Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-23-003 R1
North American stainless
6870 Highway 42 East
Ghent, KY 41045
April 9, 2025
Vahid Bakhtiari, Reviewer

SOURCE ID:	21-041-00034
AGENCY INTEREST:	711
ACTIVITY:	APE20240004; APE20250001

Table of Contents

SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3312, Steel Works and Rolling Mills

Single Source Det. ☒ Yes ☐ No If Yes, Affiliated Source AI: 112822 & 117650

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

28 Source Category ☒ Yes ☐ No If Yes, Category: Iron and steel mills

County: Carroll
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):

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
North American Stainless (NAS) is an existing major source as defined in 401 KAR 51:001 and 401 KAR 52:001.

NAS is located in Carroll County, Kentucky on 1400 acres with direct access to the Ohio River. Different cold rolling mills at NAS can roll coils to a wide range of thicknesses. The process begins at Melt Shop which includes the following process equipment: Electric Arc Furnace (EAF), Argon Oxygen Decarburization (AOD) converter, ladle stir & treatment station (LSS), and the billet caster (BC). The hot rolling mill consists of the following equipment: billet grinder, billet reheat furnace, rolling stands, cooling bed, wire rod block, garret coiler, and a compactor.

Depending on the steel grade, the billets are run through the billet grinder to remove any imperfections. Next, the billets are placed in the reheat furnace. Once the material is reheated to the appropriate temperature, it passes through the roughing mill and then through rolling stands. At the end of the rolling stands there are three different exit areas, garret coiler, wire rod block, and cooling bed, each of which is designed to produce a different product mix. Once the materials pass though one of these three areas, they are transported to finishing mill to be processed into finished products.

The wire rod process begins with the billet passing through rolling stands. After this, it exits through the wire rod block, or the garret coiler depending on the size. The material is then transported to the finishing shop and the wire rod is placed into an annealing furnace. After exiting the annealing furnace, the coil moves through pickling tanks to remove scale. At the exit of the pickling tanks, the wires can be coated.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-23-003 R1 Activities: APE20240004; APE20250001

Received: 11/26/2024; 3/28/2025 Application Complete Date: 1/24/2025; 4/8/2025

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

Description of Action:
NAS submitted a significant permit revision application on November 26, 2024 to revise their existing Title V permit V-23-003. NAS requested to have more flexibility to operate standby preheaters when the Melt Shop is not in operation. There are currently one (1) standby AOD Preheater (EP 059) and two (2) standby Ladle Preheaters (EP 049). Flexibility in their operation would lead to more efficient usage of ladles and AOD vessels upon resumption of the Melt Shop to normal operation, while reducing brick waste due to premature removal of previously used vessels before the outage. Furthermore, this would allow for maintaining previously used vessels (under heat) and the building and preheating of new vessels during the downtime.

Because NAS is a major source for the purposes of 401 KAR 51:017, Prevention of Significant Deterioration (PSD), projects at the facility must be compared to the Significant Emission Rates (SERs) to determine if a project triggers PSD applicability and a Best Available Control Technology (BACT) analysis. The total emissions increases from the standby emission units and shutdown emission units in the Melt Shop are shown in table below. While the change in operating restrictions will cause an increase in the actual emissions from the ability to operate additional units during outages, because there are no changes to the annual fuel usage limits, there are no increases in potential tpy emissions. To conservatively determine the maximum potential increase in actual emissions, the potential increase in lb/hr emissions from the operation of additional heaters was multiplied by 8760. The total maximum increases in actual emissions are less than the significant emissions increases as defined in 401 KAR 51:001, Section 1(218)(a). Based on these totals, the project is not subject to the requirements of 401 KAR 51:017, Sections 8-14.

