Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-26-005

Century Aluminum Sebree, LLC
Robards, KY 42452

November 9, 2026
Amy K. Tempus-Doom, PE, Reviewer

SOURCE ID:	21-101-00029
AGENCY INTEREST:	1788
ACTIVITY:	APE20240003

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3334, Primary Production of Aluminum

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☒ Yes ☐ No If Yes, Category: Primary aluminum ore reduction plants

County: Henderson
Nonattainment Area ☐ N/A ☐ PM_{10} ☐ $PM_{2.5}$ ☐ CO ☐ NO_X ☒ SO_2 ☐ Ozone ☐ Lead

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?

☒ PM_{10} ☒ $PM_{2.5}$ ☒ CO ☒ NO_X ☒ SO_2 ☐ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☒ Yes ☐ No
If yes, for what pollutant(s)?
☒ PM_{10} ☒ $PM_{2.5}$ ☒ CO ☒ NO_X ☒ SO_2 ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No
If yes, list which pollutant(s): *Carbonyl Sulfide, Hydrochloric Acid, Hydrofluoric Acid, Polycyclic Organic Matter*

PTE* greater than 25 tpy for combined HAP ☒ Yes ☐ No

*PTE does not include self-imposed emission limitations.

Description of Facility:
Century Aluminum Sebree, LLC (Century) produces primary aluminum from raw alumina (Al_2O_3) by applying electric current to the alumina in vessels termed reduction cells or "pots". Century operates three nearly identical potlines. Each potline is composed of two potrooms that each contain 64 reduction cells for a total of 128 cells per potline.

Each pot in the potrooms is constructed as a complete electrolytic circuit with anode, cathode, and electrolyte. The exterior of the pots consists of a rectangular steel shell lined with refractory thermal insulation. Raw material inputs to the pots include alumina, bath, carbon anodes, and various other additives to the aluminum production process such as aluminum fluoride. Within the pot is an inner lining of carbon (the cathode). Carbon anode blocks are placed just below the surface of a fluoride electrolyte (cryolite) to complete the reaction circuit. A current is applied to metal rods attached to the anode blocks, which passes thorough the molten bath (molten aluminum, cryolite, and alumina) and the carbon cathode lining, and then to the current collector bars. The molten aluminum formed in the reduction cells (as it is liberated from alumina with oxygen) settles between the anode and cathode where it accumulates. The oxygen liberated reacts with the carbon anode blocks forming carbon dioxide. The accumulated molten metal is siphoned from the pots into crucibles each day. The anode blocks, which are gradually consumed by the reaction in the pots, last a few weeks before they must be replaced with new anodes.

The emissions from the reduction cells in each potline are captured through hooding systems and are sent to two Alcoa A-398 alumina fluidized bed dry scrubbers, each of which has five reactors. Each reactor has two stacks. Thus, for three potlines, there are a total of six alumina fluidized bed dry scrubbers with each one serving half of the pots on a potline, and a total of 60 stacks. Any fugitive emissions not caught by the hooding system are vented through the roof of each potline.

To provide baked carbon anodes to the reduction cells, Century operates an anode paste mixing and forming operation and an anode bake furnace, in which the "green anodes" are baked. The green anodes are formed from petroleum coke, recycled spent anode material, and coal tar pitch, which serves as a binder. The formed anodes are compressed and placed within the bake furnace, where they are baked to remove volatiles, leaving a solid carbon block. The emissions from the paste mixing and anode forming units are vented to a common control device, a Procedair dry coke scrubber. The emissions from the anode bake furnace are sent to an Alcoa A-446 alumina fluidized bed scrubber.

The molten aluminum produced by the reduction cells from all three potlines is sent to the casthouse to be formed into billets and T-bars, along with other products. The casthouse utilizes natural gas-fired holding furnaces to condition molten aluminum and homogenizing furnaces to condition the aluminum billets.

Most of the major equipment and emission units at the Sebree Plant were constructed in 1972 and operations began in 1973. The original emission units included Potlines 1 and 2, an Anode Bake Furnace and other support operations. Potline 3 and a second Anode Bake Furnace (now out of service) began operation in 1979. In 2010, following the implementation of an amperage increase project, the production capacity of the plant was increased. The plant currently has a permitted capacity of 253,531 tons per year of aluminum from the potlines.

Production activities and emission units have historically been arranged into the following emission groups for ease of reference to a specific plant area.

- Emission Group I: Raw Materials
- Emission Group II: Green Carbon Dry
- Emission Group III: Green Carbon Wet
- Emission Group IV: Anode Bake Furnace
- Emission Group V: Anode Butts Processing
- Emission Group VI: Bath Salvage
- Emission Group VII: Anode Rods
- Emission Group VIII: Potlines
- Emission Group IX: Spent Potliner Processing
- Emission Group X: Casthouse Operations
- Emission Group XI: Miscellaneous Emission Sources
- Emission Group XII: Stationary Engines
- Emission Group XIII: Boilers

The permit is organized into "Subject Items" by regulation applicability and grouping in Section B, and these "Emission Groups" based on physical plant location, to aid in navigation.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-26-005 Activities: APE20240003; APE20240004

Received: 5/10/2024; 8/14/2024 Application Complete Date(s): 7/4/2024; 12/30/2024

Permit Action: ☐ Initial ☒ Renewal ☒ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☒Yes ☐No NSR Applicable? ☐Yes ☒No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☒Yes ☐No

- *APE20210002 – Section 502(b)(10) Change:* Replacement of the Electrode Boiler (S5) with the Green Mill Boiler (S7).
- *APE20210003 – Section 502(b)(10) Change:* Use of a temporary Bath Crusher.
- *APE20220002 – Section 502(b)(10) Change:* Addition of a portable anode crusher to Section C.
- *APE20220003 – Section 502(b)(10) Change:* Addition of a bath screening operation (EU K10-A) and associated Powerscreen Diesel Engine (EU K10-B)
- *APE20250003 – Section 502(b)(10) Change:* Replacement of the baghouse serving the Anode Butts Impactor (EU K5).

Description of Action:
On May 10, 2024, Century submitted a renewal application for their Title V permit, V-19-010 R2. In this renewal application Century requested the following:

- Removal of dismantled/inoperable/removed emission units:
  - EU E8 – Building 138 Vacuum System;
  - EU A7 – Building 004 Water Heater;
  - EU A9 – Building 004 Pickling Unit Boiler
- Addition of a previously installed 32 HP emergency generator – EU Z9 – IT Operations Emergency Generator.
- Updates to the CAM plans to remove references to old documents.

Century also requested a change to the excess emissions reporting requirements in the permit under 40 CFR 63, Subpart LL. The regulation gives the option of quarterly reports, and due to previous excess emission events at Century Sebree, the Division has opted to specify that quarterly reports are required, instead of leaving it up to the facility. The permit language will not be changed.

Century further requested revisions to the CO and SO_2 potline testing requirements and frequency. Century did not complete the required testing in the previous permit, and therefore the Division lacks the appropriate data to make a different determination regarding the appropriate frequency for roof monitor testing. Once Century completes the required testing over a permit cycle, the Division may consider changing the requirement based on the information and data available.

In addition to the requested changes, the following changes were made:

- Emission calculations were updated to reflect more recent data where it was available.
- The permit language for 40 CFR 63, Subparts LL, RRR, and ZZZZ as well as 401 KAR 63:010 was updated to reflect the most recent revisions to the regulations.
- Subject Item 8 was renamed from "Roads" to "Fugitive Emission Sources" to be inclusive of the addition of EP K10-A – bath screening operation.
- Emission factors for emission units that were tested during the permit term have been updated as appropriate to reflect the highest tested emission factor.
- The overall permit language was updated to be consistent and clear.

Century also submitted a significant permit revision application on August 14, 2024.

The U.S. EPA promulgated the current 1-hour SO_2 National Ambient Air Quality Standards (NAAQS) at 75 parts per billion (ppb) on June 22, 2010. Based on SO_2 concentration data measured at the ambient monitoring station located southwest of the Sebree Plant operations area during the 2017-2019 period, which exceeded the NAAQS, portions of Henderson and Webster Counties in Kentucky surrounding the Sebree Plant were designated as nonattainment with respect to the 1-hour SO_2 NAAQS effective on April 30, 2021. Century is the primary contributor to the exceedances of the NAAQS.

The Division is required to develop a control strategy to help return the area to attainment. As part of the development of this control strategy, the Division requested that Century evaluate and apply to revise their permit to include, and make enforceable, the selected control strategy to mitigate the monitored exceedances.

Century has submitted the following changes to the facility as proposed remedies to the exceedance of the NAAQS:

- A revised potline and ABF combined tpy SO_2 limit;
- A combined calendar month average potline and ABF lb/hr SO_2 limit;
- Individual maximum potline and ABF lb/hr SO_2 limits;
- Construction of a new 213.2 ft tall single Anode Bake Furnace stack;
- Construction of new fencing on the western and southern property boundary.

There are no physical or operational changes being proposed to existing processes and emission units, and the only construction activity addressed by this permit revision is the planned installation of the new Anode Bake Furnace stack and some new fencing on the western and southern property boundary.

The emissions from the Anode Bake Furnace (Emission Unit N2) are pulled to an Alcoa A-446 alumina fluidized bed scrubber via induced draft fans. The A-446 system consists of three alumina scrubber and baghouse modules operating in parallel that provide control for fluorides, particulate matter, and polycyclic organic matter (POM). The A-446 scrubber system is not designed to provide control for SO_2. In dry alumina scrubbers, HF in the gas stream prevents SO_2 adsorption, and displaces any SO_2 that may have been adsorbed.

Currently, each of the three scrubber modules exhausts out a dedicated stack situated on top of

the adjacent scrubber modules. Each of the three adjacent existing stacks has a 70 ft release height and 4.2 ft exit diameters. This revision includes the combining of the three stacks into a single stack, and raising the release height from 70 ft to 213.2 ft with an exit diameter of 8.5 ft. Century located the new stack approximately 20-30 meters southeast of the existing A-446 scrubber. The stack was constructed and operation of the ABF with the new stack was completed in August 2026.

The Division has determined that due to this combined configuration, the installation of SO_2 CEMS on the ABF stack is reasonable and appropriate. A requirement to install CEMS 180 days after final issuance of permit V-26-005 has been included in the permit.

The emissions from each potline are captured through hooding systems and are sent to two Alcoa A-398 alumina fluidized bed dry scrubbers, each of which has five reactors. Each reactor has two stacks. Thus, for three potlines, there are a total of six alumina fluidized bed dry scrubbers with each one serving half of the pots on a potline, and a total of 60 stacks. Any fugitive emissions not caught by the hooding system are vented through the roof of each potline. Century did not propose any changes or improvements to the stacks or roof vents (roof monitors) for each potline. Accordingly, absent reconfiguration or reconstruction reducing the number of stacks for each scrubber, SO_2 CEMS are not reasonable or appropriate for the potlines.

The revised SO_2 emission tpy limit Century requested will reduce the combined potline and ABF emission limit from 5,853 tpy to 4,946 tpy. This requested limit does not reduce or change the actual emissions from the site, but does reduce the quantity of emissions that must be modeled to determine the potential ambient impacts. This correlates with the 1,129 lb/hr combined emission limit determined using the following maximum parameters and assumptions:

Parameter	**Value Used**	**Basis**
Ratio of baked anode to green anode weight	95.440%	2021-2023 average; Calculated as the sum of monthly baked anode process rates divided by the sum of monthly green anode process rates from 1/2021 through 12/2023.
Packing coke usage rate	5.5 kg/mt Baked Anodes	12-month average packing coke usage as of 1/2024; Calculated as the sum of packing coke delivered to the ABF each month divided by the sum of the baked anode process rate each month for the past 12 months.
Pitch Sulfur Content	0.8% sulfur	Permit Limit
Petroleum Coke Sulfur Content	3.0% sulfur	Permit Limit
Packing Coke Sulfur Content	3.0% sulfur	Maximum monthly average packing coke sulfur content (now established as a permit limit in V-26-005)
Green Anode to Pet Coke Sulfur Ratio	73.11%	2021-2023 average of the monthly ratio of green anode sulfur content to the raw pet coke sulfur content. Takes into account % of recycled butts, pet coke, and pitch in anode recipe.
Ratio of Baked Anode sulfur content to Green Anode sulfur content	94.72%	2021-2023 average of the monthly ratio of baked anode sulfur content to green anode sulfur content.

