. Emission Limitations (g) – (i).**

r. No later than 180 days after issuance of final permit V-20-004, the permittee shall perform stack testing for CO emissions from EP128 using the following methods: [401 KAR 51:017]
   i. U.S. EPA Method 10 for CO; or
   ii. An alternate method as approved by the Division;
   iii. This testing shall establish an emission factor for EP128 and EP134 for CO in lb/ton of aluminum and demonstrate compliance with the emission limits in **2. Emission Limitations (h).**

s. No later than December 31, 2024, and every 5 years thereafter, the permittee shall perform stack testing for PM, PM_{10}, and $PM_{2.5}$ emissions from EP134, using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate method as approved by the Division) on both the inlet and outlet of the baghouse serving them. [To preclude 401 KAR 51:017, Sections 8-14]
   i. Prior to the test, the permittee shall establish a pressure drop range and volumetric flowrate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.

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

ii. The permittee shall monitor process weight rate, fan amps, and volumetric flow rate during the test.
iii. This testing shall establish an inlet and outlet emission factor for EP128 and EP134 for PM, PM_{10}, and $PM_{2.5}$ in lb/ton of aluminum.

t. Testing performed to satisfy the requirements of 40 CFR 63, Subpart RRR may also satisfy the requirements of **3. Testing Requirements (q) – (s)** if the permittee submits the stack test protocol to the Division such that it identifies the dual purpose of the test.

u. 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 decoating kiln in Group 18, a written operation, maintenance, and monitoring (OM&M) plan. Refer to **6. Specific Reporting Requirements (a)** and **(b)**, below, for OM&M plan requirements. [40 CFR 63.1510(b)]

b. The permittee shall inspect equipment labels for the decoating kilns in Group 18 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. The permittee shall: [40 CFR 63.1510(d)]
i. Install, operate, and maintain a capture/collection system for each delacquering kiln in Group 18; and [40 CFR 63.1510(d)(1)]
ii. Inspect the capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection. [40 CFR 63.1510(d)(2)]
iii. Meet the requirements in **Section E**.

d. The permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the delacquering kilns in Group 18 over the same operating cycle or time period used in the performance test. 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 delacquering kilns in Group 18. [40 CFR 63.1510(e)]

e. The permittee shall install and operate a bag leak detection system as required in 40 CFR 63.1510(f)(1) or a continuous opacity monitoring system as required in 40 CFR 63.1510(f)(2). [40 CFR 63.1510(f)]
i. The following requirements apply to the permittee if a bag leak detection system is used. [40 CFR 63.1510(f)(1)]
1) The permittee shall install and operate a bag leak detection system for each exhaust stack of a fabric filter. [40 CFR 63.1510(f)(1)(i)]

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

2) Each bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions. [40 CFR 63.1510(f)(1)(ii)]
3) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. [40 CFR 63.1510(f)(1)(iii)]
4) The bag leak detection system sensor must provide output of relative or absolute PM loadings. [40 CFR 63.1510(f)(1)(iv)]
5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor. [40 CFR 63.1510(f)(1)(v)]
6) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel. [40 CFR 63.1510(f)(1)(vi)]
7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter. [40 CFR 63.1510(f)(1)(vii)]
8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors. [40 CFR 63.1510(f)(1)(viii)]
9) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time. [40 CFR 63.1510(f)(1)(ix)]
10) Following initial adjustment of the system, the permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition. [40 CFR 63.1510(f)(1)(x)]

ii. The following requirements apply to the permittee if a continuous opacity monitoring system is used. [40 CFR 63.1510(f)(2)]
1) The permittee shall install, calibrate, maintain, and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack. [40 CFR 63.1510(f)(2)(i)]
2) Each continuous opacity monitoring system must meet the design and installation requirements of Performance Specification 1 in 40 CFR 60, Appendix B. [40 CFR 63.1510(f)(2)(ii)]

f. The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A. [40 CFR 63.1510(g)(1)]

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

g. The temperature monitoring device installed to comply with **4. Specific Monitoring Requirements (f)** shall meet each of the following performance and equipment specifications: [40 CFR 63.1510(g)(2)]
   i. The temperature monitoring device shall be installed at the exit of the combustion zone of each afterburner. [40 CFR 63.1510(g)(2)(i)]
   ii. The monitoring system shall record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period. [40 CFR 63.1510(g)(2)(ii)]
   iii. The recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(m). [40 CFR 63.1510(g)(2)(iii)]
   iv. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Division. [40 CFR 63.1510(g)(2)(iv)]

h. The permittee shall conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection shall include: [40 CFR 63.1510(g)(3)]
   i. Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor; [40 CFR 63.1510(g)(3)(i)]
   ii. Inspection for proper adjustment of combustion air; [40 CFR 63.1510(g)(3)(ii)]
   iii. Inspection of internal structures (e.g., baffles) to ensure structural integrity; [40 CFR 63.1510(g)(3)(iii)]
   iv. Inspection of dampers, fans, and blowers for proper operation; [40 CFR 63.1510(g)(3)(iv)]
   v. Inspection for proper sealing; [40 CFR 63.1510(g)(3)(v)]
   vi. Inspection of motors for proper operation; [40 CFR 63.1510(g)(3)(vi)]
   vii. Inspection of combustion chamber refractory lining and clean and replace lining as necessary; [40 CFR 63.1510(g)(3)(vii)]
   viii. Inspection of afterburner shell for corrosion and/or hot spots; [40 CFR 63.1510(g)(3)(viii)]
   ix. Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and [40 CFR 63.1510(g)(3)(ix)]
   x. Verification that the equipment is maintained in good operating condition. [40 CFR 63.1510(g)(3)(x)]
   xi. Following an equipment inspection, all necessary repairs shall be completed in accordance with the requirements of the OM&M plan. [40 CFR 63.1510(g)(3)(xi)]

i. The permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in 40 CFR 63, Subpart A. [40 CFR 63.1510(h)(1)]

j. The temperature monitoring device installed to comply with **4. Specific Monitoring Requirements (i)** shall meet each of the following performance and equipment specifications: [40 CFR 63.1510(h)(2)]

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

i. The monitoring system shall record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period. [40 CFR 63.1510(h)(2)(i)]
ii. The recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in 40 CFR 63.1512(n). [40 CFR 63.1510(h)(2)(ii)]
iii. The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Division. [40 CFR 63.1510(h)(2)(iii)]

k. The permittee shall verify that lime is always free-flowing in the continuous-lime injection system by either: [40 CFR 63.1510(i)(1)]
   i. Inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the permittee shall increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The permittee may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period; or [40 CFR 63.1510(i)(1)(i)]
   ii. Subject to the approval of the Division, installing, operating and maintaining a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the permittee shall promptly initiate and complete corrective action, or [40 CFR 63.1510(i)(1)(ii)]
   iii. Subject to the approval of the Division, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the permittee shall promptly initiate and complete corrective action. [40 CFR 63.1510(i)(1)(iii)]

l. The permittee shall record the lime feeder setting once each day of operation. [40 CFR 63.1510(i)(2)]

m. At least once per month, the permittee shall verify that the lime injection rate in pounds per hour (lb/hr) is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the permittee shall repair or adjust the lime injection system to restore normal operation within 45 days. The permittee may request from the Division an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The permittee may request from the Division an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of 40 CFR 63.1517. [40 CFR 63.1510(i)(4)]

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

n. For each emission point in Group 18, the permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling aluminum production in tons;
   ii. The monthly average process weight rate in tons/hr;
   iii. The monthly hours of operation;
   iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   v. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons.
   vi. The monthly and 12-month rolling natural gas usage in MMscf;

o. The permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

p. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

q. 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 the 40 CFR 63.10(b) and 40 CFR 63, Subpart RRR. 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 on-site and the remaining 3 years of records may be retained off site. [40 CFR 63.1517(a)]

b. The permittee shall keep the following records: [40 CFR 63.1517(b)]
   i. For each affected source in Group 18 with emissions controlled by a fabric filter: [40 CFR 63.1517(b)(1)]
      1) If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken. [40 CFR 63.1517(b)(1)(i)]
      2) If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any 6-minute period exceeds 5 percent, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken. [40 CFR 63.1517(b)(1)(ii)]
   ii. For each affected source in Group 18 with emissions controlled by an afterburner: [40 CFR 63.1517(b)(2)]
      1) Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken; and [40 CFR 63.1517(b)(2)(i)]
      2) Records of annual afterburner inspections. [40 CFR 63.1517(b)(2)(ii)]

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

iii. For each decoating kiln, subject to D/F and HCl emission standards with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value + 14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken. [40 CFR 63.1517(b)(3)]

iv. For each affected source in Group 18 with emissions controlled by a lime-injected fabric filter: [40 CFR 63.1517(b)(4)]

1) Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken; [40 CFR 63.1517(b)(4)(i)]

2) If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit. These records must be maintained on site and available upon request. [40 CFR 63.1517(b)(4)(ii)]

3) If lime addition rate for a noncontinuous lime injection system is monitored pursuant to the approved alternative monitoring requirements in 40 CFR 63.1510(v), records of the time and mass of each lime addition during each operating cycle or time period used in the performance test and calculations of the average lime addition rate (lb/ton of feed/charge). [40 CFR 63.1517(b)(4)(iii)]

v. For each continuous monitoring system, records required by 40 CFR 63.10(c). [40 CFR 63.1517(b)(6)]

vi. For each affected source in Group 18 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)]

vii. Records of monthly inspections for proper unit labeling for each decoating kiln in Group 18. [40 CFR 63.1517(b)(13)]

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

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

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

x. 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)]

xi. For any failure to meet an applicable standard, the permittee shall maintain the following records; [40 CFR 63.1517(b)(18)]

1) 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)]
2) Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1506(a)(5) and 63.1520(a)(8), 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)]

xii. For each period of startup or shutdown for which the permittee chooses to demonstrate compliance for an affected source, the permittee shall comply with 40 CFR 63.1517(b)(19)(i) or (ii), below. [40 CFR 63.1517(b)(19)]

1) 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 shall 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)]
   (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(i)(A)]
   (B) The quantities of feed/charge and flux introduced during each startup and shutdown; and [40 CFR 63.1517(b)(19)(i)(B)]
   (C) 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)]
2) To demonstrate compliance based on performance tests, the permittee shall maintain the following records: [40 CFR 63.1517(b)(19)(ii)]
   (A) The date and time of each startup and shutdown; [40 CFR 63.1517(b)(19)(ii)(A)]
   (B) The measured emissions in lb/hr or µg/hr or ng/hr; [40 CFR 63.1517(b)(19)(ii)(B)]
   (C) 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)]
   (D) An explanation to support that such conditions are considered representative startup and shutdown operations. [40 CFR 63.1517(b)(19)(ii)(D)]

c. The permittee shall maintain a copy of the GCOP plan required by **1. Operating Limitations (i)** as well as any revisions. [401 KAR 51:017]

d. The permittee shall maintain records of any time that EP128 or EP134 was not operated according to the GCOP plan required by **1. Operating Limitations (i)** with a description of the situation and actions taken to remedy the issue. [401 KAR 51:017]

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

e. For each emission point in Group 18, the permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling aluminum production in tons;
   ii. The monthly average process weight rate in tons/hr;
   iii. The monthly hours of operation;
   iv. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   v. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, CO, NOx, VOC, and CO_2e in tons;
   vi. The monthly and 12-month rolling natural gas usage in MMscf;

f. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

g. 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)]

h. 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)(2)]

i. Refer to **Section F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. The permittee shall submit the OM&M plan within 90 days after a successful initial performance test and the subsequent performance test as required by permit V-20-004. The plan shall 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 shall 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(b) or 40 CFR 63, Subpart RRR, the permittee shall 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.

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

c. 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) and 40 CFR 63.1510(v), the permittee may submit an application to the Division. Any such application will be processed according to the criteria and procedures set forth in 40 CFR 63.1510(w)(1) through (6), below. [40 CFR 63.1510(w)]
   i. The Division will not approve averaging periods other than those specified in 40 CFR 63.1510. [40 CFR 63.1510(w)(1)]
   ii. The permittee shall continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure. [40 CFR 63.1510(w)(2)]
   iii. The permittee shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application shall contain the information specified in 40 CFR 63.1510(w)(3)(i) through (iii): [40 CFR 63.1510(w)(3)]
      1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach; [40 CFR 63.1510(w)(3)(i)]
      2) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and [40 CFR 63.1510(w)(3)(ii)]
      3) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s). [40 CFR 63.1510(w)(3)(iii)]
   iv. The Division will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Division will provide: [40 CFR 63.1510(w)(4)]
      1) Notice of the information and findings upon which the intended disapproval is based; and [40 CFR 63.1510(w)(4)(i)]
      2) Notice of opportunity for the permittee to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the permittee to provide additional supporting information. [40 CFR 63.1510(w)(4)(ii)]
   v. The permittee is responsible for submitting any supporting information in a timely manner to enable the Division to consider the application prior to the performance test. Neither submittal of an application nor the Division's failure to approve or disapprove the application relieves the permittee of the responsibility to comply with any provisions of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(5)]
   vi. The Division may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 CFR 63, Subpart RRR. [40 CFR 63.1510(w)(6)]

d. The permittee shall submit a notification of compliance status report within 90 days after conducting the initial performance test required by 40 CFR 63.1511(b). The notification

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

shall be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report shall include: [40 CFR 63.1512(q), 40 CFR 63.1515(r), 40 CFR 63.1512(s), 40 CFR 63.1515(b)]

i. All information required in 40 CFR 63.9(h). The permittee shall provide a complete performance test report for each affected source in Group 18. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests). [40 CFR 63.1515(b)(1)]
ii. The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system). [40 CFR 63.1515(b)(2)]
iii. Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements. [40 CFR 63.1515(b)(3)]
iv. The compliant operating parameter value or range established for each affected source in Group 18 with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test. [40 CFR 63.1515(b)(4)]
v. Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c) and **1. Operating Limitations (c)**, above. [40 CFR 63.1515(b)(5)]
vi. If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems as specified in 40 CFR 63.15010(f). [40 CFR 63.1515(b)(6)]
vii. Manufacturer's specification or analysis documenting the design residence time of no less than 1 second for each afterburner used to control emissions from a scrap dryer/delacquering kiln/decoating kiln subject to alternative emission standards in 40 CFR 63.1505(e). [40 CFR 63.1515(b)(7)]
viii. The OM&M plan. [40 CFR 63.1515(b)(9)]

e. The permittee shall submit semiannual reports according to the requirements in 40 CFR 63.10(e)(3) and **Section F.5.** Except, the permittee shall 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 shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any of the following conditions occur during a 6-month reporting period: [40 CFR 63.1516(b)(1)]

i. The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(i)]
ii. The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour. [40 CFR 63.1516(b)(1)(ii)]
iii. 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, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter). [40 CFR 63.1516(b)(1)(iv)]

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

iv. Any affected source was not operated according to the requirements of 40 CFR Part 63, Subpart RRR. [40 CFR 63.1516(b)(1)(vi)]

f. Each semiannual report shall include the following certification, as applicable: [40 CFR 63.1516(b)(2)]
   i. 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)]

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 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 shall 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)]

h. For the purpose of annual certifications of compliance required by 40 CFR 70 or 71, the permittee shall 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)]

i. If there was a malfunction during the reporting period, the permittee shall 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 shall 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 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 63.1506(a)(5) and 40 CFR 63.1520(a)(8). [40 CFR 63.1516(d)]

j. All reports required by 40 CFR 63, Subpart RRR not subject to the requirements in 40 CFR 63.1516(b) shall be sent to the Administrator at the appropriate address listed in 40

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

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)]

k. The permittee shall include, in the semi-annual report, any time that EP128 or EP134 was not operated according to the GCOP plan required by **1. Operating Limitations (i)** with a description of the situation and actions taken to remedy the issue. Refer to **5. Specific Recordkeeping Requirements (d)**. [401 KAR 51:017]

l. The permittee shall submit certification that the design elements proposed as BACT for EP128 and EP134 have been implemented in the final construction. Any deviations from the design elements proposed in the application shall be analyzed for changes in air emissions profile. Design changes and emission analysis shall be submitted in a report to the Division prior to construction of the changed element. Any changes shall also be incorporated into the GCOP plan. [401 KAR 51:017]

m. 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)]

n. 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)]
   i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
   ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
   iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
   iv. 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)]

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

p. Refer to **Section F** for general reporting requirements.

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

7. Specific Control Equipment Operating Conditions:

a. The control devices associated with Group 18 shall be properly maintained, used in conjunction with operation of the underlying emission units, and operated consistent with the manufacturer's specifications. [401 KAR 52:020, Section 10]

b. For EP128 and EP134, the permittee shall install, operate, and maintain an in-process afterburner capable of controlling CO and VOC to the emission rates in **2. Emission Limitations**. The permittee shall verify this with the testing required in **3. Testing Requirements**. [401 KAR 51:017]

c. For the baghouse associated with EP128 and EP134, the permittee shall continuously monitor the inlet volumetric flow rate in the stack, and maintain it at or above the level measured during the testing required in **3. Testing Requirements (s)**. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

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

GROUP 19 REQUIREMENTS: Remelt 2 & Cold Mill 4 Project Ancillary Operations EP145, EP148, EP155-EP159, EP162, EP165, EP166, EP196-198, EP201

Description: The following units are supplementary activities involved with the Remelt 2 Project (V-13-020 R1), Cold Mill 4 Project (V-13-020 R2), and Hot Mill Upgrade Project (V-20-004 R2).