Emission Point	PM (tpy)	Lead (tpy)	NO_x (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)
1 Standby AOD Preheater (EP 059)	5.57E-04	1.47E-07	2.93	4.93	3.52E-02	3.23E-01
2 Standby Ladle Preheaters (EP 049)	6.97E-04	1.83E-07	3.67	6.16	4.40E-02	4.03E-01
Total for Standby Units	1.25E-03	3.30E-07	6.60	11.09	7.92E-02	7.26E-01
Total for Shutdown Units (EAF #1, EAF #2, AOD #1, AOD #2)	0	0	0	0	0	0

Total Emissions Increase	1.25E-03	3.30E-07	6.60	11.09	7.92E-02	7.26E-01
SER	25	0.6	40	100	40	40
PSD	No	No	No	No	No	No

On March 28, 2025, NAS submitted a significant permit revision application to their permit V-23-003. NAS requested to revise the Compliance Assurance Monitoring (CAM) requirements for EAFs and AODs (EPs 057, 058, 105, and 106) in their permit V-23-003. The public comment period for significant permit revision application submitted on November 26, 2024, ended on March 23, 2025. The Division opted to process the significant permit revision application submitted on March 28, 2025, and provide another public comment period to incorporate the recent submittal in the revised permit V-23-003 R1. The following changes have been made to the permit after the first public comment period, as a result of the application received:

- The current CAM plan requires NAS to monitor six parameters for EAFs and AODs: bag leak detection, pressure differential, fan motor amperage, damper positions, visual opacity, and control equipment inspections. However, NAS is proposing removing fan amps and damper positions from the CAM plan. These two parameters are specifically regulated under 40 CFR 60 Subpart AAa. The specified ranges for fan motor amperes and damper positions in the CAM plan are based on stack tests conducted in 2016 and 2019. Furthermore, 40 CFR 60 Subpart AAa requires that EAFs and AODs operate within the conditions established during the most recent stack tests for these two parameters. Compliance with these regulations may require annual updates to the CAM plan based on annual stack test results, imposing an administrative burden on the facility without any additional compliance assurance.

  Additionally, under Permit V-23-003, NAS is required to conduct annual stack testing of EAFs and AODs until two consecutive annual tests demonstrate emissions at or below 75% of the standard for a specific pollutant. Given this stack testing frequency, the CAM plan may need to be revised several times to avoid conflicting monitoring requirements between the regulations.

  NAS asserts that removing these two indicators from the CAM plan, while maintaining the rest, will maintain the stringency of the regulations while minimizing the need for significant permit modifications to resolve conflicts between the operating conditions after each stack test.

  The Division concurs that the remaining four indicators in the CAM plan are sufficient to assure compliance with applicable regulations. Therefore, the Division revised the CAM plan in permit V-23-003 R1 by removing fan amps and damper positions indicators for EAFs and AODs and reducing the number of indicators to four.

- On February 14, 2024, final updates to 40 CFR 60, Subpart AAa were published in the federal register. Accordingly, the regulatory language in the draft permit and Statement of Basis have been updated to reflect the published changes.

V-23-003 R1 Emission Summary				
Pollutant	[(1)] 2023 Actual (tpy)	[(2)] PTE V-23-003 (tpy)	[(5)] Change (tpy)	Revised PTE V-23-003 R1 (tpy)
CO	1,013	3,586	0	3,586
NO_X	375	1,899	0	1,899
PT	44.58	583	0	583

V-23-003 R1 Emission Summary				
Pollutant	[1] 2023 Actual (tpy)	[2] PTE V-23-003 (tpy)	[5] Change (tpy)	Revised PTE V-23-003 R1 (tpy)
PM_{10}	43.60	579	0	579
$PM_{2.5}$	16.87	413	0	413
SO_2	1.66	14.14	0	14.14
VOC	38.13	719	0	719
Lead	0.01	3.39	0	3.39
Greenhouse Gases (GHGs)				
Carbon Dioxide	209,483	496,041	0	496,041
Methane	4.01	9.50	0	9.50
Nitrous Oxide	3.84	[3] 1.99	0	1.99
CO2 Equivalent (CO2e)	209,960	496,871	0	496,871
Hazardous Air Pollutants (HAPs)				
Chromium, Total (as Cr)	1.75	3.46	0	3.46
Hexane; N-Hexane	0.0154	7.39	0	7.39
Hydrofluoric Acid	0.75	3.96	0	3.96
Manganese, Total (as Mn)	3.83	6.68	0	6.68
Nickel, Total (as Ni)	1.15	2.27	0	2.27
Combined HAPs	7.62	[4] 24.39	0	24.39