Parameter	Value Used	Basis
Anode consumption rate	0.4308 ton/ton Al	2021-2023 average
% of anode sulfur emitted as COS at the potlines	6.25%	Assumption based on the 40 CFR 63, Subpart LL COS limit
Assumed potline A-398 scrubber capture efficiency	98%	Expected based on pot and scrubber collection ductwork design.
Forecast maximum ABF portion of SO_2 emissions	21%	Highest portion of mass balance calculated SO_2 emissions occurring at the ABF in any year, 2021-2023
Forecast maximum potline portion of SO_2 emissions	90.2%	Highest portion of mass balance calculated SO_2 emissions occurring at potline in any month, 2021-2023
Expected Normal Split of SO_2 Emissions Between ABF and Potlines	14% ABF/ 86% Potlines	Mass balance and historical data

Century also requested combined potline and ABF and individual lb/hr SO_2 emission limits calculated once each calendar month. The individual limits are designed to provide operational flexibility and take into account the expected month-to-month variability, while the combined limit provides an overall backstop limiting the total emissions from both. The calendar month averaging time coincides with the averaging time for emission limits from 40 CFR 63, Subpart LL and takes into account the continuous steady-state operating nature of the potlines. The emission rates for the Highest ABF and Highest Potline scenarios consider the changes in monthly distribution of SO_2 emissions determined via mass balance during the past three years. The modeling that was conducted took into account all emission limit scenarios and proposed averaging times.

The individual limits proposed for the ABF and potlines were selected based Century's review of the historical variability of the distribution of SO2 emissions between the ABF and potlines. For example, over the past three years, while the average ABF emissions predicted by the mass balance is expected to be 14% of total emissions, the average ABF emissions have varied between 11% to 21%. Thus, the individual emission rate limit proposed for the ABF was set at 21% of the plant-wide limit, which equates to 237 lb/hr (21% × 1,129 lb/hr = 237 lb/hr). For the potlines, while average emissions predicted by the mass balance are expected to be 86% of the total emissions in a typical month, they varied between 79% to 89% of total emissions on an annual average basis in the past three years. In Century's review of individual months, the potlines never exceeded more than 90.2% of total emissions in a single month. Because the potlines make up a larger portion of emissions, this more conservative monthly maximum distribution value was used. Thus, the individual calendar month average emission rate limit proposed for the potlines was set at 90.2% of the combined plant-wide limit, which equates to 1,018 lb/hr.

Because the Division has determined that CEMS is appropriate for the ABF stack, compliance with the individual lb/hr SO_2 emission limit for the ABF will be determined on a rolling 24-hr

average basis. Century's submittal indicated that although the anodes within a given pit in the ABF are processed on a batch cycle, because there are multiple firing trains in operation continuously and so many pits moving stepwise through their respective baking cycle, this operating characteristic will dampen large swings in total SO_2 emission rates from the ABF. Additionally, Century believes that there is more short-term variability in the SO_2 emissions from the ABF compared to the potlines. Century modeled the emissions from the ABF adjusted upward to account for a requested 30-day averaging period for the ABF, which the Division did not accept. Accordingly, the modeled emission rates for the ABF were more conservative (higher) than necessary.

The CEMS data from the ABF must be used to supplement the mass balance data used to determine the potline contribution to total SO_2 emissions.

Section D of the permit includes the calculations to be used when demonstrating compliance with the combined SO_2 emission limits, and how the CEMS data is to be included in those calculations. It also includes the requirement to maintain the property line fencing installed as part of this revision, which has already been installed.

Section I of the permit includes terms and conditions related to the installation of the new CEMS for SO_2 on the ABF stack, and requires Century to use a mass balance calculation to determine compliance until the CEMS system is installed.

The changes to the SO_2 emission calculations also necessitated a change to the emission calculations for COS from the potlines – previously the COS calculation used an assumption of 5% sulfur is emitted as COS (instead of SO_2). The revised calculations now assume 6.25% is emitted as COS. This decreased the potential emissions of SO_2 calculated for the potlines.

Finally, on February 4, 2026, Century also notified the Division of the permanent shutdown and removal of two of the existing Holding Furnaces with in-line degassers (Designations I1 and I2 in EU F1) and the Remelt Furnace (EU A6). Accordingly, these emission units and associated permit conditions and alternate operating scenarios have been removed from the permit.

V-26-005 Emission Summary				
Pollutant	2025 Actual (tpy)	Previous PTE V-19-010 R2 (tpy)	Change (tpy)	PTE V-26-005 (tpy)[3]
CO	24,956	26,748	+220	26,968
NO_X	42.43	134.23	-40.72	93.51
PT	573.61[1]	458.16	-14.81	443.35
PM_{10}	198.75	360.01	-11.50	348.51
$PM_{2.5}$	130.50	302.62	-6.24	296.38
SO_2	3,700	5,854	-907	4,945
VOC	3.36	8.26	-2.01	6.25
Lead	0.0003	0.0007	-0.0002	0.0005
Fluoride (F)	54.01	129.01	0	129.01
Total Fluorides (F + HF)	157.49	243.80	-1.23	242.57
Sulfuric Acid	7.61	8.35	0	8.35
Greenhouse Gases (GHGs)				

V-26-005 Emission Summary				
Pollutant	2025 Actual (tpy)	Previous PTE V-19-010 R2 (tpy)	Change (tpy)	PTE V-26-005 (tpy)[3]
Carbon Dioxide	449,651	578,210	-48,768	529,442
Methane	1.18	3.15	-0.91	2.24
Nitrous Oxide	0.12	0.31	-0.08	0.23
Perfluoromethane (PFC-14)	--[2]	76.47	0	76.47
Perfluoroethane (PFC-116)	--[2]	3.67	0	3.67
CO_2 Equivalent (CO_2e)	449,716	1,188,255	-110,956	1,077,299
Hazardous Air Pollutants (HAPs)				
Carbonyl Sulfide (COS)	271.22	287.91	+71.98	359.89
Dioxins/Furans (D/F)	--[2]	3.0×10^{-6}	-3.0×10^{-6}	0
Chlorine	0.17	0.30	-0.07	0.23
Hexane	0.92	2.54	-0.77	1.77
Hydrochloric Acid (HCl)	25.51	42.81	-21.95	20.86
Hydrofluoric Acid (HF)	103.48	114.78	-1.22	113.56
Polycyclic Organic Matter (POM)	73.09	93.50	0	93.50
Combined HAPs:	473.30	542.25	+47.94	590.19

[1]Note: Actual PT as reported to KYEIS includes condensable PM, whereas the PTE for PT only includes the filterable portion.
[2]Note: These pollutants are not currently tracked in KYEIS.
[3]Note: Includes federally enforceable emission and operating limitations, and any federally enforceable control devices as required in the permit.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Subject Item 1: Existing Process Sources

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
Opacity	40%	401 KAR 61:020, Section 3(1)(a)	N/A	Weekly qualitative observations; monitoring; recordkeeping
PM (EUs K1 & U1)	0.02 gr/dscf; & 97% actual control efficiency	401 KAR 61:020, Section 3(2)(b)	Average from 2008-2012 Stack tests; >99% CE	Monitoring; recordkeeping; manufacturer's certification
PM (All other EUs)	• $P \leq 0.5$ tph = 2.58 lb/hr • $0.5 < P \leq 30$ tph = $4.10P^{0.67}$ lb/hr • $P > 30$ tph = $55.0P^{0.11}$-40 lb/hr	401 KAR 61:020, Section 3(2)(a)	0.01 gr/dscf filter rating	Monthly calculations; monitoring; recordkeeping

Initial Construction Date: see below.

Process Description:

EU	Equip. Designation	Const. Date	Description	Controls	Material	Capacity (tons/hr)
Emission Group I: Raw Materials						
A1	(T1, T2, T3)	8/4/1972	Barge Unloading	1-DU-DC 2-DU-DC BC1-TP-DC	Alumina, Coke	154.2
A2	(S1, S2, S3)	8/4/1972	Alumina Storage	140A-DC 140B-DC 140C-DC	Alumina	154.2
A8	(T4)	8/4/1972	Material Transfer	140X-DC TT2-DC	Alumina, Coke	154.2
C1	(T5)	8/4/1972	Material Transfer Rail Car	140Y-DC	Alumina, Fluoride, Coke	75.0
C2	(T6, 2S)	8/4/1972	Aluminum Fluoride	140G-DC 140H-DC	Aluminum Fluoride	75.0
C4	(T7, T8, T9)	8/4/1972	Coke Handling	252Y-DC TT6-DC TT7-DC	Petroleum Coke	150.0
C6	(3S, 4S)	8/4/1972	Coke Storage Tanks	252A-DC 252B-DC	Petroleum Coke	150.0
Emission Group II: Green Carbon Dry						
K7	(E6)	1972	Coke Crushing	CCD-2-DC	Petroleum Coke	24.04
L1	(E7)	1972	Coke Ball Mill	CF-13-DC	Petroleum Coke	18.32
L3	(E8)	1972	Coke Fines Handling	CFD-2-DC	Petroleum Coke	20.0

Subject Item 1: Existing Process Sources

M1	(E9)	12/12/1972	Anode Mix Hopper	MD-2-DC	Anode Raw Materials (No POM)	28.90
U2	(CI7)	1972	Coke Intermediates Handling	CI-7-DC	Intermediate Coke	45.00
Emission Group V: Anode Butts Processing						
J1	(E1)	8/4/1972	Butt Surge Tank	254Y-DC	Anode Butts	15.75
J2	(E2)	8/4/1972	Anode Butt Cleaning	SW-DC	Shot Blast Material	2.59
K5	(E5)	1972	Butt Impactor	BD-6-DC	Anode Butts	30.0
Emission Group VI: Bath Salvage						
K1	[P1(23)]	1972	Bath Crushing/Crucible Cleaning	RB10-DC	Anode Cover	40.0
U1	(5P)	1972	Bath Transfer to Storage Processing	104H-BS-DC	Anode Cover	40.00
Emission Group VII: Anode Rods						
Q4	(EG)	1972	Anode Rod Cleaning	NW-DC	Shot Blast Material	17.60
Emission Group VIII: Potlines						
B4	(S7, S8)	8/4/1972	Reacted Alumina Storage	141R-DC 142R-DC	Reacted Alumina	40.0
B6	(S4, S5)	8/4/1972	Unreacted Alumina Storage	141M-DC 142M-DC	Unreacted Alumina	200.0
Emission Group X: Casthouse Operations						
G8	(I9)	8/4/1972	Ingot Casting Dross Loading	DL-DC	Dross Material	9.75

Applicable Regulations:
401 KAR 61:020, *Existing process operations;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 61, commenced before July 2, 1975.

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

Comments:
Particulate emissions calculated using grain loading values for the dust collectors and the EPA SCC PM2.5 Calculator. For emission units A1, A2, C2, C4, C6, J1, B4, and B6, the control devices on these units meet the definition of "Inherent Process Equipment" in 40 CFR 64.1, since they are used to recover material for reintroduction back to the process or recover a material that is ultimately sold, and as such, they are exempt from the requirements under CAM. For emission unit M1, U1, C4, and A8, the emission limit can be achieved without the use of the control device, and are therefore also exempt from the requirements under CAM.

Subject Item 2: New Process Sources				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Weekly qualitative observations; monitoring; recordkeeping
PM	• $P \leq 0.5$ tph = 2.34 lb/hr • $0.5 < P \leq 30$ tph = $3.59P^{0.62}$ lb/hr • $P > 30$ tph = $17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	0.01 gr/dscf filter rating	Monthly calculations; monitoring; recordkeeping
PM_{10} (Induction Furnace #3)	15 tons/yr	To Preclude 401 KAR 51:017	0.01 gr/dscf filter rating	Monthly and 12-month rolling calculations; monitoring; recordkeeping

Initial Construction Date: see below.