Emission Point	Unit Name	Maximum Capacity	Construction Commenced
145	Remelt 2 Filter Box Pre-Heater	32.82 MMscf/yr	7/12/2016
148	Remelt 2 Comfort Heating Systems	15.89 MMscf/yr	7/12/2016
155	Cold Mill 4 Storage Tank: Dirty Coolant	33,580 gallons	6/1/2019
156	Cold Mill 4 Storage Tank: Bulk Magiesol	14,000 gallons	8/1/2019
157	Cold Mill 4 Storage Tank: Pre-Coat	925 gallons	9/1/2019
158	Cold Mill 4 Storage Tank: Body Mix	925 gallons	9/1/2019
159	Cold Mill 4 Storage Tank: Body Feed	925 gallons	9/1/2019
162	Cold Mill 4 Heating Systems	29.57 MMscf/yr	10/16/2017
165	Remelt 2 Diesel Fuel Storage Tank	3,000 gallons	7/12/2016
166	Cold Mill 4 Storage Tank: Clean Coolant	24,093 gallons	6/1/2019
196	Cold Mill 4 Storage Tank: Clean VRS	1,000 gallons	8/1/2019
197	Cold Mill 4 Storage Tank: Dirty VRS	2,500 gallons	8/1/2019
198	Cold Mill 4 Storage Tank: AH2 Hydraulic	1,215 gallons	6/1/2019
201	Cold Mill 4 Storage Tank: Body Mix #2	925 gallons	2022

APPLICABLE REGULATIONS:

401 KAR 51:017, *Prevention of significant deterioration of air quality*, for NO_x, CO, VOC, & GHG

401 KAR 59:050, *New storage vessels for petroleum liquids*, for EP157 through EP159, EP196 through EP198, and EP 201.

401 KAR 63:010, *Fugitive emissions*

PRECLUDED REGULATION:

401 KAR 51:017, *Prevention of significant deterioration of air quality, Sections 8-14,* for PM, PM_{10}, & $PM_{2.5}$.

1. **Operating Limitations:**
   a. The permittee shall only store petroleum liquids with a Reid vapor pressure of less than six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia) provided the maximum true vapor pressure does not exceed six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia). [401 KAR 59:050, Section 5(4)]

   b. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]

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

c. All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that: [401 KAR 59:050, Section 4(2)]
   i. The cover, lid, or seal is in the closed position at all times (i.e., no visible gap). [401 KAR 59:050, Section 4(2)(a)]
   ii. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and [401 KAR 59:050, Section 4(2)(b)]
   iii. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [401 KAR 59:050, Section 4(2)(c)]

d. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Refer to **2. Emission Limitations (a).** [401 KAR 63:010]

e. The permittee shall limit the operation of the units in Group 19 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.** and **D.7.**

2. Emission Limitations:

a. ***Fugitive Emission Standard***: For each affected facility that emits or may emit any air contaminant into the air outside buildings, structures, and equipment other than from a stack or air pollution control equipment exhaust:
   i. 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. [401 KAR 63:010, Section 3(1)]
   ii. The permittee shall not cause or permit the discharge of 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)]
      1) More than five (5) minutes of emission time during any sixty (6) minute observation period; or [401 KAR 63:010, Section 3(2)(a)]
      2) More than twenty (20) minutes of emission time during any twenty-four (24) hour period. [401 KAR 63:010, Section 3(2)(b)]
   iii. If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in 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 a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]

b. For Group 19, refer to **Section D.6.** and **D.7.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

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

c. The permittee shall not allow VOC emissions from the Cold Mill 4 Area Storage Tanks EP155 and EP166 to exceed the limits specified in the table below, on a rolling 12-month basis: [401 KAR 51:017]

Unit ID#	Unit Name	Emission Limitation (tons VOC/yr)
155	Cold Mill 4 Storage Tank: Dirty Coolant	1.82
166	Cold Mill 4 Storage Tank: Clean Coolant	1.82

d. The Cold Mill 4 Area Storage Tanks EP155, EP156, EP157, EP158, EP159, EP166, EP196, EP197, and EP198 and Remelt 2 Area Storage Tank EP165 shall be equipped with a permanent submerged fill pipe. [401 KAR 51:017]

Compliance Demonstration Method:
For **2. Emission Limitations (c)**, the permittee shall demonstrate compliance by meeting the requirements of **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**.

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 calculate VOC emissions from EP155 and EP166 on a monthly and 12-month rolling basis to compare with the emission limitations in **2. Emission Limitations (c).** [401 KAR 52:020, Section 10]

b. The permittee shall monitor the monthly hours of operation and monthly throughput from EP155 and EP166 for annual emissions quantification. See **Section D** for any source-wide applicable requirements. [401 KAR 52:020, Section 10]

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

5. Specific Recordkeeping Requirements:

a. For EP155 and EP166, the permittee shall, for each emission point, maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly and 12-month rolling VOC emissions in tons;
   ii. The monthly hours of operation;
   iii. The monthly throughput.

b. Refer to **Section F** for general recordkeeping requirements.

6. Specific Reporting Requirements:
See **Section F** for general reporting requirements**.**

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

GROUP 20 REQUIREMENTS: Cold Mill 4 with Heavy Oil Scrubber
EP161 (3050-1)

Description:
Cold Mill 4 processes aluminum coils to reduce their gauge thickness. Exhaust gases from Cold Mill 4 will be routed to a Heavy Oil Scrubber, where the roll coolant (in the form of mist and vapor emissions) will be recovered for reuse.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Construction Commenced
161-02 (3050-1)	Cold Mill 4 (CM4)	350	10/16/2017
161-01	CM4 Heavy Oil Scrubber (HOS)		10/16/2017

APPLICABLE REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for VOC
401 KAR 59:010, ***New process operations***
40 CFR 64, ***Compliance Assurance Monitoring (CAM)*** for PM, PM_{10}, $PM_{2.5}$, & VOC

PRECLUDED REGULATION:
401 KAR 51:017, ***Prevention of significant deterioration of air quality, Sections 8-14,*** for PM, PM_{10}, & $PM_{2.5}$

1. **Operating Limitations:**
   a. The control equipment for Cold Mill 4 and the associated capture systems shall be operational at all times while Cold Mill 4 is in operation. [401 KAR 51:017]

   b. The permittee shall not process more than 1,800,000 tons/yr of aluminum through Cold Mill 4, on an input basis. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   c. The permittee shall limit the operation of Cold Mill 4 as necessary to comply with the emission standards in **2. Emission Limitations** and **Section D.6.**

   d. The permittee shall maintain the overall capture efficiency for the fume exhaust system serving Cold Mill 4 at or above 98% capture efficiency for VOC. [401 KAR 51:017]

   e. The permittee shall maintain the overall capture efficiency for the fume exhaust system serving Cold Mill 4 at or above 98% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

   f. The permittee shall ensure that the building removal efficiency for PM, PM_{10}, and $PM_{2.5}$ in the building that houses Cold Mill 4 is at least 70%, 50%, and 15%, respectively. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

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

g. The permittee shall prepare written operating instructions and procedures that specify good operating and maintenance practices and includes, at a minimum, the following specific practices targeting VOC emissions minimization: [401 KAR 51:017]
   i. Controlling coolant application rates per unit of production using an automated flatness system for ensuring process conditions are maintained at optimum levels.
   ii. Maintaining the supplied coolant temperature within required temperature ranges to prevent overheated coolant from being exposed to aluminum slab/strip and work/backup rolls.
   iii. Performing periodic physical/chemical analysis of coolant package to assess coolant conditions and evaluate excessive degradation or out-of-range specifications for key coolant properties.
   iv. Spill prevention and other waste reduction measures to ensure the coolant supplied to the system remains within the bounds of the storage, circulation, filtration, and treatment systems.

Compliance Demonstration Method:

1) For **1. Operating Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5**. **Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (b),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (b)** and **5. Specific Recordkeeping Requirements (b)**.

3) For **1. Operating Limitations (d)**, **(e),** and **(f)** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements (d)** and **7. Specific Control Equipment Operating Conditions (c).**

4) For **1. Operating Limitations (g),** the permittee shall demonstrate compliance by meeting the requirements in **5. Specific Recordkeeping Requirements (f).**

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
   ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
   iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

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.

c. For Cold Mill 4, the permittee shall not cause or contribute to emissions of VOC from the HOS stack that exceed 6.88 pounds of VOC per hour and 30.13 tons of VOC per year, on a rolling 12-month basis. [401 KAR 51:017]

d. Refer to **Section D.6.** for PM, PM_{10}, and $PM_{2.5}$ emission limitations for CM4. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**

2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3) For **2. Emission Limitations (c),** the permittee shall demonstrate compliance by meeting the requirements in **3. Testing Requirements** and **5. Specific Recordkeeping Requirements (c).**

4) For **2. Emission Limitations (d),** the permittee shall demonstrate compliance by meeting the requirements in **3**. **Testing Requirements (b)** and **4. Specific Monitoring Requirements (f)**.

3. Testing Requirements:

a. Before conducting Cold Mill 4 performance testing, the permittee shall develop and submit a site-specific test plan to the Division 60 days prior to the scheduled test date. The permittee shall propose the following in the test plan for Division review and approval: [401 KAR 50:045, Section 2]
   i. The reference test methods that will be used.
   ii. The anticipated operating parameter ranges for Cold Mill 4 and HOS during the test.

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

iii. The monitoring parameters that will be measured during the test, which at a minimum shall include washing oil flow rate and temperature at the inlet stream to the absorber column, and the distillation column vacuum pressure.

b. Within 60 days after achieving the maximum production rate at which Cold Mill 4 will be operated but not later than 180 days after initial startup of Cold Mill 4, the permittee shall complete an initial performance test for the following: [401 KAR 51:017]
   i. Inlet and outlet VOC emissions using U.S. EPA Method 25A at the HOS stack.
   ii. Inlet and outlet PM, PM_{10}, and $PM_{2.5}$ emissions using U.S. EPA Method 17/202 at the HOS stack.
   iii. Verification of the direction of airflow through both the largest building wall opening closest to the process and the largest hood opening, that can be safely accessed while EP161 is operational, is inward using a smoke tube and the following procedures:
      1) The direction of airflow shall be monitored for at least 1 hour, with checks made no more than 10 minutes apart.

c. The performance test program shall be conducted under conditions that are representative of the source's operations and create the highest rate of emissions and shall include the following elements: [401 KAR 51:017]
   i. Prior to the test, the permittee shall establish a washing oil flow rate and temperature, distillation column vacuum pressure, and volumetric exhaust flow rate range in accordance with the manufacturer's written instructions and operate the control device within these ranges during the test.
   ii. The permittee shall monitor process weight rate and volumetric exhaust flow rate during the test.
   iii. For the inlet testing, the permittee shall test the gas stream of Cold Mill 4 in the duct prior to being sent to the HOS absorber column.
   iv. This testing will establish an inlet emission factor for EP161 for PM, PM_{10}, and $PM_{2.5}$, and VOC in lb/ton of aluminum.
   v. This testing will establish an outlet emission factor for EP161 for PM, PM_{10}, and $PM_{2.5}$, and VOC in lb/hour of HOS operation.

d. The permittee shall perform an initial technical evaluation of the capture system for Cold Mill 4 in conjunction with the initial testing for VOC and PM. If changes to any physical installation of the capture system and/or control device serving the Cold Mill 4 occur, the permittee shall update the capture system technical evaluation and perform a repeat performance test, as necessary. The permittee may request to use relevant EPA Reference Test Methods or alternative methods to calculate the capture efficiency achieved during a performance test. Such alternative methods may include measurements of capture velocity and volumetric flow rates at the Cold Mill 4 HOS. The request shall be submitted to the Division's Technical Service branch and the Permit Review branch. [401 KAR 51:017]

e. Additional performance testing of the Cold Mill 4 for VOC and PM emissions using the Reference Methods specified in 401 KAR 50:015 shall be conducted every five years. [401 KAR 50:055, Section 2(2); 401 KAR 50:045, Section 1]

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

f. 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 perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly amount of aluminum processed in tons;
   iv. The monthly hours of operation;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons

c. The permittee shall install, operate, and maintain a continuous monitoring system to measure and record the washing oil flow rate at the inlet to the absorber column of the HOS when the distillation section of the HOS is in operation. [401 KAR 51:017]

d. The permittee shall install, operate, and maintain a monitoring device to measure the distillation column vacuum pressure. Data shall be recorded at least once every 8 hours when the rectification system is in operation. [401 KAR 51:017]

e. The permittee shall install, operate, and maintain a monitoring device to measure the temperature of the washing oil in the inlet stream to the absorber. Data shall be recorded at least once every 8 hours when the system is in operation. [401 KAR 51:017]

f. Refer to **Appendix A** for CAM requirements pursuant to 40 CFR 64.

g. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly amount of aluminum processed in tons;
   iv. The monthly hours of operation;
   v. The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. The monthly and 12-month rolling emissions of PM, PM_{10}, $PM_{2.5}$, and VOC in tons;

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

vii. Washing oil flow rate into the absorber measured in accordance with **4. Specific Monitoring Requirements (c)**;
viii. Distillation column vacuum pressure, measured in accordance with **4. Specific Monitoring Requirements (d)**;
ix. Temperature of washing oil in inlet stream to the absorber, measured in accordance with **4. Specific Monitoring Requirements (e)**.

c. The permittee shall maintain records of the manufacturer's maintenance and operating instructions for the absorber and rectification system that are part of the HOS. [401 KAR 52:020, Section 10]

d. The permittee shall maintain records of maintenance activities performed on the HOS that have the potential to affect the emissions performance of the absorber system. [401 KAR 52:020, Section 10]

e. The permittee shall maintain records of maintenance activities and calibration checks performed on the following absorber monitoring systems: [401 KAR 52:020, Section 10]
i. Washing oil flow meter;
ii. Rectification column vacuum pressure gauge;
iii. Washing oil inlet stream temperature monitor.

f. The permittee shall maintain records that demonstrate that the work practice standards identified in **1. Operating Limitations (g)** are maintained.

g. 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)]

h. 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)(2)]

i. Refer to **Section F** for general recordkeeping requirements.

6. Specific Reporting Requirements:

a. 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)]

b. 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)]

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

i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; [40 CFR 64.9(a)(2)(i)]
ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and [40 CFR 64.9(a)(2)(ii)]
iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the 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)]
iv. 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)]

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

d. Refer to **Section F** for general reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The permittee shall install, operate, and maintain, in accordance with the manufacturer's specifications, a Heavy Oil Scrubber to control PM and VOC emissions from Cold Mill 4 such that they meet the emission limitations in **2. Emission Limitations (c).** [401 KAR 51:017]

b. For the Heavy Oil Scrubber, the permittee shall install operate, maintain, and calibrate, according to the manufacturer's instructions, a continuous parametric monitoring system for the HOS to monitor, at a minimum, the following parameters: [401 KAR 51:017]
i. Washing oil flow rate,
ii. Washing oil supply temperature to the adsorber column, and
iii. Distillation column vacuum pressure.

c. For Cold Mill 4, the permittee shall continuously monitor the inlet volumetric flow rate to the stack, and maintain it at or above the level measured during the testing required by **3. Testing Requirements (d)**. [401 KAR 52:020, Section 10]

d. Refer to **Section E.**

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

GROUP 21 REQUIREMENTS: Petroleum Liquid Storage Tanks < 40,000 gal
EP167 – 187 & EP202

Description:
Various tanks that store mineral coolant, lubricants, and rolling oil used in the Hot and Cold Mills.

Emission Point	Unit Name	Contents	Tank Capacity (gal)	Construction Commenced
167	Hot Mill Tank 10	Hot Mill Base Rolling Oil	10,000	6/15/1981
168	Hot Mill Tank 18	Hot Mill Base Rolling Oil w/ additives	1,100	6/15/1981
169	Cold Mills 1 & 2 Tank 2	Cold Mill Rolling Oil/Gear Lubricant	10,000	6/15/1981
170	Cold Mills 1 & 2 Tank 4	Cold Mill Rolling Oil	10,000	6/15/1981
171	Cold Mills 1 & 2 Tank 5	Cold Mill Rolling Oil	10,000	6/15/1981
172	Cold Mills 1 & 2 Tank 6	Hot Mill Base Rolling Oil	10,000	6/15/1981
173	Cold Mills 1 & 2 Tank 7	Process/Lubricating Oil	10,000	6/15/1981
174	Cold Mills 1 & 2 Tank 8	Mineral Oil-Based Coolant	30,000	6/15/1981
175	Cold Mills 1 & 2 Tank 11	Mineral Oil-Based Coolant	30,000	6/15/1981
176	Cold Mills 1 & 2 Tank 12	Mineral Oil-Based Coolant	30,000	6/15/1981
177	Cold Mills 1 & 2 Tank 13	Kerosene	6,000	6/15/1981
178	Cold Mill 3 Tank TA03	Mineral Oil-Based Coolant	1,200	1991
179	Cold Mill 3 Tank TA04	Mineral Oil-Based Coolant	3,000	1991
180	Cold Mill 3 Tank TA06	Mineral Oil-Based Coolant	1,200	1991
181	Cold Mill 3 Tank TA07	Mineral Oil-Based Coolant	5,350	1991
182	Cold Mill 3 Tank TA08	Mineral Oil-Based Coolant	1,500	1991
183	Cold Mill 3 Tank TA09	Mineral Oil-Based Coolant	1,500	1991
184	Water Services Tank 5	Mineral Oil-Based Coolant	22,500	6/15/1981
185	Water Services Tank 7A	Mineral Oil-Based Coolant	31,500	6/15/1981
186	Water Services Tank 7C	Mineral Oil-Based Coolant	31,500	6/15/1981
187	Water Services Tank 9	Mineral Oil-Based Coolant	32,500	6/15/1981
202	Cold Mill 3 Tank TA11	Mineral Oil-Based Coolant	4,300	2022

APPLICABLE REGULATIONS:
401 KAR 59:050, ***New storage vessels for petroleum liquids***

PRECLUDED REGULATIONS:
401 KAR 51:017, ***Prevention of significant deterioration of air quality,*** for EP184, EP185, EP186, & EP187 for VOC

1. **Operating Limitations:**
   a. The permittee shall only store petroleum liquids with a Reid vapor pressure of less than six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia) provided the maximum true

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

vapor pressure does not exceed six and nine tenths (6.9) kPa (one and zero tenths (1.0) psia). [401 KAR 59:050, Section 5(4)]

b. There shall be no visible holes, tears, or other opening in the seal, any seal fabric, shoe, or seal envelope. [401 KAR 59:050, Section 4(1)]

c. All openings, except stub drains, automatic bleeder vents, rim space vents, and leg sleeves, shall be equipped with covers, lids, or seals such that: [401 KAR 59:050, Section 4(2)]
   i. The cover, lid, or seal is in the closed position at all times (i.e., no visible gap). [401 KAR 59:050, Section 4(2)(a)]
   ii. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and [401 KAR 59:050, Section 4(2)(b)]
   iii. Rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. [401 KAR 59:050, Section 4(2)(c)]

2. Emission Limitations:
For EP184, EP185, EP186, and EP187, refer to **Section D.5.** for group VOC emissions limitations. [To preclude 401 KAR 51:017]

3. Testing Requirements:
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. For EP184, EP185, EP186, and EP187, the permittee shall monitor the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

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

5. Specific Recordkeeping Requirements:
a. For EP184, EP185, EP186, and EP187, the permittee shall maintain records of the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

b. 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:
None.