(1) Based on 2023 EIS Report.
(2) Includes controlled emissions based on federally enforceable control devices, and only those contributions associated with North American Stainless.
(3) Based on most recent values in 40 CFR 98, Subpart C.
(4) Due to NAS's total HAP PTE approaching major source status, NAS has opted to be regulated as a major source of HAPs.
(5) Small emission increase on a lb/hr basis is happening during the shutdown of melt shop due to operation of standby units. There are no increases in potential tpy emissions.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Group 1 – Annealing 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 when burning natural gas
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	Assumed when burning natural gas and complying with PM BACT limits below
PM_{10}	EPs 001, 006, 061, & 102	2.68 lb/hr; 11.74 tpy	401 KAR 51:017	0.0024 lb/MMBtu, September 2019 stack testing	Stack testing; monitoring; recordkeeping
PM	EP 026	0.13 lb/hr; 0.55 tpy		AP 42, Table 1.4-2	
	EP 070	0.30 lb/hr; 1.31 tpy		AP 42, Table 1.4-2	
	EPs 071 & 121	0.14 lb/hr; 0.59 tpy		AP 42, Table 1.4-2	
CO	EPs 001, 006, 061, & 102	29.61 lb/hr; 129.71 tpy	401 KAR 51:017	0.0002 lb/MMBtu, September 2019 stack testing	Stack testing; monitoring; recordkeeping
	EP 026	1.39 lb/hr; 6.1 tpy		AP 42, Table 1.4-2	
	EP 070	3.29 lb/hr; 17.18 tpy		AP 42, Table 1.4-2	
	EPs 071 & 121	1.48 lb/hr; 6.5 tpy		AP 42, Table 1.4-2	
NO_x	EPs 001, 006, 061, & 102	21.15 lb/hr; 92.64 tpy	401 KAR 51:017	0.030 lb/MMBtu, September 2019 stack testing	Stack testing; monitoring; recordkeeping
	EP 026	1.39 lb/hr; 6.1 tpy		AP 42, Table 1.4-2	
	EP 070	3.0 lb/hr; 13.14 tpy		AP 42, Table 1.4-2	
	EPs 071 & 121	1.35 lb/hr; 5.91 tpy		AP 42, Table 1.4-2	
VOC	EPs 001, 006, 061, & 102	1.95 lb/hr; 8.5 tpy	401 KAR 51:017	0.0001 lb/MMBtu, September 2019 stack testing	Stack testing; monitoring; recordkeeping
	EP 026	0.09 lb/hr; 0.40 tpy		AP 42, Table 1.4-2	
	EP 070	0.22 lb/hr; 0.94 tpy		AP 42, Table 1.4-2	

Emission Group 1 – Annealing Furnaces

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
	EP 071 & 121	0.10 lb/hr; 0.43 tpy		AP 42, Table 1.4-2	

Process Description:

Emission Point #	Description	Maximum Capacity (MMBtu/hr)	Fuel	Control Equipment	Construction Commenced
006 (S-06)	Flat Products Annealing Furnace #1	70	Natural Gas	Low NO_x Burner	3/31/1992
001 (S-01)	Flat Products Annealing Furnace #2	85	Natural Gas	Low NO_x Burner	3/31/1992
061 (S-61)	Flat Products Annealing Furnace #3	67.5	Natural Gas	Low NO_x Burner	3/7/2001
102 (S-102)	Flat Products Annealing Furnace #4	130	Natural Gas	Low NO_x Burner	5/1/2007
026 (S-26)	Plate Products Annealing Furnace	16.5	Natural Gas	Ultra-Low NO_x Burner	9/10/1999
070 (S-70)	Long Products Annealing Furnace #1	40	Natural Gas	Low NO_x Burner	3/15/2002
071 (S-71)	Long Products Annealing Furnace #2	18	Natural Gas	Low NO_x Burner	4/1/2008
121 (S-121)	Long Products Annealing Furnace #3	18	Natural Gas	Low NO_x Burner	11/1/2012

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances.* This regulation is applicable to each affected facility which emits or may potentially emit hazardous matter or toxic substances.

Comments:
Emissions are calculated using emission factors from AP-42, Section 1.4, 40 CFR 98, Subpart C, and September 2019 stack testing. EP 001 is representative of EP 006 and EP 061.