Process Description:

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

Applicable Regulations:
401 KAR 59:010, *New process operations;* applies to each affected facility, associated with a process

Subject Item 2: New Process Sources

operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

40 CFR 64, *Compliance Assurance Monitoring*, applies to emission units E6, J3, K3, U3, and U4 with respect to PM.

Precluded Regulation:
401 KAR 51:017, *Prevention of significant deterioration of air quality*, for Q2

Comments:
Particulate emissions calculated using grain loading values for the dust collectors and the EPA SCC PM2.5 Calculator. For emission units B5 and B7, the control devices on these units meet the definition of "Inherent Process Equipment" in 40 CFR 64.1, since they are used to recover material for reintroduction back to the process or recover a material that is ultimately sold, and as such, they are exempt from the requirements under CAM.

Subject Item 3: Indirect Heat Exchangers

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.42 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	AP-42, Chapter 1.4	Assumed based upon natural gas combustion
Opacity	20% opacity	401 KAR 59:015, Section 4(2)	N/A	Assumed based upon natural gas combustion
SO_2 (EU A3 & S7)	1.82 lb/MMBtu	401 KAR 59:015, Section 5(1)(c)	AP-42, Chapter 1.4	Assumed based upon natural gas combustion
SO_2 (All other EUs)	1.85 lb/MMBtu			

Initial Construction Date: See below.

Process Description:

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

Applicable Regulations:

401 KAR 59:015, *New indirect heat exchangers;* applies to indirect heat exchangers having a heat input capacity greater than one (1) MMBtu/hr commenced on or after April 9, 1972.

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 each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Applies to EU S7.

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 15 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, applies to each industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP. Under this regulation all the boilers are existing units, except EU S7, which is a new unit.

Comments:

Emissions calculated using AP-42, Chapter 1.4 and 40 CFR 98. The EUs meet the definition of units designed to burn Gas 1 fuel in 40 CFR 63, Subpart DDDDD.

Subject Item 4: Existing CWPB1 Potlines				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
TF	1.9 lb/ton (stack & roof)	40 CFR 63.843(a)(1)(i)	2017 Stack test data	Semi-Annual Roof and Annual Stack Testing; monitoring; recordkeeping
POM	1.1 lb/ton (stack & roof)	40 CFR 63.843(a)(2)(iv)	2017/2018 Stack test data	Semi-Annual Roof and Annual Stack Testing; monitoring; recordkeeping
PM	7.4 lb/ton (stack & roof)	40 CFR 63.843(a)(3)(i)	2017/2018 Stack test data	Semi-Annual Roof and Annual Stack Testing; monitoring; recordkeeping
COS	3.9 lb/ton	40 CFR 63.843(e)	Material Balance; 5% of Sulfur in Anodes	Calculation; monitoring; recordkeeping
Opacity	normal op.:10% sick/start-up: 40% dry scrubber: 10%	401 KAR 61:165, Section 3	N/A	Daily qualitative observations; monitoring; recordkeeping
TF	1.9 lb/ton (stack only)	401 KAR 61:165, Section 4(1)(a); 401 KAR 51:017	2017 Stack test data	Complying with the more stringent Subpart LL standard
CO	233.6 lb/ton (stack & roof)	401 KAR 51:017	2014 Stack test data	5-year Testing; monitoring; recordkeeping
PM	4.88 lb/ton (stack & roof)	401 KAR 51:017	2017 Stack test data	Annual Testing; monitoring; recordkeeping
PM_{10}/ $PM_{2.5}$	2.1 lb/ton (stack & roof)	401 KAR 51:017	2017 Stack test data	Annual Stack Testing; monitoring; recordkeeping
SO_2 (Potlines #1-#3 combined)	1,018 lb/hr (stack & roof)	401 KAR 53:005, Section 1(3)	Mass Balance	Stack Testing, sulfur sampling, monitoring, recordkeeping, and reporting

Initial Construction Date: See below.

Process Description:

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

Subject Item 4: Existing CWPB1 Potlines

	E3-2 (P6, P7)		Potline 2	A-398 Dry Alumina Scrubbers: 162S A-398 162N A-398		
E5	E5-1 (3P, 4P)	8/1/1979	Potline 3 Roof Monitors	None – Vents to Atmosphere	Aluminum	9.65*
	E5-2 (1P, 2P)		Potline 3	A-398 Dry Alumina Scrubbers: 163S A-398 163N A-398		

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

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

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

401 KAR 61:165, *Existing primary aluminum reduction plants,* applies to each potroom group within a primary aluminum reduction plant commenced before October 23, 1974.

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants,* applies with respect to each existing CWPB1 potline associated with primary aluminum production and located at a major source as defined in 40 CFR 63.2.

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

Comments:
Emissions for each of the potlines are calculated using previous stack tests for each Emission Unit, or data from a similar unit where no source specific tests were performed. COS emissions are calculated using an assumption of 6.25% of the sulfur in the anodes is converted to COS. CO_2, CF_4, and C_2F_6 emissions are calculated using the equations in 40 CFR 63, Subpart F. The potlines are also subject to a combined SO_2 limit with the Anode Bake Furnace.

Total Fluorides (TF), for the purposes of this permit and emission calculations include both Gaseous Fluorides (HF) and Particulate Fluorides (F).

The ambient air monitor operated by Century is operated for the measurement of gaseous fluorides (HF) only. So while 401 KAR 61:165 identifies what constitutes a violation for the secondary standard for TF, particulate fluorides are not actively monitored by Century, and therefore the only way an exceedance of the TF standard could be measured would be if HF monitoring data exceeded the TF standard alone (without the addition of particulate fluoride data).

The rodded baked anodes used to form one part of the electrolytic cell in the pots of each potline contain sulfur, which can be volatilized and oxidized to form SO_2, carbonyl sulfide (COS), and other trace sulfur compounds as the anodes are consumed in the pots. The sulfur content of the baked anodes processed is known based on daily core samples extracted and tested. The anode consumption rate, a key performance metric of the plant, is also closely measured and tracked, as required by the permit. These two inputs define, on a mass balance basis, the maximum amount of sulfur that is released from the potline operations.

Subject Item 4: Existing CWPB1 Potlines

Of the sulfur released from the consumed anodes in the potlines, some percentage will be released as COS and particulate sulfate compounds. Although up to 2% of the sulfur is believed to be emitted as particulate sulfate, for purposes of defining SO_2 emissions from the potline operations via mass balance methodology, it is conservatively assumed that all the sulfur is emitted as either SO_2 or COS.

COS emissions are calculated on a monthly basis as required by 40 CFR 63.847(j). EPA embedded a presumed conversion of sulfur to COS based on industry data available at the time of the last revision of 40 CFR 63, Subpart LL in 2015. Considering the average amounts of sulfur in raw petroleum coke converted to COS and typical percentage of anodes comprised of petroleum coke, EPA found that the sulfur to COS conversion rate ranged from 4.5% to 10%. The embedded COS conversion rate used for the COS emission limit in 40 CFR 63, Subpart LL is 6.25%.

To remain consistent with the methodology and assumptions EPA used in 40 CFR 63, Subpart LL for calculating monthly average SO_2 emissions, this 6.25% sulfur to COS conversion rate is used in the monthly potline mass balance SO_2 emission calculations. Specifically, the monthly average SO_2 emission rate from the Potlines shall be calculated monthly using the following equation (also in Section B of the permit):

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

Where:

$E_{SO_2 Potlines}$ = Calendar month average SO_2 emissions from Potlines #1 - #3 in lb/hr;

A = Total anode consumption in the potlines during month (ton/month); based on the potline production rate (ton aluminum/month) multiplied by the monthly average anode consumption rate (ton anode/ton aluminum).

$\%S_{BA}$ = Average baked anode core samples sulfur content (weight %) for the month based on all daily samples tested;

H = Operating hours in the month (hr/month);

93.75% = Assumed conversion of sulfur to SO_2 with the balance being COS (6.25%);

$64/32$ = Ratio of mass of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2 = 1 lbmole S;

2000 = Conversion of tons to lb (2,000 lb/ton)

This calculation will be used in combination with the CEMS data from the ABF to determine compliance with the combined emission limits in Section D of the permit.

Subject Item 5: Paste Production Plant				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.082 lb/ton	40 CFR 63.843(b)(4)	0.0143 lb/ton paste; 1/24/2019 Stack Test	Calculation; Testing; monitoring; recordkeeping
POM	Capture and control	40 CFR 63.843(b)		Site Inspection and records review
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Daily qualitative observations; monitoring; recordkeeping
PM	• $P \leq 0.5$ tph = 2.34 lb/hr • $0.5 < P \leq 30$ tph = $3.59P^{0.62}$ lb/hr	401 KAR 59:010, Section 3(2)	0.0143 lb/ton paste; 1/24/2019 Stack Test	Monthly calculations; monitoring; recordkeeping

Initial Construction and/or Modification Date: 6/19/1979; Modified to duct to a single stack in 1999.

Process Description:
M2-M7 (1E-9E) – Seven (7) Anode Mixers and Three (3) Anode Mix Conveyors

Maximum Capacity: 28.9 tons/hr green anodes

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

Applicable Regulations:
401 KAR 59:010, *New process operations;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants,* applies with respect to each existing paste production plant associated with primary aluminum production and located at a major source as defined in 40 CFR 63.2.

Comments:
Paste production plant emissions calculated using the results of the most recent stack test (1/24/2019) and the EPA PM2.5 Calculator.

Subject Item 6: Anode Bake Furnace				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
TF	0.20 lb/ton	40 CFR 63.843(c)(1)	0.0051 lb/ton; 5/15/2018 Stack Test	Calculation; Annual testing; monitoring; recordkeeping
POM	0.18 lb/ton	40 CFR 63.843(c)(2)	0.126 lb/ton; 9/20/2016 Stack Test	
PM	0.20 lb/ton	40 CFR 63.843(c)(3)	0.192 lb/ton; 5/15/2018 Stack Test	
Mercury	1.7 µg/dscm	40 CFR 63.843(c)(4)	2.075×10^{-5} lb/ton; LL Allowable	
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Daily qualitative observations; monitoring; recordkeeping
PM	• $P \leq 0.5$ tph = 2.34 lb/hr • $0.5 < P \leq 30$ tph = $3.59P^{0.62}$ lb/hr	401 KAR 59:010, Section 3(2)	0.192 lb/ton; 5/15/2018 Stack Test	Monthly calculations; monitoring; recordkeeping
PM/PM_{10}	5.14 lb/hr; 3-hour average	To preclude 401 KAR 51:017	0.192 lb/ton; 5/15/2018 Stack Test	Calculation; Annual testing; monitoring; recordkeeping
SO_2	237 lb/hr	401 KAR 53:005, Section 1(3)	Mass Balance	CEMS

Initial Construction and/or Modification Date: 8/4/1972; refurbished 2007; Modified to duct to a single stack in 2026.

Process Description:
N2 (EE) - Anode Bake Furnace ("261 Furnace")

Maximum Capacity: 12,144.20 tons/month green anodes

Heat Input Capacity: 51.0 MMBtu/hr

Primary Fuel: Natural Gas (Only fuel used in this emission unit)

Control equipment: A-446 Dry Alumina Scrubber/Baghouse System

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

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

401 KAR 59:010, *New process operations;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

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

Subject Item 6: Anode Bake Furnace

Aluminum Reduction Plants, applies with respect to each existing anode bake furnace associated with primary aluminum production and located at a major source as defined in 40 CFR 63.2.

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

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

Comments:
Emissions were calculated using the highest representative results from previous stack tests, 40 CFR 98, and the Subpart LL Allowable. This furnace is also subject to a combined SO_2 limit with the Potlines. Natural Gas emissions calculated using AP-42, Chapter 1.4 and 40 CFR 98. The ABF is equipped with low-NOx burners.

The coal tar pitch, petroleum coke, and the recycled anode butts material mixed into the green anode paste.

that is pressed into green anode blocks, as well as the packing coke used to cover the anodes during the

baking process, all contain sulfur. As the anodes and packing coke are heated in the Anode Bake Furnace,

the sulfur they contain can be volatilized and oxidized to form SO_2.