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

GROUP 22 REQUIREMENTS: Cold Mill 3 Area Units
EP21 (3020-1A), EP23 (3040-C), & EP24 (3040-5)

Description:
Cold Mill 3 processes aluminum coils to reduce their gauge thickness. Cold Mill 3 is equipped with a Progressive Purification Filter and Condenser to control PM and VOC emissions, respectively. The Cold Mill 3 Coolant Filtration Mix Tanks consists of 3 tanks and a filtering aid handling system. Only the filtering aid handling system is equipped with a fabric filter for control of PM emissions.

Emission Point (Unit ID)	Unit Name	Maximum Capacity	Control Device	Construction Commenced
21 (3040-1A)	Cold Mill 3	96.0 ton/hr	Progressive Purification System & Condenser (C-3040-1A)	1/7/1991; Modified 2022
23 (3040-C)	Cold Mill 3 Coolant Filtration Mix Tanks (Body Feed Tanks #1 & #2, Pre-Coat Tank, & Filtering Aid Handling System)	Body Feed Tanks: 1,504 gal, each; Pre-Coat Tank: 374 gal; 0.014 ton/hr filtering aid	Bag Dump Station Dust Collector	1/7/1991
24 (3040-5)	Cold Mill 3 Tanks TA01, TA02, & TA05	TA01: 160,000 gal; TA02: 24,000 gal; TA05: 15,000 gal	None	6/26/1991

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

PRECLUDED REGULATION:
401 KAR 51:017, ***Prevention of significant deterioration of air quality***, for PM & VOC

1. **Operating Limitations:**
   The permittee shall limit the operation of the emission points listed above as necessary to comply with the emission standards in **Section D.5.**

2. **Emission Limitations:**
   a. For EP21, 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 EP21, 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

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

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 weights ≤0.5 tons/hour: 2.34 lbs/hr
ii. For process weights <30 tons/hour: $E = 3.59P^{0.62}$
iii. For process weights ≥ 30 tons/hour: $E = 17.31P^{0.16}$

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

c. Refer to **Section D.5.** for group PM and VOC emissions limitations. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:

1) For **2. Emission Limitations (a),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5. Specific Recordkeeping Requirements (a).**
2) For **2. Emission Limitations (b),** the permittee shall demonstrate compliance each month by comparing the allowable rate to the actual rate calculated using the following equation:

$$E_{PMi} = \frac{P_i \times EF_{PM}}{h_i} \times \left(1 - \frac{CE}{100}\right)$$

Where:
i = month;
E_{PMi} = the actual average hourly particulate emissions rate for month i (lb/hr);
P_i = the actual specific operating parameter for month i (units/month);
EF_{PM} = the overall uncontrolled KYEIS particulate emission factor (lb/unit);
h_i = the actual total hours of operation for month i (hrs/month); and
CE = the overall control efficiency (%).

3. Testing Requirements:

a. 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.

b. No later than December 31, 2025, and every 5 years thereafter, the permittee shall perform a stack test for VOC and PM emissions on EP21 using the following methods:
i. U.S. EPA Method 25A for VOC; and
ii. U.S. EPA Method 5 for PM;
iii. An alternate method as approved by the Division;
iv. This testing shall establish an emission factor for VOC and PM in lb/ton of aluminum;
v. The permittee shall record information that is necessary to document emission capture system and add-on control device operating conditions during the test and the submitted test report shall include an explanation as to why the conditions represent normal operation.

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

c. Within 60 days after achieving the maximum production rate at which Cold Mill 3 (EP21) will be operated but not later than 180 days after initial startup after the changes to Cold Mill 3 implemented in V-20-004 R2 are complete, the permittee shall complete performance testing for VOC emissions using U.S. EPA Method 25A (or an alternate test method as approved by the Division) and for PM, PM_{10}, and $PM_{2.5}$ emissions from EP21, using 40 CFR 51, Appendix M, Method 201A/202, and 40 CFR 60, Appendix A, Method 5 (or an alternate test method as approved by the Division) at the Cold Mill 3 stack. The performance test program shall include the following elements: [401 KAR 50:045]
   i. Prior to the test, the permittee shall establish a volumetric exhaust flow rate range and operate the capture system within these ranges during the test.
   ii. The permittee shall record information that is necessary to document emission capture system and add-on control device operating conditions during the test and the submitted test report shall include an explanation as to why the conditions represent normal operation.
   iii. The permittee shall monitor process weight rate and volumetric exhaust flow rate during the test.
   iv. This testing will establish a stack outlet emission factor for Cold Mill 3 for VOC, PM, PM_{10}, and $PM_{2.5}$ emissions in lb/ton of aluminum.

d. Refer to **Section D.8.**

4. Specific Monitoring Requirements:

a. For EP21, the permittee shall perform a visual observation of the opacity of emissions from each stack no less frequently than once per month using U.S. EPA Reference Method 9 while the associated affected facility is operating. [401 KAR 52:020, Section 10]

b. The permittee shall monitor the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly amount of aluminum processed in tons;
   iv. The monthly hours of operation;
   v. For EP21, The hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP21 and EP23, the monthly and 12-month rolling emissions of PM and VOC in tons;
   vii. For EP24, the monthly and 12-month rolling emissions of VOC in tons;

c. The permittee shall monitor, at least monthly, the operating parameters established in most recent stack test in which compliance was demonstrated and ensure the equipment is operated within those parameters. Refer to **3. Testing Requirements (c)**. [401 KAR 52:020, Section 10]

d. The permittee shall, at least daily, monitor the pressure drop across the Progressive Purification System and ensure it remains within the proper operating range as specified

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

by the manufacturer or as established during the most recent stack test in which compliance was demonstrated. [401 KAR 52:020, Section 10]

e. After initial startup after the changes to Cold Mill 3 implemented in V-20-004 R2 are complete, the permittee shall, at least daily, monitor the cooling fluid temperature at the main supply line to the inlet of the condenser from the closed-loop chiller system and ensure it remains within the proper operating range as specified by the manufacturer or as established during the most recent stack test in which compliance was demonstrated. [401 KAR 52:020, Section 10]

f. Refer to **Section F** for general monitoring requirements.

5. Specific Recordkeeping Requirements:

a. The permittee shall retain records of the all visual observations made using U.S. EPA Reference Method 9**,** including the date, time, initials of observer, Method 9 readings taken, and any corrective action taken including results due to observed emissions. [401 KAR 52:020, Section 10]

b. The permittee shall maintain records of the following: [401 KAR 52:020, Section 10]
   i. The monthly average process weight rate in tons/hr;
   ii. The monthly coolant usage in Mgal;
   iii. The monthly amount of aluminum processed in tons;
   iv. The monthly hours of operation;
   v. For EP 21, the hourly PM emission rate, as calculated for **2. Emission Limitations**, in lb/hr;
   vi. For EP21 and EP23, the monthly and 12-month rolling emissions of PM and VOC in tons;
   vii. For EP24, the monthly and 12-month rolling emissions of VOC in tons;
   viii. SDSs of all materials used in the cold mill.
   ix. The monthly operating parameters monitored according to **4. Specific Monitoring Requirements (c);**
   x. The daily pressure drop across the Progressive Purification System.
   xi. After initial startup after the changes to Cold Mill 3 implemented in V-20-004 R2 are complete, the daily cooling fluid inlet temperature to the condenser.

c. 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:

a. The permittee shall properly maintain, keep in good operating condition, use in conjunction with the associated processes, and operate in accordance with the manufacturer's specifications all control equipment associated with Cold Mill 3. [401 KAR 52:020, Section 10]

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

b. Refer to **Section E.**

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

GROUP 23 REQUIREMENTS: Miscellaneous Process Operations
EP28, EP47 (4021-6), EP51 (6035-A), EP 190 (4021-10B), EP191, & EP192

Description:
Various emission points that are included in Group Emission Limitations in Group 13 and/or Section D.

Emission Point (Unit ID)	Unit Name	Contents	Tank Capacity (gal)	Construction Commenced
28	Water Services Tank 6B	Demulsified Oil	41,500	6/1/1990
47 (4021-6)	Propane Tanks 1, 2, 3, & 4	Propane	Tank 1: 90,000; Tanks 2-4: 48,000, each	6/15/1981
51 (6035-A)	Coating Tanks A, B, & C	Coating Material	12,000 each	6/9/1992
190 (4021-10B)	Water Services Tank 4	Emulsified Oil	200,000	6/15/1981
191	Water Services Tank 7B	Diesel Fuel	31,500	6/15/1981
192	Water Services Tank 8	Emulsified Oil	200,000	6/1/1990

APPLICABLE REGULATIONS:

STATE-ORIGIN REGULATION:
401 KAR 63:021, *Existing sources emitting toxic air pollutants,* for EP51 & EP190

PRECLUDED REGULATION:
401 KAR 51:017, *Prevention of significant deterioration of air quality,* for EP28, EP47, EP190, EP191 & EP192 for VOC

1. **Operating Limitations:**
   The permittee shall limit the operation of the emission points listed above as necessary to comply with the emission standards in **Section D.4.** and **D.5.**

2. **Emission Limitations:**
   a. For EP51 & EP190, refer to **Section B,** Group 13 requirements for group emission limitations related to 401 KAR 63:021.

   b. For EP47 & EP190, refer to **Section D.4.** for group VOC emissions limitations. [To preclude 401 KAR 51:017]

   c. For EP28, EP191, and EP192, refer to **Section D.5.** for group VOC emissions limitations. [To preclude 401 KAR 51:017]

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

3. Testing Requirements:

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. For EP28, EP47, EP190, EP191 and EP192, the permittee shall monitor the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

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

5. Specific Recordkeeping Requirements:

a. For EP28, EP47, EP190, EP191 and EP192, the permittee shall monitor the monthly and 12-month rolling emissions of VOC in tons. [401 KAR 52:020, Section 10]

b. 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)

GROUP 24 REQUIREMENTS: Mobile Engine-Powered Bale Breakers & Mobile Engine-Powered Screener

EP193A & B, EP199A & B, EP203A & B, & EP204A & B

Description:
The mobile bale breakers provide additional large scrap bale breaking capability. Each is powered by a non-road diesel engine and has no control device equipped.

The mobile screener separates gravel from the aluminum scrap from storage on gravel pads. It is powered by a non-road diesel engine and has fogging system equipped for fugitive dust control.

Emission Point (Unit ID)	Unit Name	Maximum Capacity (ton/hr)	Power Output (HP)	Liter/Cylinder	Construction Commenced
193A	Mobile Bale Breaker Engine #1	N/A	755	3.02	2020
193B	Mobile Bale Breaker #1	40	N/A	N/A	2020
199A	Mobile Bale Breaker Engine #2	N/A	755	3.02	2021
199B	Mobile Bale Breaker #2	40	N/A	N/A	2021
203A	Mobile Screener Engine	N/A	74	0.55	2023
203B	Mobile Screener	100	N/A	N/A	2023
204A	Mobile Bale Breaker Engine #3	N/A	755	3.02	2023
204B	Mobile Bale Breaker #3	40	N/A	N/A	2023

APPLICABLE REGULATIONS:

401 KAR 63:010, *Fugitive emissions.* Applicable to emissions into the air outside buildings, structures, & equipment other than from a stack or air pollution control equipment exhaust.

PRECLUDED REGULATIONS:

401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 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 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

1. **Operating Limitations:**
   a. For EP193A, 199A, 203A, and 204A, to preclude regulation as a stationary engine, the facility shall provide documentation that the engine does not remain at a location for more than 12 consecutive months. A location is any single site at a building, structure,

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

facility, or installation. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. [40 CFR 1068.30, *Nonroad engine* (2)(iii)]

b. 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. 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)]
   ii. 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)]
   iii. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
   iv. The maintenance of paved roadways in a clean condition; or [401 KAR 63:010, Section 3(1)(e)]
   v. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]

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

Compliance Demonstration Method:

1) For **1. Operating Limitations (a)**, the permittee shall demonstrate compliance by meeting the requirements of **4. Specific Monitoring Requirements (b)**, **5**. **Specific Recordkeeping Requirements (c)**, and **6. Specific Reporting Requirements**.

2) For **1. Operating Limitations (b)** and **(c),** the permittee shall demonstrate compliance by meeting the requirements in **4. Specific Monitoring Requirements (a)** and **5**. **Specific Recordkeeping Requirements (a)**.

2. Emission Limitations:

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

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:
The permittee shall demonstrate compliance by meeting the requirements of **5**. **Specific Recordkeeping Requirements (b)**.

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

b. The permittee shall monitor the engine's location including each location of the engine, the initial date at each location, the date moved from each location, and the engine's function at each location. [401 KAR 52:020, Section 10]

c. The permittee shall monitor the monthly amount of diesel combusted in gallons. [401 KAR 52:020, Section 10]

d. 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 any Reference Method 22 performed and field records identified in Reference Method 22 and any corrective action taken and the results. [401 KAR 52:020, Section 10]

c. The permittee shall maintain records of the engine's location. The location log shall be affixed to the engine itself or to the piece of equipment the engine is on. The log shall specify each location of the engine, the initial date at each location, the date moved from each location, and the engine's function at each location. [401 KAR 52:020, Section 10]

d. The permittee shall maintain records of the monthly amount of diesel combusted in gallons. [401 KAR 52:020, Section 10]

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

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

6. Specific Reporting Requirements:

a. The permittee shall include, in the semi-annual report, the locations, the initial location dates, the move dates of the engine, and the engine's function at each location. [401 KAR 52:020, Section 10]

b. Refer to **Section F** for general recordkeeping 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.	Caustic Tank	401 KAR 63:010
2.	Hot Mill Area Tanks 1, 3-9, & 11-16	401 KAR 63:010
3.	Cold Mill 1 & 2 Area Tanks 1, 3, 9, & 10	401 KAR 63:010
4.	Finishing Tank	401 KAR 63:010
5.	Cold Mill 3 Tank TA10	401 KAR 63:010
6.	Space Heaters	401 KAR 63:020
7.	Induced Air Flotation Units IAF1 & IAF2	401 KAR 63:010
8.	Ingot Butt Saw	401 KAR 63:010
9.	Level Clean Line Waste Treatment Tanks (6)	None
10.	Water Services Sump	401 KAR 63:010
11.	Cooling Tower 2	401 KAR 59:010
12.	Cooling Tower 3	401 KAR 59:010
13.	Garage-Area Diesel Tank	None
14.	Parts Washer in Remelt Area	401 KAR 63:010
15.	Parts Washer in Hot Mill Area	401 KAR 63:010
16.	Parts Washer in Maintenance Services Area	401 KAR 63:010
17.	Parts Washer in Cold Mill Area	401 KAR 63:010
18.	Parts Washer in Finishing Area	401 KAR 63:010
19.	Large Parts Washer in Roll Shop	401 KAR 63:010
20.	Small Parts Washer in Roll Shop	401 KAR 63:010
21.	Tension Leveler	None
22.	Slitter 1	None
23.	Slitter 2	None
24.	Slitter 3	None
25.	Coating Mix Room 1 Tanks 1-6	401 KAR 63:010
26.	Coating/Solvent Tank 1	401 KAR 63:010
27.	Coating/Solvent Tank 2	401 KAR 63:010
28.	Coating Pump Room Fugitives	401 KAR 63:010
29.	Coating Lab Vent Hoods	401 KAR 59:010
30.	Landfill	401 KAR 63:010
31.	Landfarm	401 KAR 63:010
32.	Chlorine Building	None
33.	Level, Clean, & Prelube Process Line	401 KAR 59:010
34.	Plant Roads	401 KAR 63:010
35.	Nutshell Filter Tanks (2)	None
36.	Sanitary Package-Sewage Treatment Plant	401 KAR 59:010; 401 KAR 63:010
37.	Hot Mill Motor Lube Tank	401 KAR 63:010
38.	Hot Mill Oil Mist Tank	401 KAR 63:010
39.	Hot Mill B/B Tank	401 KAR 63:010

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

	Description	Generally Applicable Regulation
40.	Scalper 1 Tank	401 KAR 63:010
41.	Scalper 2 Tank	401 KAR 63:010
42.	Pusher Furnace 1 & 2 – Tank 1	401 KAR 63:010
43.	Pusher Furnace 1 & 2 – Tank 2	401 KAR 63:010
44.	Pusher Furnace 1 & 2 – Tank 3	401 KAR 63:010
45.	Pusher Furnace 3 – Hydraulic Oil Tanks	401 KAR 63:010
46.	Waste Solvent Tank 3	401 KAR 63:010
47.	Coil Slicer	401 KAR 63:010
48.	Remelt 2 Casting Bay Cooling Towers (2) (EP143)	401 KAR 59:010
49.	Scalped Chip Briquetting System (EP153)	401 KAR 59:010
50.	Cold Mill 4 Area Filtering Air Handling System (EP163)	401 KAR 59:010
51.	Cold Mill 4 Area Cooling Tower (EP164)	401 KAR 59:010
52.	Flux Box Baghouse Burner (Nat. Gas Fired: 3 MMBtu)	401 KAR 59:010; 401 KAR 63:020
53.	DC4 Sow Dryer #1 (EP194)	401 KAR 59:010; 401 KAR 63:020
54.	DC4 Sow Dryer #2 (EP195)	401 KAR 59:010; 401 KAR 63:020
55.	Natural Gas-Fired Crucible Pre-Heating Station #1 (Multichamber Furnace)	401 KAR 59:010; 401 KAR 63:020
56.	Natural Gas-Fired Crucible Pre-Heating Station #2 (Multichamber Furnace)	401 KAR 59:010; 401 KAR 63:020
57.	Natural Gas-Fired Crucible Pre-Heating Station #3 (Multichamber Furnace)	401 KAR 59:010; 401 KAR 63:020
58.	Natural Gas-Fired Crucible Pre-Heating Station #1 (Swarf Furnace)	401 KAR 59:010; 401 KAR 63:020
59.	Natural Gas-Fired Crucible Pre-Heating Station #2 (Swarf Furnace)	401 KAR 59:010; 401 KAR 63:020
60.	Cold Mill TEWAC Chiller Tank #1	None
61.	Cold Mill TEWAC Chiller Tank #2	None
62.	Finishing North Diesel Tank	401 KAR 63:010
63.	Pusher Furnace 4 Hydraulic Oil Tank	401 KAR 63:010
64.	Decoater Baghouse Alkaline Reagent Silos (2)	401 KAR 59:010
65.	Water Services Tanks 10, 11, 12, 13A, 13B, 13C, 13D, 14, 15, 16A, 16B, 16C, 16D, & 17 (non-VOC)	None
66.	Hot Mill Tank 19	401 KAR 63:010
67.	Hot Mill Tank 20	401 KAR 63:010
68.	Hot Mill Tank 21	401 KAR 63:010
69.	Cooling Tower 4	401 KAR 59:010
70.	Slitter 5	401 KAR 63:010
71.	Cold Mill 4 Area Filtering Aid Handling System #2	401 KAR 59:010
72.	Slitter 4	401 KAR 63:010
73.	DC4 Mobile Scrap Conveyor #1	401 KAR 63:010
74.	DC4 Mobile Scrap Conveyor #2	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. *PM, PM_{10}, $PM_{2.5}$, VOC, HF, HCL, D/F, THC, NO_x, SO_2, CO, GHG, and HAPs* 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. *Secondary aluminum processing units*. If the permittee cannot or chooses not to demonstrate compliance with the applicable individual emission limitations under 40 CFR 63, Subpart RRR referenced in **Section B** above, the permittee shall comply with the emission limits calculated using the equations for PM, HCl, and D/F in 40 CFR 63.1505(k)(1) through (3) for each secondary aluminum processing unit (SAPU) at the secondary aluminum production facility. [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 D/F in excess of: [40 CFR 63.1505(k)(1) – (3)]

$$L_{c_{PM,HCl,D/F}} = \frac{\sum_{i=1}^{n} \left(L_{ti_{PM,HCl,D/F}} \times T_{ti} \right)}{\sum_{i=1}^{n} (T_{ti})}$$

Where:

$Lti_{PM,HCl,D/F}$ = the PM, HCl, or D/F emission limit for individual emission unit *i* in paragraph 40 CFR 63.1505(i)(1) and (2) for a group 1 furnace or in 40 CFR 63.1505(j)(1) and (2) for an in-line fluxer;

Tti = the mass of feed/charge for 24 hours for individual emission unit i; and

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

NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM, HCl, or D/F limit. Clean charge furnaces cannot be included in the D/F calculation since they are not subject to the D/F limit.

Compliance Demonstration Method:

The permittee shall use the procedures in 40 CFR 63.1513(e)(1), (2), and (3) or the procedure in (e)(4) to determine compliance with emission limits for a secondary aluminum processing unit. [40 CFR 63.1513(e)]

1) The permittee shall use the following equations to compute the mass-weighted PM, HCl, and D/F emissions for a secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit ($Ec_{PM,HCl,D/F}$) is less than or equal to the emission limit for the secondary aluminum processing unit ($Lc_{PM,HCl,D/F}$) calculated using Equation 1, 2, and 3 in 40 CFR 63.1505(k). [40 CFR 63.1513(e)(1) – (3)

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

$$E_{c_{PM,HCl,D/F}} = \frac{\sum_{i=1}^{n} \left(E_{ti_{PM,HCl,D/F}} \times T_{ti}\right)}{\sum_{i=1}^{n} (T_{ti})}$$

Where:

$Ec_{PM,HCl,D/F}$ = The mass-weighted PM, HCl, or D/F emissions for the secondary aluminum processing unit;

$Eti_{PM,HCl,D/F}$ = Measured PM, HCl, or D/F emissions for individual emission unit, or group of co-controlled emission units, i;

Tti = 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.

2) As an alternative to using the equations in 40 CFR 63.1513(e)(1), (2), and (3), 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)]

4. Emissions from the original plant shall not equal or exceed 250 tons per year, on a rolling 12-month basis, of particulate matter (PM), volatile organic compounds (VOC), and nitrogen oxides (NO_X). Emissions from the original plant include contributions from the following emission points: [To preclude 401 KAR 51:017]

Emission Point (Unit ID)	Unit Name	Initial Construction Date
01 (1002-1&2)	Aluminum Skimming House	6/15/1981
02 (1005-1A&B)	Melt Furnace (East) & Pre-Heater (DC1)	6/15/1981
03 (1005-4A&B)	Melt Furnace (West) & Pre-Heater (DC2)	6/15/1981
04 (1005-2)	Hold Furnace (East) (DC1)	6/15/1981
05 (2005-1A-C)	Scalper 1	6/15/1981
06 (2010-A)	Carbottom Furnaces 1 - 3	6/15/1981
07 (2015-1)*	Reversing Mill	6/15/1981
08 (2015-2)*	Finishing Mill	6/15/1981
09 (6020-A)	Coating Line 1	6/15/1981
30 (3005-1)	Cold Mill 1	6/15/1981
12 (3030-B & D)	Annealing Furnaces 3 & 4	6/15/1981
32 (3010-1)	Cold Mill 2	6/15/1981
15-A (4021-A)	Boiler #1	6/15/1981
15-B (4021-A)	Boiler #2	6/15/1981
15-C (4021-A)	Boiler #3	6/15/1981
17 (1005-5)	Hold Furnace (West) (DC2)	6/15/1981
22-A (1001-1)	Flux Box (DC1)	6/15/1981
22-B (1001-1)	Flux Box (DC2)	6/15/1981

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Emission Point (Unit ID)	Unit Name	Initial Construction Date
46 (4021-5)	Propane Flare	6/15/1981
47 (4021-6)	Propane Tanks 1, 2, 3, and 4	6/15/1981
48 (4021-10A)	Water Services Tank 6A	6/15/1981
49 (4021-11)	Cooling Tower 1	6/15/1981
59 (3010-2)	Control Device for CM1 & CM2: Roll Coolant Recovery System (RCRS)	2011
190 (4021-10B)	Water Services Tank 4	6/15/1981

* Criteria pollutants emitted during the first 4,066 hours of operation in any consecutive 12-month period shall be counted toward the original plant-wide emission limits.

5. Emissions from all emission points listed on permit F-97-003 shall not equal or exceed 250 tons per year, on a rolling 12-month basis, of particulate matter (PM), volatile organic compounds (VOC), and nitrogen oxides (NO_X). Permit F-97-003 lists the following emission points: [To preclude 401 KAR 51:017]

Emission Point (Unit ID)	Unit Name	Initial Construction Date
01 (1002-1&2)	Aluminum Skimming House	6/15/1981
02 (1005-1A&B)	Melt Furnace (East) & Pre-Heater (DC1)	6/15/1981
03 (1005-4A&B)	Melt Furnace (West) & Pre-Heater (DC2)	6/15/1981
04 (1005-2)	Hold Furnace (East) (DC1)	6/15/1981
07 (2015-1) *	Reversing Mill (incremental increase)	6/15/1981
08 (2015-2) *	Finishing Mill (incremental increase)	6/15/1981
17 (1005-5)	Hold Furnace (West) (DC2)	6/15/1981
18 (2011-A)	Pusher Furnaces 1 & 2	1/16/1990
21 (3040-1A)	Cold Mill 3	1/7/1991
22-A (1001-1)	Flux Box (DC1)	6/15/1981
22-B (1001-1)	Flux Box (DC2)	6/15/1981
22-C (1001-1)	Flux Box (DC3)	11/26/1991
23 (3040-C)	Cold Mill 3 Coolant Filtration Mix Tank	6/26/1991
24 (3040-5)	Cold Mill 3 Tanks TA01, TA02, TA05	6/26/1991
25 (1009-1C)	Chip Conveyor for Swarf Furnace	11/15/1997
26 (1009-1A-D)	Swarf Furnace (Main Hearth, Sidewell, & Drossing)	11/15/1997
27 (1008-1)	Reservoir Furnace	10/2/1997
28	Water Services Tank 6B	6/1/1990
40 (1006-2)	Melt Furnace (DC3)	11/26/1991
42 (1006-2)	Hold Furnace (DC3)	11/26/1991
184	Water Services Tank 5	6/15/1981
185	Water Services Tank 7A	6/15/1981
186	Water Services Tank 7C	6/15/1981
187	Water Services Tank 9	6/15/1981
191	Water Services Tank 7B	6/15/1981

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Emission Point (Unit ID)	Unit Name	Initial Construction Date
192	Water Services Tank 8	6/1/1990

* Criteria pollutants emitted after the first 4,066 hours of operation in any consecutive 12-month period shall be counted toward the expansion plant-wide emission limits.

Compliance Demonstration Method:
The permittee shall demonstrate compliance with **Section D.4.** and **D.5.** by calculating, monthly, the 12-month rolling total emissions for each group of emission points (and incremental increases). If an emission point would otherwise be an insignificant activity, the permittee may assume that the emission point contributes its potential monthly emissions to the total in lieu of calculating actual emissions for the unit.

6. **Initial Requirements for the Remelt 2 and Hot Mill/Cold Mill Expansion Project:**
The permittee shall not exceed the net emissions increase values of PM, PM_{10}, and $PM_{2.5}$ resulting from the Remelt 2 and Hot Mill/Cold Mill expansion project (V-13-020 R2) listed in Table 1, below. [To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Table 1

Pollutant	Synthetic Minor Limits[1] (tpy)
PM	17.92
PM_{10}	6.33
$PM_{2.5}$	2.83

[1]Note: The calculation for these totals only includes the contribution from those new emission units installed as part of the project and identified in Table A, and does not include the contributions from modified or affected emission units.

Compliance Demonstration Method:

1) The permittee shall demonstrate initial compliance with the above limits after performing the initial testing required in **Section B** for each unit listed in Tables A and B, and shall use the tested emission factors in the calculation, below.

2) For each pollutant after each initial testing event required in **Section B** for an affected Table A or B unit, the permittee shall demonstrate that E_{net}, as calculated by the equation below, does not exceed the applicable limit.

Equation 1

$$E_{net}^{*} = E_{potential} + E_{con}$$

Where:

E_{net} = Net Emission increase from Remelt 2 and Hot Mill/Cold Mill Expansion project (V-13-020 R2) (tons/yr)

$E_{potential}$ = Potential emissions of the current project (tons/yr) from new emission units that have commenced operation (Refer to Table A, below)

E_{con} = Contemporaneous emission change (tons/yr) using potential emissions; the sum of increases and decreases from projects completed during the contemporaneous period (Refer to Table B, below)

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

*Note: The calculation shall use capture and building control efficiencies, as submitted in the approved application for V-13-020 R2. The $E_{potential}$ calculation shall be determined based on the maximum potential throughput for each Table A unit and stack test emission factors or emission factors approved in the permit application for the project. The E_{con} calculation shall be determined based on the difference of the baseline actual emissions documented in the permit application from the potential to emit for each Table B source, where the potential to emit is determined from the maximum potential throughput and stack test emission factors or emission factors approved in the permit application for the project.

3) For each emission unit involved in the netting calculation, the permittee shall complete the initial testing required in **Section B** and use the tested inlet/outlet emission factors to calculate E_{con} and $E_{potential}$ in the equation above. If testing is not required, the permittee shall use the emission factors approved in the permit application for the project.

Table A: New Project Emission Units

EU	Description
126	Pusher Furnace 4
127	Shredding System A
128	Decoater A
129	Sidewell A1
130	Sidewell A2
131	Holder A
132	Flux Box A
133	Shredding System B
134	Decoater B
135	Sidewell B1
136	Sidewell B2
137	Holder B
140	Dross House
141	DC Generator Engine #1
142	DC Generator Engine #2
145	Remelt 2 Filter Box Pre-Heater
148	Remelt 2 Comfort Heating Systems
161	Cold Mill 4
162	Cold Mill 4 Heating Systems

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Table B: Contemporaneous Projects

Project
1. Finishing Mill Fume Exhaust Upgrade (2011)
2. Cold Mill 1 and 2 RCRS Installation (2011)
3. Sanitary Systems Emergency Generator (2013)
4. Coating Line RTO Installation (2014)
5. Remelt Area Emergency Generator Installation (2014)
6. Ingot Scalping Process Upgrade (2015)
7. CM2 Computer Room Emergency Generator (2016)
8. Gatehouse Emergency Generator (2016)
9. Recycle Center UPS Emergency Generator (2017)

7. **Continuing Requirements for the Remelt 2 and Hot Mill/Cold Mill Expansion Project:** The permittee shall not allow the emissions of PM, PM_{10}, and $PM_{2.5}$ resulting from the Remelt 2 and Hot Mill/Cold Mill Expansion project (V-13-020 R2) to exceed the values listed in Table 2, below. The permittee shall demonstrate on a 12-month rolling basis, that the limits below were not exceeded. Refer to Table A, above for a list of units included in this demonstration. [Self-Imposed Limitation to preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$]

Table 2

Pollutant	Project Emissions Increase[1] (tpy)
PM	83.8
PM_{10}	87.6
$PM_{2.5}$	71.4

[1]The totals identified in this table only include the contributions from the emission units listed in Table A, above.

Compliance Demonstration Method:

1) For each emission unit in Table A, the permittee shall demonstrate continuous compliance by completing the testing required in **Section B** and using the tested inlet/outlet emission factors in the calculation of their 12-month rolling emissions. Prior to completing the required testing or if testing is not required, the permittee shall use the approved numbers in the permit application for the project.

2) Any time that the requirements for compliance demonstration in **Section B** for capture and building control efficiency are not met (e.g. minimum volumetric flow rate), the capture and building control efficiency shall be assumed to be 0% for the purposes of this calculation and KYEIS.

8. The permittee shall perform a technical evaluation of each capture system and perform a stack test every five years if requested and, if changes are made to any physical installation of the capture system or control device serving the emission units listed in **Section B** above. The permittee may use relevant EPA Reference Test Methods or alternative methods to calculate the capture efficiency achieved during a performance test. Such alternative method

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

shall include measurements of capture velocity and volumetric flow rates inlet to and outlet from the control device before and after the capture system/control device changes or physical changes in the emission point. The permittee may use alternative method such as a construction of a temporary enclosure, around the source point during a performance test to calculate the capture efficiency. The alternative method shall be subject to prior approval by the Division. This request shall be submitted to the Division's Technical Service branch and the Permit Review branch.

9. **401 KAR 51:017, Section 16, Source Obligation.** The provisions of 401 KAR 51:017, Section 16(5) shall apply to projects at existing emissions units at a major stationary source other than projects at a source with a PAL, if there is a reasonable possibility that a project that is not part of a major modification may result in a significant emissions increase; and the permittee elects to use the method specified in 401 KAR 51:001, Section 1(199)(b) to calculate projected actual emissions. [401 KAR 51:017, Section 16(5)(a)]
   a. Before beginning actual construction of a project specified in 401 KAR 51:017, Section 16(5)(a), the permittee shall document and maintain a record of the following information: [401 KAR 51:017, Section 16(5)(b)]
      i. A description of the project; [401 KAR 51:017, Section 16(5)(b)(1.)]
      ii. Identification of the emissions units for which emissions of a regulated NSR pollutant could be affected by the project; and [401 KAR 51:017, Section 16(5)(b)(2.)]
      iii. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including: [401 KAR 51:017, Section 16(5)(b)(3.)]
         1) Baseline actual emissions; [401 KAR 51:017, Section 16(5)(b)(3.)(a)]
         2) Projected actual emissions; [401 KAR 51:017, Section 16(5)(b)(3.)(b)]
         3) Amount of emissions excluded in calculating projected actual emissions and an explanation for why that amount was excluded; and [401 KAR 51:017, Section 16(5)(b)(3.)(c)]
         4) Any applicable netting calculations. [401 KAR 51:017, Section 16(5)(b)(3.)(d)]
   b. For a project specified in 401 KAR 51:017, Section 16(5)(a), the permittee shall: [401 KAR 51:017, Section 16(5)(c)]
      i. Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that are emitted by any emissions unit identified in 401 KAR 51:017, Section 16(5)(b)(2.); and [401 KAR 51:017, Section 16(5)(c)(1.)]
      ii. Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis for: [401 KAR 51:017, Section 16(5)(c)(2.)]
         1) Five (5) years following resumption of regular operations after the change; or [401 KAR 51:017, Section 16(5)(c)(2.)(a)]
         2) Ten (10) years following resumption of regular operations after the change if the project increases the design capacity or potential to emit of the regulated NSR pollutant at the emissions unit. [401 KAR 51:017, Section 16(5)(c)(2.)(b)]
   c. The permittee shall submit a report to the Cabinet if: [401 KAR 51:017, Section 16(5)(e)(1.)]
      i. The annual emissions, in tons per year, from a project identified in 401 KAR 51:017, Section 16(5)(a) exceeds the baseline actual emissions, as documented and maintained pursuant to 401 KAR 51:017, Section 16(5)(b)(3.), by a significant

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

amount for that regulated NSR pollutant; and [401 KAR 51:017, Section 16(5)(e)(1.)(a)]

ii. The emissions differ from the preconstruction projection as documented and maintained pursuant to 401 KAR 51:017, Section 16(5)(b)(3.). [401 KAR 51:017, Section 16(5)(e)(1.)(b)]

d. The report shall be submitted within sixty (60) days after the end of the year during which records are required to be generated under 401 KAR 51:017, Section 16(5)(b) and shall contain the following: [401 KAR 51:017, Section 16(5)(e)(2.)]
   i. The name, address, and telephone number of the major stationary source; [401 KAR 51:017, Section 16(5)(e)(2.)(a)]
   ii. The annual emissions as calculated pursuant to 401 KAR 51:017, Section 16(5)(c); and [401 KAR 51:017, Section 16(5)(e)(2.)(b)]
   iii. Any other information that the permittee wishes to include in the report. [401 KAR 51:017, Section 16(5)(e)(2.)(c)]

e. The permittee of the source shall make the information required to be documented and maintained under 401 KAR 51:017, Section 16(5) available for review upon request for inspection by the Cabinet or the general public pursuant to 401 KAR 52:100. [401 KAR 51:017, Section 16(5)(f)]