The sulfur input to the Furnace is calculated based on (1) the sulfur content and process rate of green anodes and (2) the sulfur content and usage rate of packing coke. The sulfur output from the Furnace is based on the sulfur content and process rate of baked anodes removed from the Furnace. The difference between the sulfur input to the Furnace and sulfur leaving the Furnace represents the net sulfur released to the A-446 dry alumina scrubber system. The potential SO_2 emission rate is then calculated by conservatively assuming that all sulfur released from the Furnace is emitted as SO_2 (i.e., not accounting for any portion that may be released as particulate sulfate or other sulfur compounds). The sulfur that is retained in the baked anodes is transferred to and emitted at the potlines. Thus, for the Anode Bake Furnace, the calculation of potential SO_2 emissions requires data on (1) the process rates of green anodes, baked anodes, and packing coke, and (2) their respective sulfur contents.

Century is required to track and record the monthly process rate (tons/month) of green anodes placed in and baked anodes removed from the Anode Bake Furnace. The process weights are determined by weighing each anode loaded and unloaded in the pits during a given month. In the baking process, volatiles in the anodes are released and thus the weight of a given anode after it is baked is less than its weight starting out as a green anode. This ratio of the total weight of baked anodes to green anodes is relatively consistent and is thus used in the mass balance to define the monthly green anode process rate based on the measured mass of baked anodes removed from the furnace.

Century is required to track and record the monthly packing coke usage. This is determined based on the make-up supply of packing coke added each month. The weight ratio of packing coke added to baked anodes produced is consistent from month to month. Thus, the amount of packing coke used generally rises and falls with the baked anode production rate from month to month.

Century collects samples of green anode paste (just upstream of the Anode Press) and core samples of baked anodes at least once daily and to measure the sulfur content using ASTM Method D6376 or an approved alternative method. The permit also requires that a sample of packing coke be tested at least monthly to measure its sulfur content. The samples within a month are then aggregated to define the

Subject Item 6: Anode Bake Furnace

monthly average sulfur contents for each of the three materials (green anodes, baked anodes, and packing coke).

Potential emissions of SO_2 were calculated using the following assumptions in a mass balance calculation:

$$E_{SO_2-ABF} = \frac{[(P_{GA} \times \%S_{GA}) + (P_{PC} \times \%S_{PC}) - (P_{BA} \times \%S_{BA})]}{H}(\frac{64}{32})(2000)$$

Where:

E_{SO_2-ABF} = Monthly average SO_2 emissions from ABF (lb/hr)

P_{GA} = Mass of green anode blocks baked during month (ton/month), set equal to P_{BA} divided by the current three-year average baked anode:green anode weight ratio

$\%S_{GA}$ = Average green anode paste sulfur content (weight %) for month based on all valid daily samples tested

P_{PC} =Packing coke consumed during month (ton/month), based on make-up rate of packing coke added to system during the month

$\%S_{PC}$ = Average packing coke sulfur content (weight %) for month based on all valid samples collected and tested in the month

P_{BA} = Measured mass of baked anode blocks removed from the furnace during month (ton/month)

$\%S_{BA}$ = Average baked anode core samples sulfur content (weight %) for month based on all valid daily samples tested.

H = Operating hours in the month (hr/month)

64/32 = Mass ratio of SO_2 to S (lb/lbmole / lb/lbmole) where 1 lbmole SO_2 = 1 lbmole S

2000 = Conversion of tons to lb (2,000 lb/ton)

Subject Item 7: Holding Furnaces				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM (Furnace)	0.80 lb/ton	40 CFR 63.1505(i)(2)	0.2546 lb/ton; 07/2012 Stack Test on Furnace #8	Calculation; 5-year testing; monitoring; recordkeeping
PM (Fluxer)	0.01 lb/ton	40 CFR 63.1505(j)(2)		
HF (Furnace)	0.40 lb/ton	40 CFR 63.1505(i)(4)	0.123 lb/ton; 9/12/2017 Stack Test on Furnace #8	
HCl (Furnace)	0.40 lb/ton	40 CFR 63.1505(i)(4)	0.3429 lb/ton; 07/2012 Stack Test on Furnace #8	
HCl (Fluxer)	0.04 lb/ton	40 CFR 63.1505(j)(1)		
Opacity (EU F2)	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Weekly qualitative observations; monitoring; recordkeeping
Opacity (EU F1)	40%	401 KAR 61:020, Section 3(1)(a)	N/A	Weekly qualitative observations; monitoring; recordkeeping
PM (EU F2)	• $P \leq 0.5$ tph = 2.34 lb/hr • $0.5 < P \leq 30$ tph = $3.59P^{0.62}$ lb/hr	401 KAR 59:010, Section 3(2)	0.2546 lb/ton; 07/2012 Stack Test on Furnace #8	Monthly calculations; 5-year testing; monitoring; recordkeeping
PM (EU F1)	• $P \leq 0.5$ tph = 2.58 lb/hr • $0.5 < P \leq 30$ tph = 4.10 $P^{0.67}$ lb/hr	401 KAR 61:020, Section 3(2)(a)		Monthly calculations; 5-year testing monitoring; recordkeeping

Initial Construction Date: See below.

Process Description:

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

Subject Item 7: Holding Furnaces

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

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

401 KAR 59:010, *New process operations* for unit F2*;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

401 KAR 61:020, *Existing process operations* for unit F1*;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 61, commenced before July 2, 1975.

401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 through 63.1519, Tables 1 through 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production,* applies to each Group 1 and Group 2 furnace and in-line fluxer located at a secondary aluminum production facility that is a major source of hazardous air pollutants (HAPs).

Comments:
Emissions are calculated using previous stack tests and the 2009 Aluminum Association study. Emissions from natural gas combustion are calculated using AP-42, Chapter 1.4 and 40 CFR 98, Subpart C.

These furnaces and in-line fluxers may switch operating modes to Group 2 (clean charge only) operation, according to the Alternate Operating Scenario in Section H of the permit.

Subject Item 8: Fugitive Emission Sources

Initial Construction Date: for EU Z1: 1972; for EU K10-A: 2021

Process Description:
Z1 - Haul Roads (EP)

Includes both paved and unpaved roads at the facility.

Maximum Capacity: 35,128 VMT/yr

Control Equipment: Water

K10-A – Bath Screening Operation
Powerscreen Chieftain 1400 model used to process accumulated routine spillage material in the potline basements and to process accumulated bath salvage material to recycle this back into the process.
Maximum Capacity: 30,000 tons/yr

Control Equipment: None
Applicable Regulation:
401 KAR 63:010, *Fugitive emissions,* applies to each apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.

Comments:
For EU Z1, Emissions calculated using AP-42, Section 13.2.1 and 13.2.2.

For EU K10-A, Emission calculated using AP-42, Section 11.19.2 and AP-42, Chapter 13.2.4, and an average moisture content of 2.24%. Maximum throughput is inherently constrained by the amount of bath material generated by the facility.

Subject Item 9: Homogenizing Furnaces				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Opacity	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Assumed based upon natural gas combustion
PM	• $P \leq 0.5$ tph = 2.34 lb/hr • $0.5 < P \leq 30$ tph = $3.59P^{0.62}$ lb/hr	401 KAR 59:010, Section 3(2)	1.9 lb/MMscf; AP-42, Chapter 1.4	Assumed based upon natural gas combustion

Initial Construction Date: See below.

Process Description:

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

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

Applicable Regulations:

401 KAR 59:010, *New process operations;* applies to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 15 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, applies to each industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP. The homogenizing furnaces meet the definition of metal process furnaces and units designed to burn Gas 1 fuels as defined in 40 CFR 63.7575.

Comments:

Emissions calculated using AP-42, Chapter 1.4 and 40 CFR 98.

Subject Item 10: New Emergency Stationary SI RICE ≤ 500 HP				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
NOx + HC	10 g/HP-hr	40 CFR 60.4233(d)	Manufacturer's Certification	Certified Engine
CO	387 g/HP-hr	40 CFR 60.4233(d)	Manufacturer's Certification	Certified Engine

Initial Construction Date: See below.

Process Description:

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

Applicable Regulations:
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*, applies to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in 40 CFR 63.4230(a)(1) through (6).

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to stationary RICE at a major or area source of HAP emissions.

Comments:
For EU Z5, Z6, and Z8, Emissions calculated using the 40 CFR 60, Subpart JJJJ allowable, 40 CFR 98, and AP-42, Chapter 3.2 for a 4-stroke rich burn engine and using 500 hours/yr to conservatively account for emergency operation.

For EU Z9, Emissions calculated using the Engine Certification, 40 CFR 98, and AP-42, Chapter 3.2 for a 4-stroke lean burn engine and using 500 hours/yr to conservatively account for emergency operation.

Subject Item 11: Existing Emergency Stationary RICE ≤ 500HP

Initial Construction Date: See below.

Process Description:

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

Applicable Regulation:
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to stationary RICE at a major or area source of HAP emissions.

Comments:
Emissions calculated for Z2 using 40 CFR 98 and AP-42, Chapter 3.2 for a 4-stroke lean burn engine and using 500 hours/yr to conservatively account for emergency operation.

Emissions calculated for Z4 using 40 CFR 98 and AP-42, Chapter 3.3 and using 500 hours/yr to conservatively account for emergency operation.

Subject Item 12: Emergency Propane Fired Generators ≤ 500HP, Constructed on or After June 12, 2006

Initial Construction Date: See below.

Process Description:

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
Z3	(Z3)	11/2008	Cummins Emergency Generator	None	Propane	66 HP
Z7	(Z7)	2007	Lift Station Emergency Generator	None	Propane	30 HP

Applicable Regulation:
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to stationary RICE at a major or area source of HAP emissions.

Non-Applicable Regulation:
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. These engines were constructed after June 12, 2006, however, they were manufactured prior to January 1, 2009, and are therefore exempt from this regulation. [40 CFR 60.4230(a)(4)(iv)] (Note: This regulation will become applicable should either of these engines be modified or reconstructed in the future as defined under the Federal Regulation)

Comments:
Emissions calculated for Z7 using the engine certification for CO, NOx, and VOC, 40 CFR 98, and AP-42, Chapter 3.2 for a 4-stroke rich burn engine and using 500 hours/yr to conservatively account for emergency operation.

Emissions calculated for Z3 using 40 CFR 98 and AP-42, Chapter 3.2 for a 4-stroke lean burn engine and using 500 hours/yr to conservatively account for emergency operation.

Subject Item 13: Pitch Storage Tanks				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
POM	95% Reduction	40 CFR 63.843(d)	0.0392 lb POM/ton; Subpart LL ICR Survey for VOC	Design Evaluation submitted 8/18/2017

Initial Construction Date: 7/28/1977

Process Description:
U5 (EO72, EO73) – Pitch Storage Tanks
Maximum Capacity: 29.50 tons coal tar/hr; 225,000 gallons total storage capacity
Control equipment: DL-DC; Carbon Adsorber

Applicable Regulation:
401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants,* applies with respect to each pitch storage tank associated with primary aluminum production and located at a major source as defined in 40 CFR 63.2.

Comments:
Century submitted the design evaluation for the Pitch Storage Tank control system pursuant to 40 CFR 63.843(d) on August 18, 2017. Emissions are calculated assuming POM is equal to VOC for these tanks.

Subject Item 14: New Stationary CI RICE

Initial Construction Date: See below.

Process Description:

EU	Equip. Designation	Const. Date	Description	Controls	Fuel	Capacity
Emission Group XII: Stationary Engines						
K10-B	---	2021	Powerscreen Engine	None	Diesel	110 HP

Applicable Regulations:
401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in 40 CFR 63.4200(a)(1) through (4).

401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* applies to stationary RICE at a major or area source of HAP emissions.

Comments:
Emissions calculated using the Engine Certification, 40 CFR 98, and AP-42, Chapter 3.3 for a 4-stroke lean burn engine.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
Q2 (Furnace #3)	Baghouse (232F-DC)	PM	401 KAR 59:010	Initial	Method 5	10.90 lb/hr	0.014 lb/hr	0.00103 gr/dscf; 6 tph	CMN20060009	11/9/06
K1 & U1	Baghouse (RB10-DC & 104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Initial & Annual	Method 5	0.02 gr/dscf & 97% RE	K1: 0.001 gr/dscf; 99.9% RE U1:0.001 gr/dscf; 99.6% RE	K1 flow: 22,567 dscfm; U1 flow: 45,460 dscfm; 2 buckets of bath per hour	CMN20070010	4/3/07-4/4/07
K1 & U1	Baghouse (RB10-DC & 104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	K1: 0.002 gr/dscf; 99.94% RE U1:0.003 gr/dscf; 99.35% RE	K1 flow: 23,235 dscfm; U1 flow: 43,199 dscfm; 202,000 lb/test day	CMN20080012	4/2/08-4/3/08
K1 & U1	Baghouse (RB10-DC & 104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	K1: 0.007 gr/dscf; 99.6% RE U1:0.010 gr/dscf; 97.2% RE	K1 flow: 23,003 dscfm; U1 flow: 39,011 dscfm; 138,000 lb/test day	CMN20090014	4/2/09-4/3/09

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
K1 & U1	Baghouse (RB10-DC & 104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	K1: 0.004 gr/dscf; 99.86% RE U1:0.001 gr/dscf; 99.74% RE	K1 flow: 20,307 dscfm; U1 flow: 42,895 dscfm; 151,600 lb/test day	CMN20100013	5/18/10-5/24/10
K1	Baghouse (RB10-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	0.006 gr/dscf; 99.7% RE	flow: 19,711 dscfm; 65 ton/test day	CMN20110018	5/5/11
K1	Baghouse (RB10-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	0.001 gr/dscf; 99.99% RE	flow: 21,922 dscfm; 49 ton/test day	CMN20120026	3/20/12
U1	Baghouse (104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	0.021 gr/dscf; 91.40% RE	flow: 46,056 dscfm; 67 ton/test day	CMN20110016	4/1/11
U1	Baghouse (104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	0.001 gr/dscf; 99.74% RE	flow: 49,978 dscfm; 77.7 ton/test day	CMN20110019	10/14/11
U1	Baghouse (104H-BS-DC)	PM grain loading and efficiency	401 KAR 61:020, Section 3(2)(b)	Annual	Method 5	0.02 gr/dscf & 97% RE	0.001 gr/dscf; 99.73% RE	flow: 45,243 dscfm; 58 ton/test day	CMN20120021	3/19/12

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
Existing SAPU (F1 & F2)	None	PM & HCl	40 CFR 63.1505(k) & 63.1513(e)	Every 5 years	Method 5 & 26A	Furnace: 0.80 lb PM/ton; ACD: 0.010 lb PM/ton	Furnace: 0.88 lb PM/ton; ACD: 0.58 lb PM/ton	Furnace throughput: 9.28 tons/hr; ACD throughput: 31.8 ton/hr	CMN20030009	1/14/03-1/16/03
						Furnace: 0.40 lb HCl/ton; ACD: 0.040 lb HCl/ton	Furnace: 0.734 lb HCl/ton; ACD: 0.001 lb HCl/ton			
Existing SAPU (F1 & F2)	None	PM & HCl	40 CFR 63.1505(k) & 63.1513(e)	Every 5 years	Method 5 & 26A	Furnace: 0.80 lb PM/ton; ACD: 0.010 lb PM/ton	Furnace: 0.39 lb PM/ton; ACD: 0.018 lb PM/ton	Furnace throughput: 7.94 tons/hr; ACD throughput: 36.0 ton/hr; Average flux rate: 2.61 lb of flux/ton charged	CMN20080011	1/29/08-2/1/08
						Furnace: 0.40 lb HCl/ton; ACD: 0.040 lb HCl/ton	Furnace: 0.34 lb HCl/ton; ACD: 0.003 lb HCl/ton			
Existing SAPU (F1 & F2)	None	PM & HCl	40 CFR 63.1505(k) & 63.1513(e)	Every 5 years	Method 5 & 26A	Furnace: 0.80 lb PM/ton; ACD: 0.010 lb PM/ton	Furnace: 0.24 lb PM/ton; ACD: 0.010 lb PM/ton	Furnace throughput: 5.22 tons/hr; ACD throughput: 36.0 ton/hr;	CMN20120025	6/12/12-6/15/12

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
						Furnace: 0.40 lb HCl/ton; ACD: 0.040 lb HCl/ton	Furnace: 0.34 lb HCl/ton; ACD: 0.00005 lb HCl/ ton	Average flux rate: 2.4 lb of flux/ton charged		
Existing SAPU (F1 & F2)	None	PM, HCl, & HF	40 CFR 63.1505(k) & 63.1513(e)	Every 5 years & Initial (HF)	Method 5 & 26A	SAPU: 0.118 lb PM/ton 0.089 lb HCl/ton Furnace: 0.40 lb HF/ton	SAPU: 0.066 lb PM/ton 0.087 lb HCl/ton Furnace: 0.123 lb HF/ton	Furnace throughput: 5.17 tons/hr; ACD throughput: 32.6 ton/hr; Average flux rate: 2.262 lb of flux/ton charged; 0.0364 lb/ton for ACD	CMN20170022	9/12/17-9/14/17
Existing SAPU (F1 & F2)	None	PM, HCl, & HF	40 CFR 63.1505(k) & 63.1513(e)	Retest	Method 5 & 26A	Test Series 1: SAPU: 0.139 lb PM/ton 0.099 lb HCl/ton Furnace: 0.40 lb HF/ton	Test Series 1: SAPU: 0.030 lb PM/ton 0.036 lb HCl/ton Furnace: 0.033 lb HF/ton	Test Series 1: Furnace: 5.52 tons/hr; ACD: 28.2 ton/hr; Avg flux rate: 2.075 lb of flux/ton charged; 0.0277 lb/ton for ACD	CMN20170024	9/12/17-9/14/17

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
						Test Series 2: SAPU: 0.139 lb PM/ton 0.099 lb HCl/ton	Test Series 2: SAPU: 0.056 lb PM/ton 0.021 lb HCl/ton	Test Series 2: Furnace: 5.47 tons/hr; ACD: 33.0 ton/hr; Avg flux rate: 1.073 lb of flux/ton charged; 0.0179 lb/ton for ACD		
Existing SAPU (F1 & F2)	None	PM, HCl, & HF	40 CFR 63.1505(k) & 63.1513(e)	Every 5 years	Method 5 & 26A	SAPU: 0.129 lb PM/ton 0.094 lb HCl/ton Furnace: 0.40 lb HF/ton	SAPU: 0.048 lb PM/ton 0.010 lb HCl/ton Furnace: 0.064 lb HF/ton	Furnace throughput: 9.2 tons/hr; ACD throughput: 51.64 ton/hr; Average flux rate: 2.297 lb of flux/ton charged; 0.0151 lb/ton for ACD	CMN20220024	9/13/22-9/15/22
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	PM/PM_{10} & CO	To preclude 401 KAR 51:017 & confirm emissions	Once per permit term for PM/PM_{10}; Annual for CO	Method 5 & 10	5.14 lb/hr for PM/PM_{10}, 3-hour average	0.734 lb PM/PM_{10}/ hr; 98.13 lb CO/hr	15.49 green anode tons/hr; 14.68 baked anode tons/hr	CMN20100014	3/30/10-4/1/10

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	98.02 lb CO/hr; 5.15 lb/ green ton	19.0 green anode tons/hr; 18.48 baked anode tons/hr	CMN20110015	3/29/11-3/30/11
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	45.75 lb CO/hr; 2.89 lb/ green ton	15.84 green anode tons/hr; 15.05 baked anode tons/hr	CMN20120027	3/21/12
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	69.00 lb CO/hr; 2.51 lb/ green ton	27.56 green anode tons/hr; 25.99 baked anode tons/hr	CMN20130020	9/24/13
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	109.2 lb CO/hr; 6.74 lb/ green ton	16.21 green anode tons/hr; 13.14 baked anode tons/hr	CMN20140018	9/23/14
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	86.9 lb CO/hr; 5.4 lb/ green ton	16.5 green anode tons/hr; 15.03 baked anode tons/hr	CMN20150024	9/10/15
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	85.1 lb CO/hr; 5.70 lb/ green ton	15.06 green anode tons/hr; 14.15 baked anode tons/hr	CMN20160019	9/21/16

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
N2 (ABF)	None for CO	CO	401 KAR 51:107	Annual	Method 10	N/A	44.44 lb CO/hr; 2.67 lb/ green ton	16.62 green anode tons/hr; 15.66 baked anode tons/hr	CMN20180015	5/15/18
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF & POM	40 CFR 63.843(c) (1) & (2)	Initial	Method 13B & 315	0.20 lb TF/ton; 0.18 lb POM/ton	0.0015 lb TF/ton; 0.037 lb POM/ton	15.9 green anode tons/hr	CMN20140026	11/20/14-11/21/14
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF & POM	40 CFR 63.843(c) (1) & (2)	Annual	Method 13B & 315	0.20 lb TF/ton; 0.18 lb POM/ton	0.0010 lb TF/ton; 0.0746 lb POM/ton	16.5 green anode tons/hr	CMN20150024	9/9/15-9/10/15
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF & POM	40 CFR 63.843(c) (1) & (2)	Annual	Method 13B & 315	0.20 lb TF/ton; 0.18 lb POM/ton	0.0026 lb TF/ton; 0.126 lb POM/ton	15.06 green anode tons/hr	CMN20160019	9/20/16-9/21/16
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual & Initial (PM & Hg)	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0083 lb TF/ton; 0.080 lb POM/ton; 0.172 lb PM/ton; 1.425 µg Hg/dscm	14.98 green anode tons/hr	CMN20170015	5/16/17-5/18/17

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0051 lb TF/ton; 0.0548 lb POM/ton; 0.192 lb PM/ton; 0.36 µg Hg/dscm	16.62 green anode tons/hr	CMN20180015	5/15/18-5/18/18
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0010 lb TF/ton; 0.032 lb POM/ton; 0.012 lb PM/ton; 0.399 µg Hg/dscm	18.18 green anode tons/hr	CMN20190016	5/14/19-5/15/19
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, Mercury, CO, SO_2	40 CFR 63.843(c) (1), (2), (3), & (4); 401 KAR 51:017	Annual	Method 13B, 315, 5, 29, 10, 6	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.00249 lb TF/ton; 0.082 lb POM/ton; 0.176 lb PM/ton 0.771 µg Hg/dscm; 8.79 lb CO/ton; 5.85 lb SO_2/ton	18.26 green anode tons/hr	CMN20200016	7/7/20-7/8/20

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0028 lb TF/ton; 0.123 lb POM/ton; 0.062 lb PM/ton; 1.126 µg Hg/dscm	15.54 green anode tons/hr	CMN20210016	5/3/21-5/4/21
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0018 lb TF/ton; 0.082 lb POM/ton; 0.082 lb PM/ton; 0.877 µg Hg/dscm	17.04 green anode tons/hr	CMN20220017	5/24/22-5/25/22
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.013 lb TF/ton; 0.051 lb POM/ton; 0.622 lb PM/ton[1]; 1.099 µg Hg/dscm	17.14 green anode tons/hr	CMN20230015	5/23/23
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual (retest)	Method 5	0.20 lb PM/ton	0.167 lb PM/ton	16.59 green anode tons/hr	CMN20230026	10/17/23

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0026 lb TF/ton; 0.098 lb POM/ton; 0.075 lb PM/ton; 1.35 µg Hg/dscm	17.29 green anode tons/hr	CMN20240018	10/14/24-10/15/24
N2 (ABF)	Dry Scrubber/ Baghouse (A-446)	TF, POM, PM, & Mercury	40 CFR 63.843(c) (1), (2), (3), & (4)	Annual	Method 13B, 315, 5, 29	0.20 lb TF/ton; 0.18 lb POM/ton; 0.20 lb PM/ton 1.7 µg Hg/dscm	0.0034 lb TF/ton; 0.134 lb POM/ton; 0.144 lb PM/ton; 0.929 µg Hg/dscm	12.40 green anode tons/hr	CMN20250025	10/13/25-10/14/25
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, $PM_{2.5}$, & CO	401 KAR 51:017; 40 CFR 63.843(a) (3)(i)	Initial	Method 201A, 202, & 10	2.1 lb PM_{10}/$PM_{2.5}$/ton; 4.88 lb PM/ton; 233.6 lb CO/ton	2.09 lbs PM_{10}/ $PM_{2.5}$/ton; 1.88 lb PM/ton; 196.2 lb CO/ton	Potline #3 average production: 7.955 ton/hr	CMN20130021 & CMN20130022	9/30/13-10/3/13
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	None for CO	CO	401 KAR 51:017	Annual	Method 10	233.6 lb CO/ton	206.5 lb CO/ton	Potline #3 average production: 8.68 ton/hr	CMN20140013	6/16/14-6/19/14