10. Pursuant to 401 KAR 51:017, Section 16(5)(c), VOC, PM_{10}, and $PM_{2.5}$ emissions from the following emission units shall be monitored for ten (10) years following resumption of regular operations after the changes to Scalper 2 (EP154), Reversing Mill (EP07), Finishing Mill (EP08), and Cold Mill 3 (EP21) implemented in V-20-004 R2 are complete:
    a. Hot Mill Tank 19 (Insignificant Activity #66)
    b. Hot Mill Tank 20 (Insignificant Activity #67)
    c. Hot Mill Tank 21 (Insignificant Activity #68)
    d. Cooling Tower 4 (Insignificant Activity #69)
    e. Boiler #4 (EP200)
    f. Slitter 5 (Insignificant Activity #70)
    g. Cold Mill 4 Storage Tank: Body Mix #2 (EP201)
    h. Cold Mill 4 Area Filtering Aid Handling System 2 (Insignificant Activity #71)
    i. Cold Mill 3 Tank TA11 (EP202)
    j. Finishing Mill (EP08)
    k. Reversing Mill (EP07)
    l. Ingot Scalping Process (EP05 – Scalper 1 and EP154 – Scalper 2)
    m. Cold Mill 3 (EP21)
    n. Pusher Furnaces 1 & 2 (EP18)
    o. Pusher Furnace 3 (EP19)
    p. Pusher Furnace 4 (EP126)
    q. Control Device for CM1 & CM2: Roll Coolant Recovery System (RCRS) (EP59)
    r. Fugitive Emissions from Cold Mill 1 (EP30)
    s. Fugitive Emissions from Cold Mill 2 (EP32)
    t. Cold Mills 1 & 2 Tank 6 (EP172)
    u. Cold Mills 1 & 2 Tanks 1, 3, 9 & 10 (Insignificant Activity #3)
    v. Hot Mill Tank 10 (EP167)
    w. CM3 Tanks TA01 (EP24), TA02 (EP24), TA03 (EP178), TA04 (EP179), TA05 (EP24),

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

TA06 (EP180), TA07 (EP181), TA08 (EP182), TA09 (EP183), and TA10 (or Pre-Coat Tank; EP23)

x. Note: Affected units listed above that are designated as insignificant activities may be tracked on the basis of annual potential to emit approved in the permit application for the project in place of calculating actual annual emissions using relevant process rates and emission factors from the permit application.

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. For EP26 (Excepting Swarf Hearth Baghouse), EP56, EP57, EP127, EP128, EP129, EP130, EP133, EP134, EP135, EP136, and EP205:
   a. The permittee shall: [40 CFR 63.1510(d)]
      i. Install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device; and [40 CFR 63.1510(d)(1)]
      ii. Inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with 40 CFR 63.1510(d)(2)(i), (ii), or (iii). As an alternative to the flow rate measurement specified in this paragraph, the inspection may satisfy the requirements of this paragraph, including the operating requirements in 40 CFR 63.1506(c), by including permanent total enclosure verification in accordance with 40 CFR 63.1510(d)(2)(i) or (iv). Inspections that fail to successfully demonstrate that the requirements of 40 CFR 63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that 40 CFR 63.1506(c) requirements are fully met. [40 CFR 63.1510(d)(2)]
         1) Conduct annual flow rate measurements using U.S. EPA Methods 1 and 2 in 40 CFR 60, Appendix A, or conduct annual verification of a permanent total enclosure using U.S. EPA Method 204; or the permittee may follow one of the three alternate procedures described in 40 CFR 63.1510(d)(2)(ii), (iii), or (iv) to maintain system operations in accordance with an operating limit established during the performance test. The operating limit is determined as the average reading of a parametric monitoring instrument (Magnehelic®, manometer, anemometer, or other parametric monitoring instrument) and technique as described in 40 CFR 63.1510(d)(2)(ii), (iii), and (iv). A deviation, as defined in 40 CFR 63.1510(d)(2)(ii), (iii), and (iv), from the parametric monitoring operating limit requires the permittee to make repairs or adjustments to restore normal operation within 45 days. [40 CFR 63.1510(d)(2)(i)]
         2) As an alternative to annual flow rate measurements using U.S. EPA Methods 1 and 2, measurement with U.S. EPA Methods 1 and 2 can be performed once every 5 years, provided that: [40 CFR 63.1510(d)(2)(ii)]
            (A) A flow rate indicator consisting of a pitot tube and differential pressure gauge (Magnehelic®, manometer or other differential pressure gauge) is installed with the pitot tube tip located at a representative point of the duct proximate to

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

the location of the Methods 1 and 2 measurement site; and [40 CFR 63.1510(d)(2)(ii)(A)]

(B) The flow rate indicator is installed and operated in accordance with the manufacturer's specifications; and [40 CFR 63.1510(d)(2)(ii)(B)]

(C) The differential pressure is recorded during the Method 2 performance test series; and [40 CFR 63.1510(d)(2)(ii)(C)]

(D) Daily differential pressure readings are made by taking three measurements with at least 5 minutes between each measurement and averaging the three measurements; and readings are recorded daily and maintained at or above 90 percent of the average pressure differential indicated by the flow rate indicator during the most recent Method 2 performance test series; and [40 CFR 63.1510(d)(2)(ii)(D)]

(E) An inspection of the pitot tube and associated lines for damage, plugging, leakage and operational integrity is conducted at least once per year; or [40 CFR 63.1510(d)(2)(ii)(E)]

3) As an alternative to annual flow rate measurements using EPA Methods 1 and 2, measurement with EPA Methods 1 and 2 can be performed once every 5 years, provided that: [40 CFR 63.1510(d)(2)(iii)]

(A) Daily measurements of the capture and collection system's fan revolutions per minute (RPM) or fan motor amperage (amps) are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at or above 90 percent of the average RPM or amps measured during the most recent Method 2 performance test series; or [40 CFR 63.1510(d)(2)(iii)(A)]

(B) A static pressure measurement device is installed in the duct immediately downstream of the hood exit, and daily pressure readings are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or better of the average vacuum recorded during the most recent Method 2 performance test series; or [40 CFR 63.1510(d)(2)(iii)(B)]

(C) A hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple and automated data logging software and associated hardware is installed; and daily readings are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or greater of the average readings during the most recent Method 2 performance test series; or [40 CFR 63.1510(d)(2)(iii)(C)]

(D) For booth-type hoods, hotwire anemometer measurements of hood face velocity are performed simultaneously with U.S. EPA Method 1 and 2 measurements, and the annual hood face velocity measurements confirm that the enclosure draft is maintained at 90 percent or greater of the average readings during the most recent Method 2 performance test series. Daily readings are made by taking three measurements with at least 5 minutes

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS (CONTINUED)

between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or greater of the average readings during the most recent Method 1 and 2 performance test series. [40 CFR 63.1510(d)(2)(iii)(D)]

4) As an alternative to the annual verification of a permanent total enclosure using U.S. EPA Method 204, verification can be performed once every 5 years, provided that: [40 CFR 63.1510(d)(2)(iv)]
   (A) Negative pressure in the enclosure is directly monitored by a pressure indicator installed at a representative location; [40 CFR 63.1510(d)(2)(iv)(A)]
   (B) Pressure readings are recorded daily or the system is interlocked to halt material feed should the system not operate under negative pressure; [40 CFR 63.1510(d)(2)(iv)(B)]
   (C) An inspection of the pressure indicator for damage and operational integrity is conducted at least once per calendar year. [40 CFR 63.1510(d)(2)(iv)(C)]

3. The permittee shall calibrate or replace any monitoring devices (i.e. pressure drop monitoring equipment) for the control equipment in **Section E.2.** in a manner consistent with the manufacturer's recommendations or, at a minimum, annually. [401 KAR 52:020, Section 10]

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].

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

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

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;
   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,

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

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	U.S. EPA Region 4
Bowling Green Regional Office	Air Enforcement Branch
2642 Russellville Road	Atlanta Federal Center
Bowling Green, KY 42101-3356	61 Forsyth St. SW
	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 Permit V-20-004 R4.

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.

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

SECTION G - GENERAL PROVISIONS (CONTINUED)

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.
(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*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

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

During periods of natural gas curtailment, the permittee may use propane as a back-up fuel for the emission points listed below. When the natural gas supplier curtails the amount of gas sent to Logan, the propane blending system is started. There are four tanks that supply the propane to be blended along with a unit that does the blending. The mixture of natural gas and propane is sent to the main plant facility in the same pipeline that carries the unblended natural gas. There are no separate lines to burn 100% propane. For any unit that burns natural gas in the main plant facility, there is no option to not burn the blended gas. The Remelt 2 (DC4) facility will not receive the propane/natural gas mixture. In this alternate operating scenario, the permittee has limited hours of operation during which propane can be used. All other regulations and requirements in Section B continue to apply to the emission points listed below.

Affected Facilities:

Emission Point (Unit ID)	Unit Name	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
02 (1005-1 A&B)	Melt Furnace (East) & Pre-Heater (DC1)	80.0	None	6/15/1981
03 (1005-4 A&B)	Melt Furnace (West) & Pre-Heater (DC2)	80.0	None	6/15/1981
04 (1005-2)	Hold Furnace (East) (DC1)	15.0	None	6/15/1981
06 (2010-A)	Carbottom Furnaces 1 - 3	100.26	None	6/15/1981
09 (6020-A)	Coating Line 1	13.0	RTO	6/15/1981; RTO inst. 9/2012
12 (3030-B & D)	Annealing Furnaces 3 & 4	17 each, 34 total	None	6/15/1981
15-A (4021-A)	Boiler #1	22	None	6/15/1981
15-B (4021-A)	Boiler #2	22	None	6/15/1981
15-C (4021-A)	Boiler #3	22	None	6/15/1981
200	Boiler #4	22	None	2022
17 (1005-5)	Hold Furnace (West) (DC2)	15.0	None	6/15/1981
18 (2011-A)	Pusher Furnaces 1 & 2	224.8	None	1/16/1990
19 (2011-B)	Pusher Furnace 3	124.0	None	10/1999
26 (1009-1A)	Swarf Furnace (Main Hearth)	34.0	None	11/15/1997

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

Emission Point (Unit ID)	Unit Name	Burner Maximum Capacity (MMBtu/hr)	Control Device	Construction Commenced
26 (1009-1B & 1D)	Swarf Furnace (Sidewell & Drossing)	34.0	Lime injected Baghouse & Leak Detection	11/15/1997
27 (1008-1)	Reservoir Furnace	50.0	None	10/2/1997
40 (1006-2)	Melt Furnace (DC3)	80.0	None	11/26/1991
42 (1006-2)	Hold Furnace (DC3)	15.0	None	11/26/1991
44 (1003-1)	Sow Dryer	24.0	None	9/1998
57 (1011-1)	Multichamber Furnace	27.3	Lime Injected Baghouse & Leak Detection	2006; Modified 2012
126 (2011-C)	Pusher Furnace 4	105.0	None	4/12/2016

APPLICABLE REGULATIONS: Unchanged from Section B

1. **Operating Limitations:**
   Propane may be used as an alternate fuel in the case of natural gas curtailment. Propane shall not be used as a backup fuel for more than 3,000 hours/yr on a 12-month rolling basis.

   Compliance Demonstration Method:
   To demonstrate compliance with **1. Operating Limitations**, the permittee shall keep records of the total hours of operation each month that propane is being used and ensure the total hours of operation remain below 3,000 hours during any rolling 12-month period. If a propane flow meter malfunctions, the permittee shall utilize an average daily usage as an acceptable estimate.

2. **Emission Limitations:**
   Unchanged from **Section B.**

3. **Testing Requirements:**
   Unchanged from **Section B.**

4. **Specific Monitoring Requirements:**
   Unchanged from **Section B.**

5. **Specific Recordkeeping Requirements:**
   The permittee shall maintain records of the hours of operation that each emission point uses propane as fuel. Other recordkeeping requirements are unchanged from **Section B.**

6. **Specific Reporting Requirements:**
   Unchanged from **Section B.**

SECTION H - ALTERNATE OPERATING SCENARIOS (CONTINUED)

7. **Specific Control Equipment Operating Conditions:**
   Unchanged from **Section B.**

SECTION I - COMPLIANCE SCHEDULE

N/A

APPENDIX A – COMPLIANCE ASSURANCE MONITORING PLANS

COMPLIANCE ASSURANCE MONITORING PLANS
LOGAN ALUMINUM ▪ RUSSELLVILLE, KENTUCKY

Prepared by:

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August 2019

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1. INTRODUCTION

As part of the Title V renewal process, Logan Aluminum (Logan) has evaluated the applicability of the Compliance Assurance Monitoring (CAM) rule, established in 40 CFR Part 64 and promulgated on November 21, 1997.[1] Under the CAM regulations, facilities are required to prepare and submit monitoring plans for certain emission units to provide on-going and reasonable assurance of compliance with emission limitations. Based on the complete CAM applicability analysis presented in Section 1.1 below, the following emission units at the Russellville plant are subject to the CAM rule:

Scrap Processing System [EP56(1010-1)],

Multichamber Furnace [EP57(1011-1)],

Swarf Furnace with Molten Metal Holder [EP26(1009-1B & D)],

Aluminum Skimming House [EP01(1002-1)], and

Reversing Mill and Finishing Mill [EP07(2015-1) and EP08(2015-2), respectively]

Cold Mill 1 and 2 [EP30(3005-1), 32(3010-1), and 59(3010-2)]

Cold Mill 4 [EP161(3050-1)]

Decoaters A and B [EP128(9033) and 134(9037)]

The CAM Plans for each of these emission units drafted in accordance with all applicable provisions of 40 CFR Part 64 and based on the U.S. EPA CAM technical guidance document are provided in Sections 2 through 10.[2]

1.1 CAM APPLICABILITY

1.1.1 CAM APPLICABILITY CRITERIA

Pursuant to 40 CFR 64.2(a), the CAM regulations apply to a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 40 CFR 64.1, at a major Title V source if the PSEU 1) is subject to an emission limitation or standard for the regulated pollutant, other than an emission limitation or standard that is exempt under 40 CFR 64.2(b), 2) uses a control device as defined in 40 CFR 64.1 to achieve compliance with the emission limitation, and 3) has potential pre-controlled emissions of the applicable regulated air pollutant that are equal to or greater than the Title V major source threshold.

[1] Logan only operates "small" (not defined as "large") pollutant-specific emission units (PSEU) at the Russellville plant. Therefore, in accordance with §64.5(b), a CAM plan is required to be submitted as part of an application for a renewal of a Part 70 (Title V) permit.

[2] U.S. EPA, *Technical Guidance Document: Compliance Assurance Monitoring*, August 1998.

1.1.2 CAM APPLICABILITY EXEMPTIONS

The CAM regulations specifically exempt certain emission limits from being considered for CAM applicability. Specifically, limits or standards proposed by U.S. EPA after November 15, 1990, pursuant to section 111 and section 112 of the Clean Air Act are exempted.[3] Emission limits for which "a part 70 or 71 permit specifies a continuous compliance determination method, as defined in 40 CFR 64.1" are also exempt.[4] Per 40 CFR 64.1, the definition of a continuous compliance determination method is:

> *…a method, specified by the applicable standard or an applicable permit condition, which: (1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and (2) Provides data either in units of the standard or correlated directly with the compliance limit.*

1.1.3 CAM APPLICABILITY DETERMINATION

For the CAM applicability determination, all emissions units at the facility were first reviewed to identify those which rely on control devices to achieve compliance with an emission limitation or standard. The potential pre-controlled emissions for the identified units were then compared to the Title V major source thresholds for the Russellville plant, 100 tpy of any regulated pollutant, 10 tpy of any individual HAP, and 25 tpy of combined HAPs. Per 40 CFR 64.2(a)(3), potential pre-control device emissions was interpreted to have the same meaning as "potential-to-emit", as defined in 64.1, except that emission reductions achieved by the applicable control device were not taken into account. For any units with pre-controlled potential emissions exceeding 100 tpy, the list of potential exemptions identified in Section 1.1.2 were then reviewed and applied as necessary.

The following emission units at the Russellville plant which use control devices to comply with emission limitations are subject to the CAM rule for the reasons cited:

- **Scrap Processing System** [EP56(1010-1)]: The Scrap Processing System uses a baghouse to achieve compliance with the PM emission limitations from 40 CFR 63, Subpart RRR, the PSD avoidance limit for PM, and the PWR PM limitation derived from 401 KAR 59:010. Although the 40 CFR 63, Subpart RRR emission limitations are exempt from CAM consideration since 40 CFR 63, Subpart RRR was proposed after November 15, 1990, the PSD avoidance and PWR PM emission limitations are not exempt from CAM. The pre-controlled potential emissions of PM from the unit are greater than 100 tpy. Refer to Section 2 containing the CAM Plan for the Scrap Processing System Baghouse.

- **Multichamber Furnace** [EP57(1011-1)]: The Multichamber Furnace uses a lime injected baghouse to comply with the 40 CFR 63, Subpart RRR emission limitations for PM and HCl, the PSD avoidance limit for PM, and the PWR PM emission limit. The pre-controlled potential emissions from the unit are greater than 100 tpy of PM and 10 tpy of HCl. Despite the 40 CFR 63, Subpart RRR limitations being exempt from consideration for CAM, the PSD avoidance and PWR emission limitations are CAM eligible. Refer to Section 3 containing the CAM Plan for the Multichamber Furnace Baghouse.

- **Swarf Furnace with Molten Metal Holder** [EP26(1009-1B & D)]: The Swarf Furnace uses a lime injected baghouse to comply with the 40 CFR 63, Subpart RRR emission

[3] 40 CFR 64.2(b)(1)(i)

[4] 40 CFR 64.2(b)(1)(vi)

limitations for PM and HCl and the PWR PM emission limitation. The pre-controlled potential emissions from the unit are greater than 100 tpy of PM and 10 tpy of HCl. Despite the 40 CFR 63, Subpart RRR limitations being exempt from consideration for CAM, the PWR emission limitation is CAM eligible. Refer to Section 4 containing the CAM Plan for the Swarf Sidewell Baghouse.

- **Aluminum Skimming House** [EP01(1002-1)] The Aluminum Skimming House relies on a baghouse to control emissions of PM to comply with the PWR emission limitation. The pre-controlled potential emissions of PM from the unit are greater than 100 tpy. Refer to Section 5 containing the CAM Plan for the Skimming House Baghouse.

- **Reversing Mill and Finishing Mill** [EP07(2015-1) and 08(2015-2), respectively] The Reversing Mill uses an inertial separator and the Finishing Mill uses second stage mist eliminators (SSMEs) to control emissions of PM to comply with the PWR emission limitations. The pre-controlled potential emissions of PM from the units are greater than 100 tpy. Refer to Sections 6 and 7 containing the CAM Plans for the Reversing Mill inertial separator and Finishing Mill SSMEs, respectively.

- **Cold Mills 1 and 2** [EP10(3005-1) and 14(3010-1)]: Cold Mills 1 and 2 use control devices to comply with the PWR PM emission limitation as well as PSD avoidance limitations for PM, PM_{10}, $PM_{2.5}$ and VOC. The pre-controlled potential emissions of PM, PM_{10}, $PM_{2.5}$, and VOC are greater than 100 tpy. Refer to Section 8 containing the CAM Plan.

- **Cold Mill 4** [EP161(3050-1)]: Cold Mill 4 uses a heavy oil scrubber (HOS) to comply with the PWR PM emission limitation, PSD avoidance limitations for PM, PM_{10}, $PM_{2.5}$, and Best Available Control Technology (BACT) emission limits for VOC. Based on the pre-controlled potential emissions data referenced in the Hot Mill-Cold Mill expansion project significant revision application, the pre-controlled potential emissions of PM, PM_{10}, $PM_{2.5}$, and VOC are greater than 100 tpy. Refer to Section 9 containing the CAM Plan. Logan will update this plan following completion of the initial performance testing of Cold Mill 4 to assess compliance with the applicable PSD avoidance and BACT emission limits.

- **Decoaters A&B** [EP128 (9033) and 134 (9037)]: The Decoaters use baghouses to comply with PWR PM emission limitations as well as PSD avoidance limitations for PM, PM_{10}, $PM_{2.5}$. The pre-controlled potential emissions of PM, PM_{10}, and $PM_{2.5}$ are greater than 100 tpy. Refer to Section 10 containing the CAM Plan.

1.2 CAM PLAN REQUIREMENTS

To provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a PSEU, the CAM plan submittal must 1) identify the control device monitoring approach, 2) identify the indicator range or value to be maintained and, 3) provide the rationale for selecting the monitoring approach and the indicator range or value. The control device monitoring procedures outlined in the CAM plans that follow are existing procedures currently implemented at the Russellville plant. Federally enforceable permit conditions that require Logan to conduct these procedures in accordance with control device manufacturer's specifications and for 40 CFR 63, Subpart RRR affected sources in accordance with the Operations, Maintenance, and Monitoring (OMM) Plan are being followed on an on-going basis.

2. CAM PLAN – SCRAP PROCESSING SYSTEM BAGHOUSE

2.1 CAM BACKGROUND

2.1.1 EMISSION UNIT

Description: Scrap Processing System consisting of aluminum scrap shredders and conveyors

Identification: EP56(1010-1)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

2.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $3.59 \times P^{0.62}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity
To preclude 401 KAR 51:017 for PM_{10}

Current Monitoring Requirements: Bag leak detection on baghouse exhaust
Monthly visible emissions observations (EPA Reference Method 9)

2.1.3 CONTROL TECHNOLOGY

Pulse jet baghouse manufactured by Schust with a maximum design flow capacity of 50,000 acfm and an air to cloth ratio of 6.55:1.

2.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 2-1.

TABLE 2-1. SCRAP PROCESSING SYSTEM BAGHOUSE MONITORING APPROACH SUMMARY

Indicator	
Parameter	Bag leak detector triboelectric signal
Measurement Approach	A triboelectric bag leak detection system operates at the baghouse exhaust. An alarm sounds when the signal remains over a preset level indicating a broken filter or other baghouse malfunction. Routine baghouse equipment maintenance will also be conducted in accordance with the 40 CFR 63, Subpart RRR operations, maintenance, and monitoring plan (OMMP).
Indicator Range	
	An excursion is defined as a triboelectric signal indicating a PM exit loading greater than 45 mg/m^3 for more than 180 seconds. Excursions trigger an alarm, an inspection, and potentially corrective action and malfunction recordkeeping and reporting in the event of alarms that remain active. Existing work practice procedures for the proper operation and maintenance of the bag leak detection system and the Scrap Processing System Baghouse overall are contained within the 40 CFR 63, Subpart RRR OMM Plan, and following these procedures ensures continued compliance with the applicable PM emission limitations for the Scrap Processing System.
Performance Criteria	
Data Representativeness	The triboelectric signal is observed by a probe inside the baghouse exhaust stack (i.e., at the point of emissions). The triboelectric signal is directly proportional to the amount of particulate matter emanating from the baghouse stack and is, therefore, representative of PM emissions and provides assurance that the unit is in compliance with the applicable PM and VE limitations on a continued basis.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The bag leak detection system is calibrated annually in accordance with manufacturer's specifications and the device meets all of the accuracy and sensitivity requirements specified in 40 CFR 63, Subpart RRR.
Monitoring Frequency and Data Collection Procedures	The bag leak detector triboelectric signal is monitored continuously. The signal is displayed on screens in the control room and alarms are logged electronically.
Corrective Action	If a bag leak detection system alarm is triggered, the operator responsible for monitoring the bag leak detection system will notify a GT of the bag alarm. The GT will inspect the leak detector to ensure that a bag break or other baghouse-related malfunction has in fact occurred. Once the GT verifies the presence of a malfunction, Logan will initiate corrective actions to repair the broken bag(s) or to address the malfunctioning baghouse equipment within one (1) hour of recognizing the occurrence of an alarm.

2.3 MONITORING APPROACH JUSTIFICATION

The Scrap Processing System Baghouse controls PM and PM_{10} emissions generated by the scrap shredders, vibratory screeners, air knife, and conveyor transfer points in the system. Scrap is loaded via a grappling machine and periodically by front end loaders onto a conveyor which feeds the primary low speed high torque shredder. Shredded scrap flows from the primary shredder to a vibratory screener which removes fines from the material. From the primary screener, the scrap is loaded onto an incline conveyor that feeds a secondary shredder and screener. If the scrap is being fed through the main shred line, it is transferred to an incline conveyor feeding an air knife after being processed in the secondary shredder and screener. If it is fed through the secondary shred line, the scrap is loaded onto an incline conveyor that discharges material onto a conveyor that feeds a compactor. Material exiting the air knife is loaded onto an incline conveyor that discharges material onto a conveyor that feeds a compactor.

The emissions generated by the shredders, screeners, air knife, and conveyor transfer points are captured through hooding systems and are routed through duct work to the baghouse. The inlet exhaust stream to the baghouse is at ambient conditions with relatively low moisture content. The baghouse manufactured by Schust is a single compartment baghouse containing 405 – 6" x 144" bags. Air flow through the system is maintained by a single induced draft fan downstream of the baghouse. The outlet exhaust stream from the baghouse is vented to atmosphere through a 40 feet tall dedicated stack.

2.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The triboelectric bag leak detection system measures the static charge generated as particles pass over the detector probe in the baghouse stack. The current generated as particles pass by the detector probe is fed to an analyzer which determines the concentration of particulate matter in the exhaust stream exiting the baghouse stack. The analyzer produces a continuous output signal and a signal indicating the alarm state for the system.

The signal observed by the bag leak detector is directly proportional to the particulate mass flow, but this proportionality can be affected by changes in humidity, exhaust gas velocity, and particle size. However, for baghouses, these factors do not vary considerably during normal operation and therefore, the detector is an accurate predictor of the particulate mass flow exiting the baghouse system.

2.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

An excursion is defined as a triboelectric monitor signal of 45 mg/m^3 that lasts for more than 180 seconds. When an excursion occurs, corrective action is initiated in accordance with all applicable provisions of the 40 CFR 63, Subpart RRR and Logan's 40 CFR 63, Subpart RRR OMMP. All excursions will be investigated and records of each event will be documented.

The triboelectric bag leak detection system used in conjunction with the Scrap Processing System Baghouse, TRIBO.d^2 Model 3400 manufactured by Auburn Systems, has the capability for dual alarms, early collector leak detection and bag failure detection. The bag break alarm level was set by injecting dust into the clean air plenum of the baghouse and noting the signal level just before the point at which visible emissions were observed at the baghouse exhaust.

3. CAM PLAN – MULTICHAMBER FURNACE BAGHOUSE

3.1 CAM BACKGROUND

3.1.1 EMISSION UNIT

Description: Multichamber Furnace

Identification: EP57(1011-1)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

3.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit:	*401 KAR 59:010 (New process operations)*; PM emissions less than $3.59 \times P^{0.62}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity *To preclude 401 KAR 51:017* for PM_{10}
Current Monitoring Requirements:	Bag leak detection on baghouse exhaust Maintaining continuous lime flow[5] Continuous baghouse inlet temperature monitoring[6] Monthly visible emissions observations (EPA Method 9)

3.1.3 CONTROL TECHNOLOGY

Lime-injected pulse jet baghouse manufactured by U.S. Air Filtration with a maximum design flow capacity of 70,000 acfm and an air to cloth ratio of 3.96:1.

3.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 3-1.

[5] Maintaining continuous lime flow is an 40 CFR 63, Subpart RRR requirement to ensure that the baghouse is maintaining the proper level of control for HCl.

[6] Maintaining the 3-hour block average baghouse inlet temperature at or below the value established during the performance test ensures that the level of dioxin/furan (D/F) emissions from the furnace is maintained below the level observed during the performance test.

TABLE 3-1. MULTICHAMBER FURNACE BAGHOUSE MONITORING APPROACH SUMMARY

Indicator	
Parameter	Bag leak detector triboelectric signal
Measurement Approach	A triboelectric bag leak detection system operates at the baghouse exhaust. An alarm sounds when the signal remains over a preset level indicating a broken filter or other baghouse malfunction. Routine baghouse equipment maintenance will also be conducted in accordance with the 40 CFR 63, Subpart RRR operations, maintenance, and monitoring plan (OMMP).
Indicator Range	
	An excursion is defined as a triboelectric monitor signal which is 3.75% of range for 600 seconds, 7.5% of range for 300 seconds, or 10% of range for 150 seconds. Excursions trigger an alarm, an inspection, and potentially corrective action and malfunction recordkeeping and reporting in the event of alarms that remain active. Existing work practice procedures for the proper operation and maintenance of the bag leak detection system and the Multichamber Furnace Baghouse overall are contained within the 40 CFR 63, Subpart RRR OMM Plan, and following these procedures ensures continued compliance with the applicable PM emission limitations for the Multichamber Furnace.
Performance Criteria	
Data Representativeness	The triboelectric signal is observed by a probe inside the baghouse exhaust stack (i.e., at the point of emissions). The triboelectric signal is directly proportional to the amount of particulate matter emanating from the baghouse stack and is, therefore, representative of PM emissions and provides assurance that the unit is in compliance with the applicable PM and VE limitations on a continued basis.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The bag leak detection system is calibrated annually in accordance with manufacturer's specifications and the device meets all of the accuracy and sensitivity requirements specified in 40 CFR 63, Subpart RRR.
Monitoring Frequency and Data Collection Procedures	The bag leak detector triboelectric signal is monitored continuously. The signal is displayed on screens in the control room and alarms are logged electronically.
Corrective Action	If a bag leak detection system alarm is triggered, the operator responsible for monitoring the bag leak detection system will notify a GT of the bag alarm. The GT will inspect the leak detector to ensure that a bag break or other baghouse-related malfunction has in fact occurred. Once the GT verifies the presence of a malfunction, Logan will initiate corrective actions to repair the broken bag(s) or to address the malfunctioning baghouse equipment within one (1) hour of recognizing the occurrence of an alarm.

3.3 MONITORING APPROACH JUSTIFICATION

The Multichamber Furnace Baghouse controls PM, PM_{10}, and HCl emissions generated by the Multichamber Furnace (main chamber, melting chamber, and pre-heat shaft), the dross cooling area, and the dross house. Scrap is loaded into the Multichamber Furnace using specially designed containers which operate in conjunction with a lifting device that elevates the container from floor level to directly over the opening of the preheat shaft. The temperature of the scrap in the preheat shaft is increased close to the melting temperature of aluminum by recirculating hot exhaust gases from the melting and main chambers of the furnace. Once the scrap is preheated and decontaminated to a sufficient level in the preheat shaft, the metal level in the melting chamber is increased causing the scrap in the bottom portion of the preheat shaft to melt. This freshly melted metal is circulated to the main chamber where regenerative burners are used to maintain the bath temperature and to provide heat for melting scrap. Emissions generated as scrap is loaded into the preheat shaft are collected via a hooding system and are routed to the baghouse. Whenever the sidewall doors of either the melting or main chambers are opened for drossing or for any other reason, emissions are collected by hooding and are routed to the baghouse. Finally, emissions emanating from the furnace itself are vented though the regenerative burners on the main chamber and are routed to the lime-injected baghouse. Any dross removed from the furnace is staged in a dross cooling area before it is moved to the dross house for further cooling and eventual shipment offsite. Emission collected by hoods associated with the dross cooling area and the dross house are also routed to the baghouse.

The U.S. Air baghouse is a single compartment system with 1,125 – 6'' x 120'' polytetrafluoroethylene (PTFE) membrane bags. Air flow through the system is maintained by a single induced draft fan downstream of the baghouse. The outlet exhaust stream is routed to a dedicated stack with a height of 50' 6'' and a diameter of 56''.

3.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The triboelectric bag leak detection system measures the static charge generated as particles pass over the detector probe in the baghouse stack. The current generated as particles pass by the detector probe is fed to an analyzer which determines the concentration of particulate in the exhaust stream exiting the baghouse stack. The analyzer produces a continuous output signal and a signal indicating the alarm state for the system.

The signal observed by the bag leak detector is directly proportional to the particulate mass flow, but this proportionality can be affected by changes in humidity, exhaust gas velocity, and particle size. However, for baghouses, these factors do not vary considerably during normal operation and therefore, the detector is an accurate predictor of the particulate mass flow exiting the baghouse system.

3.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

An excursion is defined as a triboelectric monitor signal which is 3.75% of range for 600 seconds, 7.5% of range for 300 seconds, or 10% of range for 150 seconds. When an excursion occurs, corrective action is initiated in accordance with all applicable provisions of the 40 CFR 63, Subpart RRR and Logan's 40 CFR 63, Subpart RRR OMMP. All excursions will be investigated and records of each event will be documented.

The triboelectric bag leak detection system used in conjunction with the Multichamber Furnace Baghouse, TRIBO.d^2 Model 3400 manufactured by Auburn Systems, has the capability for dual alarms: early collector leak detection and bag failure detection. The bag break alarm level was set by injecting dust into the clean air plenum of the baghouse and noting the signal level just before the point at which visible emissions were observed at the baghouse exhaust. The three levels of alarm are based on signal strength and duration the alarm is active, so the alarm

will not activate due to the very short-term spikes in the exhaust gas particulate concentration caused by pulse-jet cleaning cycles.

4. CAM PLAN – SWARF SIDEWELL BAGHOUSE

4.1 CAM BACKGROUND

4.1.1 EMISSION UNIT

Description: Swarf Furnace Sidewell

Identification: EP26(1009-1B & D)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

4.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New Process Operations)*; PM emissions less than $3.59 \times P^{0.62}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity

Current Monitoring Requirements:
Bag leak detection on baghouse exhaust
Maintaining continuous lime flow
Continuous baghouse inlet temperature monitoring
Daily baghouse differential pressure drop
Monthly visible emissions observations (EPA Reference Method 9)

4.1.3 CONTROL TECHNOLOGY

Lime injected pulse jet baghouse manufactured by Flex-Kleen with a maximum design flow capacity of 45,000 acfm and an air to cloth ratio of 4.03:1.

4.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 4-1.

TABLE 4-1. SWARF SIDEWELL BAGHOUSE MONITORING APPROACH SUMMARY

Indicator	
Parameter	Bag leak detector Triboelectric signal
Measurement Approach	A triboelectric bag leak detection system operates at the baghouse exhaust. An alarm sounds when the signal remains over a preset level indicating a broken filter or other baghouse malfunction. Routine baghouse equipment maintenance will also be conducted in accordance with the 40 CFR 63, Subpart RRR operations, maintenance, and monitoring plan (OMMP).
Indicator Range	
	An excursion is defined as a triboelectric monitor signal which is 3.75% of range for 600 seconds, 7.5% of range for 300 seconds, or 10% of range for 150 seconds. Excursions trigger an alarm, an inspection, and potentially corrective action and malfunction recordkeeping and reporting in the event of alarms that remain active. Existing work practice procedures for the proper operation and maintenance of the bag leak detection system and the Swarf Furnace Baghouse overall are contained within the 40 CFR 63, Subpart RRR OMM Plan, and following these procedures ensures continued compliance with the applicable PM emission limitations for the Swarf Furnace.
Performance Criteria	
Data Representativeness	The triboelectric signal is observed by a probe inside the baghouse exhaust stack (i.e., at the point of emissions). The triboelectric signal is directly proportional to the amount of particulate matter emanating from the baghouse stack and is, therefore, representative of PM emissions and provides assurance that the unit is in compliance with the applicable PM and VE limitations on a continued basis.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The bag leak detection system is calibrated annually in accordance with manufacturer's specifications and the device meets all of the accuracy and sensitivity requirements specified in 40 CFR 63, Subpart RRR.
Monitoring Frequency and Data Collection Procedures	The bag leak detector triboelectric signal is monitored continuously. The signal is displayed on screens in the control room and alarms are logged electronically.
Corrective Action	If a bag leak detection system alarm is triggered, the operator responsible for monitoring the bag leak detection system will notify a GT of the bag alarm. The GT will inspect the leak detector to ensure that a bag break or other baghouse-related malfunction has in fact occurred. Once the GT verifies the presence of a malfunction, Logan will initiate corrective actions to repair the broken bag(s) or to address the malfunctioning baghouse equipment within one (1) hour of recognizing the occurrence of an alarm.