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Quarterly	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	6.29 lb PM_{10}/ $PM_{2.5}$/ton; 7.66 lb PM/ton	Potline #3 average production: 9.05 ton/hr	CMN20140014	6/16/14-6/19/14
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Quarterly	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	1.77 lb PM_{10}/ $PM_{2.5}$/ton; 2.69 lb PM/ton	Potline #3 average production: 9.29 ton/hr	CMN20140016 & CMN20140017	7/28/14-7/31/14
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Quarterly	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	2.1 lb PM_{10}/ $PM_{2.5}$/ton; 2.12 lb PM/ton	Potline #3 total average production: 9.28 ton/hr	CMN20140019 & CMN20140020	9/26/14-9/26/14
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Quarterly	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	1.005 lb PM_{10}/ $PM_{2.5}$/ton; 3.02 lb PM/ton	Potline #3 total average production: 9.10 ton/hr	CMN20140027 & CMN20140028	11/17/14-11/20/14
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Quarterly	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	2.01 lb PM_{10}/ $PM_{2.5}$/ton; 1.45 lb PM/ton	Potline #3 total average production: 9.38 ton/hr	CMN20150013	3/23/15-3/26/15
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	1.378 lb PM_{10}/ $PM_{2.5}$/ton; 1.66 lb PM/ton	Potline #3 total average production: 8.586 ton/hr	CMN20170021	7/17/17-7/20/17

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb PM_{10}/$PM_{2.5}$/ton; 4.88 lb PM/ton	1.17 lb PM_{10}/ $PM_{2.5}$/ton; 3.72 lb PM/ton	Potline #3 total average production: 9.28 ton/hr	CMN20180020	12/17/18-12/20/18
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb PM_{10}/$PM_{2.5}$/ton; 4.88 lb PM/ton	0.58 lb PM_{10}/ $PM_{2.5}$/ton; 3.32 lb PM/ton	Potline #3 total average production: 9.65 ton/hr	CMN20190017	12/9/19-12/12/19
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	SO_2	401 KAR 51:017	Every 5 years (Scrubber); Annually (Down-comer)	Method 6C	N/A (sitewide tpy limit)	Scrubber: 304.3 lb SO_2 ton; Downcomer: 10.61 lb SO_2 ton	Potline #3 total average production: 8.81 ton/hr	CMN20200019	6/29/20
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb PM_{10}/$PM_{2.5}$/ton; 4.88 lb PM/ton	2.0 lb PM_{10}/ $PM_{2.5}$/ton; 3.64 lb PM/ton	Potline #3 total average production: 9.34 ton/hr	CMN20200028	1/5/21-1/8/21
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb PM_{10}/$PM_{2.5}$/ton; 4.88 lb PM/ton	1.97 lb PM_{10}/ $PM_{2.5}$/ton; 3.87 lb PM/ton	Potline #3 total average production: 9.28 ton/hr	CMN20210028	12/7/21-12/9/21

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	2.2 lb $PM_{10}/PM_{2.5}$/ton[1]; 8.89 lb PM/ton[1]	Potline #3 total average production: 8.80 ton/hr	CMN20220027	12/12/22
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	1.21 lb $PM_{10}/PM_{2.5}$/ton[1]; 4.08 lb PM/ton[1]	Potline #3 total average production: 8.96 ton/hr	CMN20230020	12/4/23
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	None for CO	CO	401 KAR 51:017	Every 5 years	Method 10	233.6 lb CO/ton	185.89 lb CO/ton	Potline #3 average production: 8.97 ton/hr	CMN20240002	1/9/24
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	1.87 lb $PM_{10}/PM_{2.5}$/ton[1]; 2.37 lb PM/ton[1]	Potline #3 total average production: 8.88 ton/hr	CMN20240021	10/21/24
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	PM, PM_{10}, & $PM_{2.5}$	401 KAR 51:017; 40 CFR 63.843(a)(3)(i)	Semi-Annual	Method 201A & 202	2.1 lb $PM_{10}/PM_{2.5}$/ton; 4.88 lb PM/ton	0.56 lb $PM_{10}/PM_{2.5}$/ton[1]; 1.70 lb PM/ton[1]	Potline #3 total average production: 9.12 ton/hr	CMN20250026	10/20/25-10/23/25

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 & E5-2 (Potline #3 scrubber & room 6 downcomer)	Dry Scrubber/ baghouse (A-398)	SO_2	401 KAR 51:017	Every 5 years (Scrubber); Annually (Down-comer)	Method 6C	N/A (sitewide tpy limit)	Scrubber: 0.75 lb SO_2 ton; Downcomer: 0.75 lb SO_2 ton	Potline #3 total average production: 9.12 ton/hr	CMN20250026	10/20/25-10/23/25
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00725 lb F/ton; 0.0199 lb HF/ton; 0.0268 lb TF/ton	Potline #3 total average production: 9.2 ton/hr	CMN20140024 & CMN20140025	10/14/14-10/17/14
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00417 lb F/ton; 0.02545 lb HF/ton; 0.0296 lb TF/ton	Potline #3 total average production: 9.28 ton/hr	CMN20150016	6/8/15-6/9/15
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00475 lb F/ton; 0.02045 lb HF/ton; 0.0252 lb TF/ton	Potline #3 total average production: 9.08 ton/hr	CMN20160017	6/21/16-6/22/16
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.011 lb TF/ton; 0.251 lb PM/ton; 0.396 lb POM/ton	Potline #3 total average production: 9.28 ton/hr	CMN20170019	6/21/17-6/22/17

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.008 lb TF/ton; 0.033 lb PM/ton; 0.034 lb POM/ton	Potline #3 total average production: 9.28 ton/hr	CMN20180019	12/17/18-12/19/18
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.014 lb TF/ton; 0.081 lb PM/ton; 0.014 lb POM/ton	Potline #3 total average production: 9.30 ton/hr	CMN20190018	7/15/19-7/24/19
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.009 lb TF/ton; 0.040 lb PM/ton; 0.085 lb POM/ton	Potline #3 total average production: 8.30 ton/hr	CMN20200018	7/13/20-7/22/20
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.008 lb TF/ton; 0.138 lb PM/ton; 0.082 lb POM/ton	Potline #3 total average production: 8.69 ton/hr	CMN20210015	4/19/21-4/27/21
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.015 lb TF/ton; 0.181 lb PM/ton; 0.093 lb POM/ton	Potline #3 total average production: 8.93 ton/hr	CMN20220016	4/19/22-4/21/22

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.012 lb TF/ton; 0.137 lb PM/ton; 0.098 lb POM/ton	Potline #3 total average production: 9 ton/hr	CMN20230014	4/18/23
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.013 lb TF/ton; 0.187 lb PM/ton; 0.067 lb POM/ton	Potline #3 total average production: 9.08 ton/hr	CMN20240017	4/23/24
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.043 lb TF/ton; 0.225 lb PM/ton; 0.055 lb POM/ton	Potline #3 total average production: 8.84 ton/hr	CMN20250018	4/23/25-5/1/25
E5-2 (Potline #3 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.008 lb TF/ton; 0.150 lb PM/ton; 0.043 lb POM/ton	Potline #3 total average production: 9.18 ton/hr	CMN20260015	4/14/26-4/22/26
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.5 lb TF/ton; 6.4 lb PM/ton; 0.72 lb POM/ton	Potline #3 total average production: 8.83 ton/hr	CMN20190024	10/3/19, 10/8/19, 10/9/19, 10/16/19, 10/21/19 & 10/22/19

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.66 lb TF/ton; 4.83 lb PM/ton; 0.26 lb POM/ton	Potline #3 total average production: 9.045 ton/hr	CMN20200014	March 2020
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.80 lb TF/ton; 4.05 lb PM/ton; 0.23 lb POM/ton	Potline #3 total average production: not reported[2]	CMN20200025	Nov 2020
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	No Valid Results Obtained	Potline #3 total average production: not reported	CMN20200032	March 2021
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.06 lb TF/ton; 3.13 lb PM/ton; 0.22 lb POM/ton	Potline #3 total average production: 9.22 ton/hr	CMN20210020	May 2021
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.69 lb TF/ton; 3.57 lb PM/ton; 0.14 lb POM/ton	Potline #3 total average production: 9.35 ton/hr	CMN20210024	Oct 2021

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.63 lb TF/ton; 3.82 lb PM/ton; 0.85 lb POM/ton	Potline #3 total average production: 9.32 ton/hr	CMN20220001	March 2022
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.02 lb TF/ton; 5.20 lb PM/ton; 0.70 lb POM/ton	Potline #3 total average production: 9.00 ton/hr	CMN20220025	Oct 2022
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.31 lb TF/ton; 2.98 lb PM/ton; 0.32 lb POM/ton	Potline #3 total average production: 9.19 ton/hr	CMN20230013	March 2023
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.85 lb TF/ton; 3.15 lb PM/ton; 0.20 lb POM/ton	Potline #3 total average production: 9.0 ton/hr	CMN20230018	Oct 2023
E5-1 (Potline #3 Downcomer)	Dry Scrubber/ baghouse (A-398)	SO_2	401 KAR 51:017	Annually	Method 6C	N/A (sitewide tpy limit)	Downcomer: 0.23 lb SO_2 ton	Potline #3 total average production: 8.97 ton/hr	CMN20240002	1/9/24

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.55 lb TF/ton; 1.95 lb PM/ton; 0.25 lb POM/ton	Potline #3 total average production: 9.2 ton/hr	CMN20240015	March 2024
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.88 lb TF/ton; 2.58 lb PM/ton; 0.41 lb POM/ton	Potline #3 total average production: 8.88 ton/hr	CMN20240016	Oct 2024
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.71 lb TF/ton; 1.44 lb PM/ton; 0.19 lb POM/ton	Potline #3 total average production: 9.04 ton/hr	CMN20250014	March 2025
E5-1 (Potline #3 Downcomer)	Dry Scrubber/ baghouse (A-398)	SO_2	401 KAR 51:017	Annually	Method 6C	N/A (sitewide tpy limit)	Downcomer: 0.496 lb SO_2 ton	Potline #3 total average production: 9.15 ton/hr	CMN20250015	3/25/25
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.61 lb TF/ton; 3.25 lb PM/ton; 0.32 lb POM/ton	Potline #3 total average production: 9.12 ton/hr	CMN20250027	Oct 2025

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E5-1 (Potline #3 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.34 lb TF/ton; 5.86 lb PM/ton; 0.11 lb POM/ton	Potline #3 total average production: 9.22 ton/hr	CMN20260012	March 2026
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a) (1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.0068 lb F/ton; 0.0152 lb HF/ton; 0.02197 lb TF/ton	Potline #2 total average production: 9.08 ton/hr	CMN20140022 & CMN20140023	10/15/14-10/16/14
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a) (1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00385 lb F/ton; 0.01731 lb HF/ton; 0.0212 lb TF/ton	Potline #2 total average production: 9.08 ton/hr	CMN20150015	6/4/15-6/5/15
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a) (1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00811 lb F/ton; 0.0284 lb HF/ton; 0.0365 lb TF/ton	Potline #2 total average production: 9.12 ton/hr	CMN20160016	6/23/15 & 6/27/16
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.023 lb TF/ton; 0.498 lb PM/ton; 0.484 lb POM/ton	Potline #2 total average production: 9.22 ton/hr	CMN20170018	6/23/17, 6/25/17 & 6/26/17

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.048 lb TF/ton; 0.616 lb PM/ton; 0.209 lb POM/ton	Potline #2 total average production: 9.18 ton/hr	CMN20180018	6/19/18 & 6/21/18
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.014 lb TF/ton; 0.046 lb PM/ton; 0.042 lb POM/ton	Potline #2 total average production: 9.06 ton/hr	CMN20190018	7/15/19-7/24/19
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.011 lb TF/ton; 0.074 lb PM/ton; 0.107 lb POM/ton	Potline #2 total average production: 7.92 ton/hr	CMN20200018	7/13/20-7/22/20
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.023 lb TF/ton; 0.174 lb PM/ton; 0.118 lb POM/ton	Potline #2 total average production: 8.43 ton/hr	CMN20210014	4/19/21-4/27/21
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.021 lb TF/ton; 0.269 lb PM/ton; 0.091 lb POM/ton	Potline #2 total average production: 8.87 ton/hr	CMN20220015	4/22/22-4/24/22