4.3 MONITORING APPROACH JUSTIFICATION

The Swarf Sidewell Baghouse controls emissions routed from hoods over the sidewell. Charge materials are manually fed to the charge well of the Swarf Furnace via a charge chute and are automatically fed to the GSSD well via a cyclone. Reactive fluxing agents are also fed automatically over the vortex formed in the GSSD well. Any emissions generated during either charging or fluxing in the sidewell are collected by a hooding system extending over the entire sidewell of the furnace. Freshly melted and fluxed metal is circulated from the sidewell to the main hearth of the furnace via archways in the refractory lining of the furnace below the bath level. Natural gas fired burners in the main hearth are used to maintain the bath temperature and to provide heat for melting. Natural gas combustion and process related emissions from the main hearth are routed uncontrolled to atmosphere through a dedicated stack. During periodic drossing of the main hearth, the hearth door is opened and a hooding system over the hearth door is engaged. All emissions collected by the main hearth door hood during drossing are routed to the Swarf Hearth Baghouse.

The Swarf Sidwell Baghouse is a Flex-Kleen baghouse with a single compartment system with 520 polyester bags that operate in parallel. Air flow through the system is maintained by a single induced draft fan downstream of the baghouse. The outlet exhaust stream is routed to a dedicated stack with a height of 60'and a diameter of 4'.

4.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The triboelectric bag leak detection system measures the static charge generated as particles pass over the detector probe in the baghouse stack. The current generated as particles pass by the detector probe is fed to an analyzer which determines the concentration of particulate in the exhaust stream exiting the baghouse stack. The analyzer produces a continuous output signal and a signal indicating the alarm state for the system.

The signal observed by the bag leak detector is directly proportional to the particulate mass flow, but this proportionality can be affected by changes in humidity, exhaust gas velocity, and particle size. However, for baghouses, these factors do not vary considerably during normal operation and therefore, the detector is an accurate predictor of the particulate mass flow exiting the baghouse system.

4.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

An excursion is defined as a triboelectric monitor signal which is 3.75% of range for 600 seconds, 7.5% of range for 300 seconds, or 10% of range for 150 seconds. When an excursion occurs, corrective action is initiated in accordance with all applicable provisions of the 40 CFR 63, Subpart RRR and Logan's 40 CFR 63, Subpart RRR OMMP. All excursions will be investigated and records of each event will be documented.

The triboelectric bag leak detection system used in conjunction with the Swarf Furnace Baghouse, TRIBO.d^2 Model 3400 manufactured by Auburn Systems, has the capability for dual alarms: early collector leak detection and bag failure detection. The bag break alarm level was set by injecting dust into the clean air plenum of the baghouse and noting the signal level just before the point at which visible emissions were observed at the baghouse exhaust. The three levels of alarm are based on signal strength and duration the alarm is active, so the alarm will not activate due to the very short-term spikes in the exhaust gas particulate concentration caused by pulse-jet cleaning cycles.

5. CAM PLAN – SKIMMING HOUSE BAGHOUSE

5.1 CAM BACKGROUND

5.1.1 EMISSION UNIT

Description: Skimming House

Identification: EP01(1002-1)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

5.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $3.59 \times P^{0.62}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity

Current Monitoring Requirements: Daily baghouse differential pressure drop
Annual visible emissions observations (EPA Reference Method 9)
Weekly qualitative visible emissions evaluations

5.1.3 CONTROL TECHNOLOGY

Pulse air baghouse manufactured by Fisher Klosterman with a maximum design flow capacity of 35,000 acfm and an air to cloth ratio of 2.2:1.

5.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 5-1.

TABLE 5-1. SKIMMING HOUSE BAGHOUSE MONITORING APPROACH SUMMARY

Indicator	
Parameter	Pressure Drop
Measurement Approach	Pressure drop across the baghouse is measured continuously using a differential pressure gauge and is observed by a GT daily. Weekly qualitative visible emissions evaluations and annual visible emissions observations using U.S. EPA reference Method 9 and routine baghouse equipment maintenance will also be conducted.
Indicator Range	
	The indicator range is a pressure drop reading between 0.5and 9.5 in. H_2O. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Pressure drop across the baghouse is measured at the inlet and outlet of the baghouse and is an indicator of baghouse performance and thus can be used to ensure compliance with applicable emission limitations. A reading is taken daily such that 24-hours do not pass between readings.
QA/QC Practices and Criteria	Pressure gauge is calibrated annually. Pressure taps are checked annually for plugging.
Monitoring Frequency and Data Collection Procedures	Pressure drop is measured continuously and a GT observes the pressure drop daily.
Corrective Action	When an out of range pressure drop reading occurs, operators will check the pressure gauge and baghouse equipment to ensure proper operation. If any of these checks indicate abnormal baghouse operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

5.3 MONITORING APPROACH JUSTIFICATION

The Skimming House Baghouse controls emissions routed from the skimming house. Dross skimmed from the melting and holding furnaces in the Remelt operating unit is transferred into pans that are then sent to the skimming house to cool. Any residual emissions generated as the dross cools are collected via hooding systems and are routed to the Skimming House Baghouse.

The Fisher Klosterman baghouse is a single compartment system with paper cartridge bags that operate in parallel. Air flow through the system is maintained by a single induced draft fan downstream of the baghouse. The outlet exhaust stream is routed to a dedicated stack with a height of 60 feet and a diameter of 3 feet.

5.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The pressure drop across the baghouse is monitored continuously and observed daily. A measured differential pressure drop across the baghouse above the maximum end of the indicator range may suggest the cleaning cycle for the baghouse is not frequent enough, the pulse air cleaning system is damaged, or the bags are becoming plugged. A measured pressure drop below the minimum end of the indicator range may suggest that loose or broken bags are present within the system.

5.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

The indicator range for baghouse differential pressure drop is between 0.5 and 9.5 in. H_2O. This indicator range was chosen based on operational experience and manufacturer's specifications.

6. CAM PLAN – REVERSING MILL INERTIAL SEPARATOR

6.1 CAM BACKGROUND

6.1.1 EMISSION UNIT

Description: Reversing Mill

Identification: Title V Unit ID 07(2015-1)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

6.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $17.31 \times P^{0.16}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity

Current Monitoring Requirements: Daily differential pressure drop across separator
Monthly visible emissions observations (EPA Reference Method 9)

6.1.3 CONTROL TECHNOLOGY

Inertial separator manufactured Busch International with a maximum design flow capacity of 113,000 acfm.

6.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 6-1.

TABLE 6-1. REVERSING MILL INERTIAL SEPARATOR MONITORING APPROACH SUMMARY

Indicator	
Parameter	Pressure Drop
Measurement Approach	Pressure drop across the separator is measured continuously using a differential pressure gauge and is observed by an operator daily. Monthly visible emissions observations using U.S. EPA reference Method 9 and routine separator equipment maintenance will also be conducted.
Indicator Range	
	The indicator range is a pressure drop reading between 2.28 and 5.3 in. H_2O. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Pressure drop across the separator is measured at the inlet and outlet of the unit and is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.
QA/QC Practices and Criteria	Pressure gauge is calibrated annually. Pressure taps are checked monthly.
Monitoring Frequency and Data Collection Procedures	Pressure drop is measured continuously and recorded six times per day, and an operator observes the pressure drop daily.
Corrective Action	When an out of range pressure drop reading occurs, operators will check the pressure gauge and separator equipment to ensure proper operation. If any of these checks indicate abnormal operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

6.3 MONITORING APPROACH JUSTIFICATION

The Reversing Mill Inertial Separator controls PM emissions generated as mineral oil-based coolant is applied to the rollers in the mill. The Reversing Mill is a single stand system that through repetitive passes, rolls aluminum ingot into ingot slabs. Due to the heat produced by the pressure applied to the rollers, a mineral oil-based coolant is sprayed over the rollers to prevent overheating. PM emissions generated as the Reversing Mill processes aluminum ingot are routed through a hooding system to the SSMEs. Air flow through the system is maintained by a single induced draft fan downstream of the separator. The outlet exhaust stream is routed to a dedicated stack with a height of 85 feet and a diameter of 8 feet.

6.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The pressure drop across the separator is monitored continuously and observed daily. The control efficiency of the separator is a function of inlet velocity, and changes in velocity result

in changes in pressure drop across the device. If the inlet velocity is too high (i.e., the measured pressure drop exceeds the maximum end of the indicator range), turbulence in the system increases decreasing the control efficiency. If the inlet velocity is too low, the particulate in the exhaust stream may fall out in the duct work prior to reaching the control device.

6.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

The indicator range for separator differential pressure drop is between 2.28 and 5.3 in. H_2O. This indicator range was chosen based on operational experience and manufacturer's specifications.

7. CAM PLAN – FINISHING MILL SECOND STAGE MIST ELIMINATORS (SSMES)

7.1 CAM BACKGROUND

7.1.1 EMISSION UNIT

Description: Finishing Mill

Identification: EP08(2015-2)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

7.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $17.31 \times P^{0.16}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity
To preclude 401 KAR 51:017, Sections 8-14 for the Hot Mill/Cold Mill Expansion/Remelt 2 Project for PM, PM_{10}, and $PM_{2.5}$

Current Monitoring Requirements: Daily differential pressure drop across separator
Monthly visible emissions observations (EPA Reference Method 9)
Minimum volumetric flow rate

7.1.3 CONTROL TECHNOLOGY

One second stage mist eliminator manufactured Busch International with a maximum design flow capacity of 225,000 acfm.

7.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in Tables 7-1 and 7-2.

TABLE 7-1. FINISHING MILL SSME MONITORING APPROACH SUMMARY (PRESSURE DROP)

Indicator	
Parameter	Pressure Drop
Measurement Approach	Pressure drop across the SSMEs is measured continuously using a differential pressure gauge and is observed by an operator daily. Monthly visible emissions observations using U.S. EPA reference Method 9 and routine SSME equipment maintenance will also be conducted.
Indicator Range	
	The indicator range is a pressure drop reading between 0.75 and 7.5 in. H_2O. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Pressure drop across the SSME is measured at the inlet and outlet of the unit and is an indicator of control device performance and thus can be used to ensure compliance with applicable emission limitations.
QA/QC Practices and Criteria	Pressure gauge is calibrated annually. Pressure taps checked monthly.
Monitoring Frequency and Data Collection Procedures	Pressure drop is measured continuously and recorded six times per day, and an operator observes the pressure drop daily.
Corrective Action	When an out of range pressure drop reading occurs, operators will check the pressure gauge and SSME equipment to ensure proper operation. If any of these checks indicate abnormal operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 7-2. FINISHING MILL SSME MONITORING APPROACH SUMMARY (VOLUMETRIC FLOW RATE)

Indicator	
Parameter	Minimum Volumetric Flow Rate
Measurement Approach	A calibrated optical flow sensor (OFS) in the SSME duct continuously measures the exhaust flowrate.
Indicator Range	
	The minimum volumetric flow rate is expressed as a minimum in-duct velocity of 57.7 ft/s on a 6-hour average basis (i.e., period covering three 2-hour test runs during the performance test). Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	The OFS has a minimum accuracy of ± 0.1 m/s or ± 2% of reading, whichever is greater.
QA/QC Practices and Criteria	OFS is manually checked based on input from the manufacturer when the correlation output falls outside the recommended range.
Monitoring Frequency and Data Collection Procedures	Flowrate is measured continuously by a data logger and an operator observes the correlation values monthly.
Corrective Action	When an out of range flowrate reading occurs, operators will check the OFS and SSME equipment to ensure proper operation. If any of these checks indicate abnormal operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

7.3 MONITORING APPROACH JUSTIFICATION

The Finishing Mill Second Stage Mist Eliminator controls PM emissions generated as mineral oil-based coolant is applied to the rollers in the mill. The Finishing Mill is a three-stand system that reduces aluminum ingot slabs into rolled aluminum coils. Due to the heat produced by the pressure applied to the rollers, a mineral oil-based coolant is sprayed over the rollers to prevent overheating. PM emissions generated as the Finishing Mill processes aluminum ingot slabs are routed through a hooding system to the SSME located in the stack. Air flow through the system is maintained by a two induced draft fans. The outlet exhaust stream is routed to a dedicated stack with a height of 88 feet and a diameter of 13 feet.

7.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The pressure drop across the SSME is monitored continuously and observed daily. The control efficiency of the SSME is a function of the pore space in the filter mesh. If the open area is reduced (i.e., the measured pressure drop exceeds the maximum end of the indicator range), a blockage occurs in the flow, forcing it through a week point in the mesh decreasing the control efficiency. If the open area is expanded, the particulate in the exhaust stream may not pass through the more tightly woven areas.

Pursuant to Condition B.1.c. for the Finishing Mill, Logan is required to maintain the capture efficiency of each hood and exhaust pickup point serving the Finishing Mill at or above 95% capture efficiency for PM, PM_{10}, and $PM_{2.5}$. Logan is required to demonstrate that the target level of capture efficiency is being
achieved on an ongoing basis by complying with the following permit requirements.

- Condition B.3.f. for the Finishing Mill requires Logan to perform a technical evaluation of the capture system if changes are made to any physical installation of the capture system or control device serving this emission unit.
- Condition B.3.b. for the Finishing Mill requires Logan to verify the direction of airflow through both the largest building wall opening closest to the process and the largest hood opening using a smoke tube.
- Condition B.7.b. for EP08 requires Logan to continuously monitor the inlet volumetric flow rate in the stack.

To comply with volumetric flow rate monitoring requirements in Section B for the Finishing Mill, Logan has selected optical flow sensors (OFS) installed near the sampling ports on the inlet duct run to the SSME. This monitoring system uses optical scintillation technology to measure the movement of turbulence found in a gaseous flow stream to provide accurate, path-averaged air velocity measurements. OFS volumetric flow rate monitoring systems meet EPA 40 CFR Parts 60 & 75 specifications (e.g., 40 CFR 60 Appendix B Performance Specification 6 for Continuous Emission Rate Monitoring Systems in Stationary Sources) and are in service in power plants, mines, refineries, and incinerators.

7.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

The indicator range for separator differential pressure drop is 0.75 to 7.5 in. H_2O. This indicator range was chosen based on operational experience and manufacturer's specifications.

The minimum volumetric flow rate for the Finishing Mill capture system was established through the June 2017 performance testing performed in conjunction with the Remelt 2 project. Recognizing the need to establish worst-case operating conditions during the performance test, Logan used a fan speed setting (88% of maximum fan speed) for the Finishing Mill which was at the low end of the range necessary to provide the target capture efficiency. After the performance test and on an ongoing basis, Logan maintains the Finishing Mill fan speed setting at or above the level during the performance test and continuously monitors the Finishing Mill inlet duct velocities as a means to identify any periods of compromised performance of the capture system (i.e., indications of clogged ducts, fan malfunction, etc.) when the measured velocity falls below the minimum operating limit.

8. CAM PLAN – COLD MILLS 1 AND 2 ROLL COOLANT RECOVERY SYSTEM (RCRS)

8.1 CAM BACKGROUND

8.1.1 EMISSION UNIT

Description: Cold Mills 1 and 2 with Roll Coolant Recovery System

Identification: EP30(3005-1), 32(3010-1), and 59(3010-2)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

8.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit:	*401 KAR 59:010 (New process operations)*; PM emissions less than $17.31 \times P^{0.16}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity *To preclude 401 KAR 51:017, Sections 8-14* for PM, PM_{10}, $PM_{2.5}$ and VOC
Current Monitoring Requirements:	Washing oil flow rate Rectification column vacuum pressure Washing oil inlet stream temperature Minimum volumetric flow rate Monthly visible emissions observations (EPA Method 9)

8.1.3 CONTROL TECHNOLOGY

The RCRS includes an absorption column and rectification column with vacuum pump, degassing column, rolling oil distillate and electric heater.

8.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in Tables 8-1 through 8-4.

TABLE 8-1. COLD MILLS 1 AND 2 RCRS MONITORING APPROACH SUMMARY (WASHING OIL FLOW RATE)

Indicator	
Parameter	Washing Oil Flow Rate
Measurement Approach	The washing oil flow rate is measured continuously by a flow meter directly in the washing oil supply line to the absorption column.
Indicator Range	
	The indicator range is between 13.5-30.6 m^3/hr on an hourly average basis. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	The flow rate is measured continuously.
QA/QC Practices and Criteria	The flow meter calibration is verified annually.
Monitoring Frequency and Data Collection Procedures	Flow rate is measured continuously.
Corrective Action	When an out of range flow rate reading occurs, operators will check the flow meter and column to ensure proper operation. If any of these checks indicate abnormal RCRS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 8-2. COLD MILLS 1 AND 2 RCRS MONITORING APPROACH SUMMARY (WASHING OIL TEMPERATURE)

Indicator	
Parameter	Washing Oil Temperature
Measurement Approach	The washing oil temperature is measured continuously using a thermocouple in the inlet stream to the absorber.
Indicator Range	
	The indicator range is between 14.7-45.7°C on an hourly average basis. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Washing oil temperature is measured continuously.
QA/QC Practices and Criteria	The temperature measurement system calibration is maintained by replacing the temperature sensor with a factory calibrated element every six months.
Monitoring Frequency and Data Collection Procedures	Washing oil temperature is measured continuously.
Corrective Action	When an out of range temperature reading occurs, operators will check the thermocouple and RCRS equipment to ensure proper operation. If any of these checks indicate abnormal RCRS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 8-3. COLD MILLS 1 AND 2 RCRS MONITORING APPROACH SUMMARY (RECTIFICATION COLUMN VACUUM PRESSURE)

Indicator	
Parameter	Rectification Column Vacuum Pressure
Measurement Approach	The rectification column vacuum pressure is measured continuously.
Indicator Range	
	The indicator range is between 1.63-3.33 millibars on an hourly average basis, except when in an extended bypass mode. Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Vacuum pressure is measured continuously.
QA/QC Practices and Criteria	The vacuum pressure measurement system calibration is verified annually.
Monitoring Frequency and Data Collection Procedures	Vacuum pressure is measured continuously.
Corrective Action	When an out of range pressure reading occurs, operators will check the vacuum pump and RCRS equipment to ensure proper operation. If any of these checks indicate abnormal RCRS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 8-4. COLD MILLS 1 AND 2 RCRS MONITORING APPROACH SUMMARY (VOLUMETRIC FLOW RATE)

Indicator	
Parameter	Minimum Volumetric Flow Rate
Measurement Approach	A calibrated optical flow sensor (OFS) in the RCRS inlet ducts for Cold Mills 1 and 2 continuously measure the exhaust flowrate.
Indicator Range	
	The minimum volumetric flow rate is expressed as a minimum in-duct velocity of 14.6 m/s for Cold Mill 1 and 15.01 m/s for Cold Mill 2 on a 6-hour average basis (i.e., period covering three 2-hour test runs during the performance test). Excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	The OFS have a minimum accuracy of ± 0.1 m/s or ± 2% of reading, whichever is greater.
QA/QC Practices and Criteria	OFS is manually checked based on input from the manufacturer when the correlation output falls outside the recommended range.
Monitoring Frequency and Data Collection Procedures	Flowrate is measured continuously by a data logger and an operator observes the rolling 6-hour average flow readings to confirm values are in range and no step changes indicative of a monitoring system problem have occurred.
Corrective Action	When an out of range flowrate reading occurs, operators will check the OFS and RCRS equipment to ensure proper operation. If any of these checks indicate abnormal operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

8.3 MONITORING APPROACH JUSTIFICATION

A mineral oil-based lubricant/coolant is applied at controlled flow rates to the aluminum strip/work roll interfaces. Although this rolling oil serves several functions, its primary function is to remove heat generated from the compression of the aluminum strip and to prevent sticking of the strip to the steel work rolls. Based on this function, rolling oil is commonly referred to as “roll coolant”. The roll coolant application rate is primarily dependent on the line speed and product specifications (i.e., starting and ending gauge, width, hardness, alloy type, etc.). A recycling process is used to recover and re-circulate nearly all of the roll coolant applied at Cold Mills 1 and 2. Despite the efficiency of the roll coolant collection and recycling system, a small portion of the roll coolant applied becomes entrained in the air as mist and vapor, primarily through the mechanical action and heat generated at the aluminum strip/work roll contact point. Entrained roll coolant mist and vapor will be captured through the mill’s hooding

system and will be routed to a RCRS designed for PM and VOC control. The outlet exhaust stream is routed to a dedicated stack with a height of 104 feet and a diameter of 8.5 feet.

8.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

PM and VOC control is provided by the absorption tower through the packing media of the tower creating intimate liquid-liquid and liquid-vapor contact between the coolant entrained in the exhaust gas and the washing oil. Monitoring the washing oil flow rate ensures relatively constant flow rate through the RCRS. For wet scrubbing systems in which the dirty scrubbing liquid is collected, treated using distillation, and recirculated back to the absorption column, the scrubbing liquid temperature is commonly monitored to ensure proper scrubber control performance. If the washing oil temperature is too low, it will be overly viscous with insufficient flow through the column, which will reduce the control achieved. Too high of a washing oil temperature reduces the potential for absorption of roll coolant. A suitably clean washing oil is essential for achieving desired absorption of roll coolant in the scrubber tower. Vacuum pressure is a key determinant in the quality of the distillation separating the heavier washing oil from the lighter rolling oil in the stripping column. It determines the overall "cleanliness" of the washing oil recirculated to the absorption column.

8.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

The indicator ranges for washing oil flow rate, washing oil temperature, rectification column vacuum pressure, and minimum air flow were chosen based on operational experience and manufacturer's specifications.

9. CAM PLAN – COLD MILL 4 HEAVY OIL SCRUBBER (HOS)

9.1 CAM BACKGROUND

9.1.1 EMISSION UNIT

Description: Cold Mill 4 with Heavy Oil Scrubber

Identification: EP161(3050-1)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

9.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $17.31 \times P^{0.16}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity
To preclude 401 KAR 51:017, Sections 8-14 for PM, PM_{10}, and $PM_{2.5}$
401 KAR 51:017 BACT limits for VOC

Current Monitoring Requirements:
Washing oil flow rate
Rectification column vacuum pressure
Washing oil inlet stream temperature
Minimum volumetric flow rate
Monthly visible emissions observations (EPA Method 9)

9.1.3 CONTROL TECHNOLOGY

The HOS includes an absorption column and rectification column with vacuum pump, degassing column, rolling oil distillate and electric heater.

9.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in Tables 9-1 to 9-4.

TABLE 9-1. COLD MILL 4 HOS MONITORING APPROACH SUMMARY (WASHING OIL FLOW RATE)

Indicator	
Parameter	Washing Oil Flow Rate
Measurement Approach	The washing oil flow rate is measured continuously by a flow meter directly in the washing oil supply line to the absorption column.
Indicator Range	
	The washing oil flow rate range will be established in conjunction with the initial stack test protocol and the initial performance tests of Cold Mill 4 for PM, PM_{10}, $PM_{2.5}$, and VOC. After a numerical operating limit is established, excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Flow rate is measured continuously.
QA/QC Practices and Criteria	The flow meter calibration is verified annually.
Monitoring Frequency and Data Collection Procedures	Flow rate is measured continuously.
Corrective Action	When an out of range flow rate reading occurs, operators will check the flow meter and HOS equipment to ensure proper operation. If any of these checks indicate abnormal HOS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 9-2. COLD MILL 4 HOS MONITORING APPROACH SUMMARY (WASHING OIL TEMPERATURE)

Indicator	
Parameter	Washing Oil Temperature
Measurement Approach	The washing oil temperature is measured continuously using a thermocouple in the inlet stream to the absorber.
Indicator Range	
	The washing oil temperature range will be established in conjunction with the initial stack test protocol and the initial performance tests of Cold Mill 4 for PM, PM_{10}, $PM_{2.5}$, and VOC. After a numerical operating limit is established, excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Washing oil temperature is measured continuously.
QA/QC Practices and Criteria	The temperature measurement system calibration is maintained by replacing the temperature sensor with a factory calibrated element every six months.
Monitoring Frequency and Data Collection Procedures	Washing oil temperature is measured continuously.
Corrective Action	When an out of range temperature reading occurs, operators will check the thermocouple and HOS equipment to ensure proper operation. If any of these checks indicate abnormal HOS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 9-3. COLD MILL 4 HOS MONITORING APPROACH SUMMARY (RECTIFICATION COLUMN VACUUM PRESSURE)

Indicator	
Parameter	Rectification Column Vacuum Pressure
Measurement Approach	The rectification column vacuum pressure is measured continuously.
Indicator Range	
	The rectification column vacuum pressure will be established in conjunction with the initial stack test protocol and the initial performance tests of Cold Mill 4 for PM, PM_{10}, $PM_{2.5}$, and VOC. After a numerical operating limit is established, excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	Vacuum pressure is measured continuously.
QA/QC Practices and Criteria	The vacuum pressure measurement system calibration is verified annually.
Monitoring Frequency and Data Collection Procedures	Vacuum pressure is measured continuously.
Corrective Action	When an out of range pressure reading occurs, operators will check the vacuum pump and HOS equipment to ensure proper operation. If any of these checks indicate abnormal HOS operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

TABLE 9-4. COLD MILL 4 HOS MONITORING APPROACH SUMMARY (VOLUMETRIC FLOW RATE)

Indicator	
Parameter	Minimum Volumetric Flow Rate
Measurement Approach	A calibrated optical flow sensor (OFS) in the HOS inlet duct continuously measures the exhaust flowrate.
Indicator Range	
	The minimum volumetric flow rate will be established in conjunction with the initial capture system design evaluation submitted with the stack test protocol and the initial performance tests for PM, PM_{10}, $PM_{2.5}$, and VOC. After a numerical operating limit is established, excursions trigger an inspection and potentially corrective action and reporting.
Performance Criteria	
Data Representativeness	The OFS have a minimum accuracy of ± 0.1 m/s or ± 2% of reading, whichever is greater.
QA/QC Practices and Criteria	OFS is manually checked based on input from the manufacturer when the correlation output falls outside the recommended range.
Monitoring Frequency and Data Collection Procedures	Flowrate is measured continuously by a data logger and an operator observes the correlation values monthly.
Corrective Action	When an out of range flowrate reading occurs, operators will check the OFS and HOS equipment to ensure proper operation. If any of these checks indicate abnormal operation, Logan will inspect all potentially malfunctioning components of the offending system. Once the source of the malfunction is determined, the problem will be remedied as soon as is practicable after the malfunction is recognized by repairing or replacing the malfunctioning component of the system.

9.3 MONITORING APPROACH JUSTIFICATION

A mineral oil-based lubricant/coolant is applied at controlled flow rates to the aluminum strip/work roll interfaces. Although this rolling oil serves several functions, its primary function is to remove heat generated from the compression of the aluminum strip and to prevent sticking of the strip to the steel work rolls. Based on this function, rolling oil is commonly referred to as “roll coolant”. The roll coolant application rate is primarily dependent on the line speed and product specifications (i.e., starting and ending gauge, width, hardness, alloy type, etc.). A recycling process is used to recover and re-circulate nearly all of the roll coolant applied at Cold Mill 4. Despite the efficiency of the roll coolant collection and recycling system, a small portion of the roll coolant applied becomes entrained in the air as mist and vapor, primarily through the mechanical action and heat generated at the aluminum strip/work roll contact point. Entrained roll coolant mist and vapor will be captured through the mill’s hooding system and will be routed to a HOS system designed for PM and VOC control. The outlet exhaust stream is routed to a dedicated stack with a height of 100 feet and a diameter of 7.8 feet.

9.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

PM and VOC control is provided by the absorption tower through the packing media of the tower creating intimate liquid-liquid and liquid-vapor contact between the coolant entrained in the exhaust gas and the washing oil. Monitoring the washing oil flow rate ensures relatively constant flow rate through the HOS. For wet scrubbing systems in which the dirty scrubbing liquid is collected, treated using distillation, and recirculated back to the absorption column, the scrubbing liquid temperature is commonly monitored to ensure proper scrubber control performance. If the washing oil temperature is too low, it will be overly viscous with insufficient flow through the column, which will reduce the control achieved. Too high of a washing oil temperature reduces the potential for absorption of roll coolant. A suitably clean washing oil is essential for achieving desired absorption of roll coolant in the scrubber tower. Vacuum pressure is a key determinant in the quality of the distillation separating the heavier washing oil from the lighter rolling oil in the stripping column. It determines the overall "cleanliness" of the washing oil recirculated to the absorption column.

9.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

The indicator ranges for washing oil flow rate, washing oil temperature, rectification column vacuum pressure, and minimum air flow will be chosen based on operational experience and manufacturer's specifications.

10. CAM PLAN – DECOATERS A AND B BAGHOUSES

10.1 CAM BACKGROUND

10.1.1 EMISSION UNIT

Description: Decoaters A and B

Identification: EP128(9033) and 134(9037)

Facility: Logan's Aluminum Rolling Mill in Russellville, Kentucky

10.1.2 APPLICABLE REGULATIONS, EMISSION LIMITATIONS, AND MONITORING REQUIREMENTS

Regulation/ Emission Limit: *401 KAR 59:010 (New process operations)*; PM emissions less than $3.59 \times P^{0.62}$ lb/hr where P is tons of material processed per hour and visible emissions less than 20% opacity
To preclude 401 KAR 51:017, Sections 8-14 for the Hot Mill/Cold Mill Expansion/Remelt 2 Project for PM, PM_{10}, and $PM_{2.5}$

Current Monitoring Requirements: Bag leak detection on baghouse exhaust
Maintaining continuous lime flow[7]
Continuous baghouse inlet temperature monitoring[8]
Monthly visible emissions observations (EPA Method 9)

10.1.3 CONTROL TECHNOLOGY

Lime-injected pulse jet baghouses manufactured by ETA with a maximum design flow capacity of 90,000 acfm and a total filtering area of 25,068 ft^2 each.

10.2 MONITORING APPROACH

The key elements of the monitoring approach, including the indicators to be monitored, indicator ranges, and performance criteria are summarized in the Table 10-1.

[7] Maintaining continuous lime flow is an 40 CFR 63, Subpart RRR requirement to ensure that the baghouse is maintaining the proper level of control for HCl.

[8] Maintaining the 3-hour block average baghouse inlet temperature at or below the value established during the performance test ensures that the level of D/F emissions from the furnace is maintained below the level observed during the performance test.

TABLE 10-1. DECOATER A/SIDEWELL A1 AND DECOATER B/SIDEWELL B1 BAGHOUSE MONITORING APPROACH SUMMARY

Indicator	
Parameter	Bag leak detector triboelectric signal
Measurement Approach	A triboelectric bag leak detection system operates at the baghouse exhaust. An alarm sounds when the signal remains over a preset level indicating a broken filter or other baghouse malfunction. Routine baghouse equipment maintenance will also be conducted in accordance with the 40 CFR 63, Subpart RRR operations, maintenance, and monitoring plan (OMMP).
Indicator Range	
	An excursion is defined as a triboelectric monitor signal which is 10% of range for 10 seconds. Excursions trigger an alarm, an inspection, and potentially corrective action and malfunction recordkeeping and reporting in the event of alarms that remain active. Existing work practice procedures for the proper operation and maintenance of the bag leak detection system and the Decoaters A and B Baghouse overall are contained within the 40 CFR 63, Subpart RRR OMM Plan, and following these procedures ensures continued compliance with the applicable PM emission limitations for Decoaters A and B.
Performance Criteria	
Data Representativeness	The triboelectric signal is observed by a probe inside the baghouse exhaust stack (i.e., at the point of emissions). The triboelectric signal is directly proportional to the amount of particulate matter emanating from the baghouse stack and is, therefore, representative of PM emissions and provides assurance that the unit is in compliance with the applicable PM and VE limitations on a continued basis.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The bag leak detection system is calibrated annually in accordance with manufacturer's specifications and the device meets all of the accuracy and sensitivity requirements specified in the 40 CFR 63, Subpart RRR.
Monitoring Frequency and Data Collection Procedures	The bag leak detector triboelectric signal is monitored continuously. The signal is displayed on screens in the control room and alarms are logged electronically.
Corrective Action	If a bag leak detection system alarm is triggered, the operator responsible for monitoring the bag leak detection system will notify a GT of the bag alarm. The GT will inspect the leak detector to ensure that a bag break or other baghouse-related malfunction has in fact occurred. Once the GT verifies the presence of a malfunction, Logan will initiate corrective actions to repair the broken bag(s) or to address the malfunctioning baghouse equipment within one (1) hour of recognizing the occurrence of an alarm.

10.3 MONITORING APPROACH JUSTIFICATION

Decoaters A and B are manufactured by Gillespie & Powers, Inc. and are designated as the Mass Flow Delacquering Process (MFDP). The MFDP design is a unique arrangement that provides ideal decoating of prepared aluminum scrap over a wide variety of process conditions. Shredded material is fed into the partially insulated rotary kiln through a series of pneumatically operated feed airlocks. The shredded material then passes through the heavily "flighted" rotary kiln barrel to the discharge airlocks. The volatilized organics and particulates from the shredded material surface travel counter-current to the aluminum scrap flow to the inlet of a cyclonic separator designed to remove larger particulate and then to a variable speed recirculation fan, which moves the process gas into a natural gas-fired, fume incinerator "afterburner." The afterburner offers the remaining destruction of volatiles that did not occur from the partial oxidation processes within the rotary kiln. Excess combustion byproduct gases in the system are discharged through a pressure-controlled damper, with the remainder of the process gas being recirculated to the rotary kiln. The combustion byproduct discharge is routed to a dedicated baghouse for each decoater.

The Decoater A and Decoater B baghouses are five (5)-compartment systems with PTFE membrane bags. Air flow through the system is maintained by a single induced draft fan downstream of each baghouse with a nominal flow capacity of 90,000 acfm. The outlet exhaust stream is routed to a dedicated stack with a height of 80 feet and a diameter of 5.5 feet.

10.3.1 RATIONALE FOR SELECTING PERFORMANCE INDICATORS

The triboelectric bag leak detection system measures the static charge generated as particles pass over the detector probe in the baghouse stack. The current generated as particles pass by the detector probe is fed to an analyzer which determines the concentration of particulate in the exhaust stream exiting the baghouse stack. The analyzer produces a continuous output signal and a signal indicating the alarm state for the system.

The signal observed by the bag leak detector is directly proportional to the particulate mass flow, but this proportionality can be affected by changes in humidity, exhaust gas velocity, and particle size. However, for baghouses, these factors do not vary considerably during normal operation and therefore, the detector is an accurate predictor of the particulate mass flow exiting the baghouse system.

10.3.2 RATIONALE FOR SELECTING INDICATOR RANGE

An excursion is defined as a triboelectric monitor signal which is 10% of range for 10 seconds. When an excursion occurs, corrective action is initiated in accordance with all applicable provisions of the 40 CFR 63, Subpart RRR and Logan's 40 CFR 63, Subpart RRR OMMP. All excursions will be investigated and records of each event will be documented.

The triboelectric bag leak detection system used in conjunction with the Decoater A and Decoater B Baghouses, has the capability for dual alarms: early collector leak detection and bag failure detection. The bag break alarm level was set by injecting dust into the clean air plenum of the baghouse and noting the signal level just before the point at which visible emissions were observed at the baghouse exhaust. The alarm level is based on signal strength and duration the alarm is active, so the alarm will not activate due to the very short-term spikes in the exhaust gas particulate concentration caused by pulse-jet cleaning cycles.