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.011 lb TF/ton; 0.206 lb PM/ton; 0.158 lb POM/ton	Potline #2 total average production: 9.1 ton/hr	CMN20230014	4/18/23
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.017 lb TF/ton; 0.300 lb PM/ton; 0.147 lb POM/ton	Potline #2 total average production: 9.2 ton/hr	CMN20240017	4/23/24
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.013 lb TF/ton; 0.368 lb PM/ton; 0.134 lb POM/ton	Potline #2 total average production: 9.02 ton/hr	CMN20250018	4/23/25-5/1/25
E3-2 (Potline #2 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.014 lb TF/ton; 0.178 lb PM/ton; 0.097 lb POM/ton	Potline #2 total average production: 9.18 ton/hr	CMN20260015	4/14/26-4/22/26

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.7 lb TF/ton; 5.3 lb PM/ton; 0.92 lb POM/ton	Potline #2 total average production: 9.15 ton/hr	CMN20190024	10/3/19, 10/8/19, 10/9/19, 10/16/19, 10/17/19 10/21/19 & 10/22/19
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.48 lb TF/ton; 6.63 lb PM/ton; 0.22 lb POM/ton	Potline #2 total average production: 8.999 ton/hr	CMN20200014	March 2020
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.87 lb TF/ton; 4.04 lb PM/ton; 0.14 lb POM/ton	Potline #2 total average production: not reported[2]	CMN20200025	Nov 2020
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	No Valid Results Obtained	Potline #2 total average production: not reported	CMN20200032	March 2021

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.48 lb TF/ton; 5.06 lb PM/ton; 0.35 lb POM/ton	Potline #2 total average production: 8.66 ton/hr	CMN20210020	May 2021
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.41 lb TF/ton; 5.95 lb PM/ton; 0.24 lb POM/ton	Potline #2 total average production: 8.81 ton/hr	CMN20210024	Oct 2021
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.88 lb TF/ton; 2.92 lb PM/ton; 0.29 lb POM/ton	Potline #2 total average production: 9.12 ton/hr	CMN20220001	March 2022
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.65 lb TF/ton; 3.76 lb PM/ton; 0.82 lb POM/ton	Potline #2 total average production: 9.28 ton/hr	CMN20220025	Oct 2022
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.56 lb TF/ton; 4.27 lb PM/ton; 0.84 lb POM/ton	Potline #2 total average production: 9.22 ton/hr	CMN20230013	March 2023

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.63 lb TF/ton; 2.31 lb PM/ton; 0.16 lb POM/ton	Potline #2 total average production: 8.88 ton/hr	CMN20230018	Oct 2023
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.96 lb TF/ton; 3.05 lb PM/ton; 0.20 lb POM/ton	Potline #2 total average production: 9.12 ton/hr	CMN20240015	March 2024
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.10 lb TF/ton; 4.13 lb PM/ton; 0.24 lb POM/ton	Potline #2 total average production: 9.08 ton/hr	CMN20240016	Oct 2024
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.81 lb TF/ton; 1.90 lb PM/ton; 0.21 lb POM/ton	Potline #2 total average production: 9.12 ton/hr	CMN20250014	March 2025
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.71 lb TF/ton; 6.18 lb PM/ton; 0.36 lb POM/ton	Potline #2 total average production: 9.04 ton/hr	CMN20250027	Oct 2025

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E3-1 (Potline #2 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.95 lb TF/ton; 4.01 lb PM/ton; 0.16 lb POM/ton	Potline #2 total average production: 9.19 ton/hr	CMN20260012	March 2026
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.0044 lb F/ton; 0.4885 lb HF/ton; 0.4927 lb TF/ton	Potline #1 total average production: 9.08 ton/hr	CMN20140029	9/9/14-9/10/14
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Retest for Reactor 3 on A-398 south	Method 13B	1.9 lb TF/ton	0.0022 lb F/ton; 0.0499 lb HF/ton; 0.0521 lb TF/ton	Potline #1 total average production: 9.14 ton/hr	CMN20140030	11/4/14
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00243 lb F/ton; 0.0145 lb HF/ton; 0.01692 lb TF/ton	Potline #1 total average production: 9.22 ton/hr	CMN20150014	6/2/15-6/3/15
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00884 lb F/ton; 0.01715 lb HF/ton; 0.026 lb TF/ton	Potline #1 total average production: 9.1 ton/hr	CMN20160015	6/28/16-6/29/16

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, & TF	401 KAR 61:165; 40 CFR 63.843(a)(1)(i)	Annual	Method 13B	1.9 lb TF/ton	0.00884 lb F/ton; 0.01715 lb HF/ton; 0.026 lb TF/ton	Potline #1 total average production: 9.1 ton/hr	CMN20160015	6/28/16-6/29/16
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.020 lb TF/ton; 0.630 lb PM/ton; 0.721 lb POM/ton	Potline #1 total average production: 9.22 ton/hr	CMN20170017	6/27/17-6/28/17
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.039 lb TF/ton; 0.644 lb PM/ton; 0.180 lb POM/ton	Potline #1 total average production: 9.38 ton/hr	CMN20180017	6/22/18-6/25/18
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.017 lb TF/ton; 0.073 lb PM/ton; 0.060 lb POM/ton	Potline #1 total average production: 9.16 ton/hr	CMN20190018	7/15/19-7/24/19
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.011 lb TF/ton; 0.096 lb PM/ton; 0.094 lb POM/ton	Potline #1 total average production: 7.93 ton/hr	CMN20200018	7/13/20-7/22/20

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.011 lb TF/ton; 0.15 lb PM/ton; 0.116 lb POM/ton	Potline #1 total average production: 8.93 ton/hr	CMN20210013	4/19/21-4/27/21
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.017 lb TF/ton; 0.23 lb PM/ton; 0.108 lb POM/ton	Potline #1 total average production: 9.10 ton/hr	CMN20220014	4/26/22-4/28/22
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.003 lb TF/ton; 0.177 lb PM/ton; 0.095 lb POM/ton	Potline #1 total average production: 9.06 ton/hr	CMN20230014	4/18/23
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.012 lb TF/ton; 0.243 lb PM/ton; 0.087 lb POM/ton	Potline #1 total average production: 9.25 ton/hr	CMN20240017	4/23/24
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.014 lb TF/ton; 0.314 lb PM/ton; 0.112 lb POM/ton	Potline #1 total average production: 9.24 ton/hr	CMN20250018	4/23/25-5/1/25

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-2 (Potline #1 scrubber)	Dry Scrubber/ baghouse (A-398)	F, HF, TF, PM, & POM	401 KAR 61:165; 40 CFR 63.843(a)	Annual	Method 13B, 5, & 315	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.033 lb TF/ton; 0.228 lb PM/ton; 0.058 lb POM/ton	Potline #1 total average production: 9.14 ton/hr	CMN20260015	4/14/26-4/22/26
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.6 lb TF/ton; 3.8 lb PM/ton; 0.73 lb POM/ton	Potline #1 total average production: 9.32 ton/hr	CMN20190024	10/3/19, 10/8/19, 10/9/19, 10/16/19, 10/21/19 & 10/22/19
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.92 lb TF/ton;[1] 9.53 lb PM/ton;[1] 0.27 lb POM/ton	Potline #1 total average production: 8.997 ton/hr	CMN20200014	March 2020
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.89 lb TF/ton; 4.18 lb PM/ton; 0.21 lb POM/ton	Potline #1 total average production: not reported[2]	CMN20200025	Nov 2020
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	No Valid Results Obtained	Potline #1 total average production: not reported	CMN20200032	March 2021

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.70 lb TF/ton; 3.23 lb PM/ton; 0.33 lb POM/ton	Potline #1 total average production: 9.22 ton/hr	CMN20210020	May 2021
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.77 lb TF/ton; 4.30 lb PM/ton; 0.30 lb POM/ton	Potline #1 total average production: 9.15 ton/hr	CMN20210024	Oct 2021
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.39 lb TF/ton; 3.19 lb PM/ton; 0.24 lb POM/ton	Potline #1 total average production: 9.12 ton/hr	CMN20220001	March 2022
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.88 lb TF/ton; 6.04 lb PM/ton; 0.70 lb POM/ton	Potline #1 total average production: 9.28 ton/hr	CMN20220025	Oct 2022
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.65 lb TF/ton; 5.98 lb PM/ton; 0.93 lb POM/ton	Potline #1 total average production: 9.10 ton/hr	CMN20230013	March 2023

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.32 lb TF/ton; 3.70 lb PM/ton; 0.30 lb POM/ton	Potline #1 total average production: 9.20 ton/hr	CMN20230018	Oct 2023
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.98 lb TF/ton; 3.57 lb PM/ton; 0.22 lb POM/ton	Potline #1 total average production: 9.32 ton/hr	CMN20240015	March 2024
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.94 lb TF/ton; 3.12 lb PM/ton; 0.28 lb POM/ton	Potline #1 total average production: 9.0 ton/hr	CMN20240016	Oct 2024
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	0.78 lb TF/ton; 1.92 lb PM/ton; 0.08 lb POM/ton	Potline #1 total average production: 9.32 ton/hr	CMN20250014	March 2025
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.47 lb TF/ton; 7.05 lb PM/ton; 1.01 lb POM/ton	Potline #1 total average production: 9.16 ton/hr	CMN20250027	Oct 2025

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
E1-1 (Potline #1 Downcomer)	None	F, HF, TF, PM, & POM	40 CFR 63.843(a)	Semi-Annual	Method 14A & 14	1.9 lb TF/ton; 7.4 lb PM/ton; 1.1 lb POM/ton	1.12 lb TF/ton; 3.31 lb PM/ton; 0.15 lb POM/ton	Potline #1 total average production: 9.16 ton/hr	CMN20260012	March 2026
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Initial & Annual	Method 5	0.082 lb/ton paste	0.0059 lb PM/ton paste	44.37 tons green anode/hr	CMN20160020	11/11/16
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.0268 lb PM/ton paste	26.20 tons green anode/hr	CMN20170016	7/20/17
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.156 lb PM/ton paste	29.8 tons green anode/hr	CMN20180016	6/25/18
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.0143 lb PM/ton paste	26.9 tons green anode/hr	CMN20190013	1/24/19
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.01683 lb PM/ton paste	26.2 tons green anode/hr	CMN20190015	5/16/19
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.1439 lb PM/ton paste[1]	21.32 tons green anode/hr	CMN20200017	7/9/2020
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.017 lb PM/ton paste	26.73 tons green anode/hr	CMN20200029	12/1/21
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.0399 lb PM/ton paste	21.33 tons green anode/hr	CMN20210017	5/4/21

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput & Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.034 lb PM/ton paste	23.24 tons green anode/hr	CMN20220018	5/25/22
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.042 lb PM/ton paste	22.79 tons green anode/hr	CMN20230016	5/25/23
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.031 lb PM/ton paste	26.02 tons green anode/hr	CMN20240020	5/21/24
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.026 lb PM/ton paste	22.27 tons green anode/hr	CMN20250016	4/23/25
M2-M7 (Paste Plant)	Procedair Dry Coke Scrubber	PM	40 CFR 63.843(b)(4)	Annual	Method 5	0.082 lb/ton paste	0.025 lb PM/ton paste	16.83 tons green anode/hr	CMN20260018	4/23/26

Footnotes:
Emission limits for the potlines are based on the emissions of the stack & downcomer (roof monitor) combined. Where the potlines and roof monitors are tested separately, the results in this table are the separate results, not combined.
[1]Note: Indicates a failed stack test.
[2]Note: The test report only included a total production rate, not a ton/hr average production rate.

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
9,360 tons of cast iron/yr	To preclude 401 KAR 51:017	Q2
253,531 tons of aluminum produced/yr	401 KAR 51:017	E1, E3, E5
petroleum coke and packing coke used to make the green anodes: < 3.0% sulfur by weight; Pitch: < 0.80% sulfur by weight	401 KAR 51:017; 401 KAR 53:005, Section 1(3)	E1, E3, E5, N2
5,853 tpy of SO_2 emissions	401 KAR 51:017	E1, E3, E5, N2
4,946 tpy of SO_2 emissions	401 KAR 53:005, Section 1(3)	E1, E3, E5, N2
1,129 lb/hr of SO_2 emissions	401 KAR 53:005, Section 1(3)	E1, E3, E5, N2

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 51:017, *Prevention of significant deterioration of air quality*	E1, E3, E5, N2
401 KAR 53:010, *Ambient air quality standards*	Source-wide
401 KAR 59:010, *New process operations*	U4, J3, K3, U3, Q2, B5, B7, E6, M2 - M7, N2, F2, H1, H2, H3, H4
401 KAR 59:015, *New indirect heat exchangers*	S6, S7, A3, A4, I4
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*	S7
401 KAR 60:005, Section 2(2)(oooo), 40 C.F.R. 60.4200 through 60.4219, Tables 1 through 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*	K10-B
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*	Z5, Z6, Z8, Z9
401 KAR 61:020, *Existing process operations*	A1, A2, A8, C1, C2, C4, C6, K7, L1, L3, M1, U2, J1, J2, K5, K1, U1, Q4, B4, B6, G8, F1
401 KAR 61:165, *Existing primary aluminum reduction plants*	E1, E3, E5
401 KAR 63:002, Section 2(4)(bb), 40 C.F.R. 63.840 through 63.855, Tables 1 through 4, and Appendix A (Subpart LL), *National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants*	E1, E3, E5, M2-M7, N2, U5

Applicable Regulations	Emission Unit
401 KAR 63:002, Section 2(4)(ccc), 40 C.F.R. 63.1500 through 63.1519, Tables 1 through 3, and Appendix A (Subpart RRR), *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*	F1, F2
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*	Z2, Z3, Z4, Z5, Z6, Z7, Z8, Z9, K10-B
401 KAR 63:002, Section 2(4)(iiii), 40 C.F.R. 63.7480 through 63.7575, Tables 1 through 15 (Subpart DDDDD), *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*	S6, S7, A3, A4, I4, H1, H2, H3, H4
401 KAR 63:010, *Fugitive emissions*	Z1, K10-A
40 CFR 64, *Compliance Assurance Monitoring*	C1, G8, J2, K1, K5, K7, L1, L3, Q4, U1, E6, J3, K3, U3, U4, E1, E3, E5, N2

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017, *Prevention of significant deterioration of air quality.* This regulation has been precluded by the source taking operational and emission limits on emission units involved in projects that would have major modifications and triggered PSD BACT review if they were not put in place.	Q2, N2

Table D - Summary of Non Applicable Regulations:

Non Applicable Regulations	Emission Unit
401 KAR 60:005, Section 2(2)(pppp), 40 C.F.R. 60.4230 through 60.4248, Tables 1 through 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. These engines were constructed after June 12, 2006, however, they were manufactured prior to January 1, 2009, and are therefore exempt from this regulation. [40 CFR 60.4230(a)(4)(iv)]	Z3 & Z7

Air Toxic Analysis

401 KAR 53:010, *Ambient air quality standards* & **401 KAR 61:165**, *Existing primary aluminum reduction plants*

The Division performed a refined air dispersion model using AERMOD on May 16, 2014 for HF emissions based upon the process rates, stack heights and other pertinent information provided by the applicant. Based upon this information, the modeling results showed that the HF ambient air monitor required by 401 KAR 61:165 was not located in the area of expected maximum impact. The Division required a plan for relocation be submitted to relocate to monitor as close to the area of expected maximum impact as possible. On September 9, 2016, Century submitted

a plan for monitor relocation and supporting modeling data. The Division requested a different monitor location nearby on September 16, 2016. Century revised and resubmitted a plan for relocation on December 8, 2016. With the renewal permit (V-19-010), the Division approved the plan for relocation as submitted and corresponding requirements have been included in Section I of the permit. This process shall be repeated with each permit renewal to ensure the monitor remains in the area of expected maximum impact. Additionally, in 2020, Century submitted a revised monitor relocation plan changing the proposed location of the monitor. This plan was reviewed and was approved with permit V-19-010 R2.

The monitor relocation was completed during the V-19-010 R2 permit term, and the relocation plan has therefore been removed from Section I of the permit. Century must continue to operate the monitor at this location unless modeling indicates that it is no longer located in the area of expected maximum impact.

Single Source Determination

N/A

SECTION 5 – COMPLIANCE ASSURANCE MONITORING

40 CFR 64, *Compliance assurance monitoring* (CAM) applies to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:

(1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1);

(2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and

(3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Emission Unit	Criteria 1 (Y/N)	Criteria 2 (Y/N)	Criteria 3 (Y/N)	Does CAM apply? If Y for criteria 1, 2, AND 3, then Yes, Otherwise, No.
A1	Y	N*	Y	No
A2	Y	N	N	No
A8	Y	N	N	No
C1	Y	Y	Y	Yes
C2	Y	N	N	No
C4	Y	N	N	No
C6	Y	N	N	No
K7	Y	Y	Y	Yes
L1	Y	Y	Y	Yes
L3	Y	Y	Y	Yes
M1	Y	N	Y	No
U2	Y	N	N	No
J1	Y	N*	Y	No
J2	Y	Y	Y	Yes
K5	Y	Y	Y	Yes
K1	Y	Y	Y	Yes
U1	Y	Y	Y	Yes
Q4	Y	Y	Y	Yes
B4	Y	N*	Y	No
B6	Y	N*	Y	No
G8	Y	Y	Y	Yes
U4	Y	Y	Y	Yes
J3	Y	Y	Y	Yes
K3	Y	Y	Y	Yes
U3	Y	Y	Y	Yes
Q2	Y	Y	N	No
B5	Y	N*	Y	No
B7	Y	N*	Y	No
E6	Y	Y	Y	Yes
E1	Y	Y	Y	Yes

Emission Unit	Criteria 1 (Y/N)	Criteria 2 (Y/N)	Criteria 3 (Y/N)	Does CAM apply? If Y for criteria 1, 2, AND 3, then Yes, Otherwise, No.
E3	Y	Y	Y	Yes
E5	Y	Y	Y	Yes
M2-M7	Y	Y	N	No
N2	Y	Y	Y	Yes
U5	N	Y	N	No

If Yes, CAM applies for any of the emission units above, then see further clarification for each listed emission unit in **Section 3**.

* For emission units A1, J1, B4, B5, B6, B7 the control devices on these units meet the definition of "Inherent Process Equipment" in 40 CFR 64.1, since they are used to recover material for reintroduction back to the process or recover a material that is ultimately sold, and as such, they are exempt from the requirements under CAM.

**Note: Only emission units with control devices are listed in this table.

SECTION 6 – PERMITTING HISTORY

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
O-74-409	Initial Permit	APE20150003	Unknown	12/31/1974	Initial facility-wide permit for two potlines	N/A
C-77-082	Const.	APE20150003	Unknown	7/28/1977	Addition of a 3rd potline	PSD
C-79-56	Const.	APE20150003	Unknown	6/19/1979	Modification of the 3rd potline	PSD
O-82-31	Operating	APE20150003	Unknown	3/18/1982	Operating Permit for the three potlines	N/A
C-83-48	Const.	N/A	Unknown	4/19/1983	Construction of a fourth potline (expired without const. taking place)	PSD
O-82-031 (Duplicate)	Operating	APE20150003	5/20/1986	9/9/1986	Name Change to Alcan	N/A
C-90-005	Const.	APE20150003	12/6/1989	3/2/1990	Replacement of 2 Electric Arc Furnaces with 2 Induction Furnaces	Syn Minor
C-90-114	Const.	APE20150003	5/31/1990	7/6/1990	Addition and Modification of Homogenizing Furnaces	N/A
C-94-006	Const.	APE20150003	9/27/1993	2/11/1994	Addition of a waste oil boiler	N/A
S-96-190	State-Origin	APE20150003	2/14/1996	5/15/1996	Addition of a transloading area	N/A
S-99-060	State-Origin	APE20050004	7/29/1999	8/4/1999	Addition of a remelt furnace	N/A
V-05-088	Initial Title V	APE20050007	12/7/2005	4/3/2007	Permitting of Q2	Syn Minor
V-05-088 R1	Sig. Rev.	APE20070002	9/12/2007	3/26/2008	ABF Refurbishment	PSD/Syn Minor
V-05-088 R2	Sig. Rev.	APE20090001	9/29/2009	10/4/2010	Potline Production Increase Project	PSD
V-12-015	Renewal	APE20110002	1/30/2012	10/10/2012	Renewal	N/A
V-12-015 R1	Minor Revision	APE20120004	1/17/2013	2/15/2013	Addition of Q4, Z5, Z6, Z7	N/A
V-12-015 R2	Admin Amend	APE20130001	8/12/2013	8/23/2013	Change of ownership to Century Sebree	N/A
V-12-015 R3	Sig. Rev.	APE20130008	8/12/2014	9/17/2015	Restart Remelt Furnace, changed capacities to hourly, Remelt alt. op. scenario added, ambient & testing requirements added to Section D.	Syn Minor
V-12-015 R4	Minor Revision	APE20160002	11/22/2016	1/21/2017	Added Subpart LL reduced testing freq. for roof monitors	N/A
V-19-010	Renewal	APE20170001	9/14/2017	11/11/2019	Renewal Permit	N/A

Permit	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
V-19-010 R1	Sig. Rev.	APE20190002	11/8/2019	2/24/2020	Change Remelt Furnace to Group 2 Operation Only	Syn Minor
V-19-010 R2	Minor Revision	APE20200001	1/3/2020	4/24/2020	Change Remelt Furnace to Group 1 Uncontrolled Operation	N/A

SECTION 7 – PERMIT APPLICATION HISTORY

None.

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS – Ambient Air Quality Standards
BACT – Best Available Control Technology
Btu – British thermal unit
CAM – Compliance Assurance Monitoring
CB – Carbon bake
CO – Carbon Monoxide
COS – Carbonyl Sulfide
DC – Dust Collector
D/F – Dioxins/Furans
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (or Gaseous Fluorides)
MSDS – Material Safety Data Sheets
mmHg – Millimeter of mercury column height
NAAQS – National Ambient Air Quality Standards
NESHAP – National Emissions Standards for Hazardous Air Pollutants
NO_x – Nitrogen Oxides
NSR – New Source Review
OM&M plan – Operation, Maintenance, & Monitoring plan
PM – Particulate Matter
PM_{10} – Particulate Matter equal to or smaller than 10 micrometers
$PM_{2.5}$ – Particulate Matter equal to or smaller than 2.5 micrometers
PM_{10} / $PM_{2.5}$ – PM_{10} and $PM_{2.5}$ standards are the same except as noted
PM / PM_{10} – PM and PM_{10} standards are the same except as noted
POM – polycyclic organic matter
PSD – Prevention of Significant Deterioration
PTE – Potential to Emit
QIP – Quality Improvement Plan
SAPU – Secondary Aluminum Processing Unit
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compounds

APPENDIX B – INDIRECT HEAT EXCHANGER EMISSIONS LIMITATIONS

EU	Fuel	Capacity (MMBtu/hr)	Construction Date	Notes/ Removal Date	Basis for PM Limit	Total Heat Input Capacity for PM Limit (MMBtu/hr)	Basis for SO_2 Limit	Total Heat Input Capacity for SO_2 Limit (MMBtu/hr)
A3	Natural Gas	1.26	1974	---	Section 4(1)(c)	33.85	Section 5(1)(c)2.	33.85
A4	Natural Gas	1.68	1972	---	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
A7	Natural Gas	2.22	1972	Removed in 2024	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
A9	Natural Gas	1.80	1972	Removed in 2024	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
I4	Natural Gas	1.89	1972	---	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
S5 (EI)	Natural Gas	12.5	12/31/1972	Removed in 2021; Replaced by S7	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
S6 (EI)	Natural Gas	12.5	12/31/1972	---	Section 4(1)(c)	32.59	Section 5(1)(c)2.	32.59
S7	Natural Gas	12.6	9/2021	Replaced S5	Section 4(1)(c)	33.945	Section 5(1)(c)2.	33.945