The annealing furnaces are direct-fired and do not meet the definition of "indirect heat exchanger" as defined in 401 KAR 59:015, therefore the requirements of 401 KAR 59:015 do not apply to these emission points. Refer to email "Annealing Furnaces" dated 11.10.2021 under Activity APE20200003. Also, these furnaces are direct-fired and do not meet the definition for process heaters in 40 CFR 63, Subpart DDDDD.

Emission Group 2 – Acid Pickling					
Pollutant	**Emission Limit or Standard**		**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Opacity	20% opacity		401 KAR 59:010, Section 3(1)(a)	N/A	Monthly qualitative observations; monitoring; recordkeeping
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	N/A	No PM emissions based on the application and the nature of process
NO_x	EP 003 & 007	50 ppm; 4.60 lb/hr; 20.14 tpy	401 KAR 51:017	1.77 lb/ton; BACT limit	Stack testing; monitoring; recordkeeping; CAM plan
	EP 028	100 ppm; 1.44 lb/hr; 6.32 tpy		2.403 lb/ton; BACT limit	
	EP 062	100 ppm; 2.55 lb/hr; 11.17 tpy		1.819 lb/ton; BACT limit	
	EP 074	100 ppm; 9.61 lb/hr; 42.10 tpy		19.224 lb/ton; BACT limit	
	EP 078	75 ppm; 1.08 lb/hr; 4.74 tpy		5.41 lb/ton; BACT limit	
	EP 101	50 ppm; 4.81 lb/hr; 21.05 tpy		1.068 lb/ton; BACT limit	

Process Description:

Emission Point #	Description	Maximum Capacity (tons of steel/hr)	Control Equipment	Construction Commenced
003 (S-03)	Flat Products Mixed Acid Pickling #1 (AP1)	75	One Shared Selective Catalytic Reduction (SCR) DeNOx System	2/1/1991; Modified: 12/2005
007 (S-07)	Flat Products Mixed Acid Pickling #2 (AP2)	100		2/1/1992; Modified: 12/2005 & 2023
028 (S-28)	Plate Pickling Section	30	Wet Scrubber	9/10/1999
062 (S-62)	Acid Pickling #3 (AP3)	70	SCR	3/7/2001

Emission Group 2 – Acid Pickling

074 (S-74)	Long Products Pickling Line #1	25	Wet Scrubber	3/15/2002
078 (S-78)	Angle Pickling Line #1	10	Wet Scrubber	3/15/2002
101 (S-101)	Flat Products Pickling #4 (AP4)	225	SCR	5/1/2007

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 53:010, *Ambient air quality standards;* applicable to HF emissions.
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to SCR and wet scrubbers for controlling NOx emissions.

Comments:
NO_x emissions are back calculated based on established BACT limits. EP 028 is representative of EP 074 and EP 078. EP 003 is representative of EP 007, EP 062, and EP 101.

An annealing and pickling line could be described as a "hot rolled coil products" or a "cold rolled coil products". If the stainless steel is altered by the Hot Mill (slab grinder, reheat furnace, and roughing/finishing mill), then the annealing and pickling line is designated as a "Hot AP" line or "hot rolled coil products". If the steel was previously processed in a cold rolling process such as a reverse rolling mill (Z-Mill), the annealing and pickling line is designated as a "Cold AP" line or "cold rolled coil products".
The "hot rolled products scenario" and "cold rolled products scenario" at NAS could be further described as follows:

- The AP1 and AP3 lines are flat products annealing and pickling lines dedicated to the processing of cold rolled products (i.e., Cold AP lines) because incoming steel coils were previously processed in the Reverse Cold Rolling Mills. AP1 and AP3 are primarily equipped with strip cleaning, annealing furnace, strip cooling/quenching, electrolytic stage, and acid pickling sections.
- The AP2 line was originally equipped with annealing furnace, strip cooling/quenching, shot blasting (three shot blasters) and acid pickling sections. The AP2 line historically only received material from the hot rolling mill (reheat and roughing/finishing mills) and was therefore considered to be a flat products annealing and pickling line dedicated to the processing of hot rolled products (i.e., Hot AP line).
- Once the AP4 line was constructed in 2007, it became the new primary flat products annealing and pickling line for dedicated processing of hot rolled products. The AP4 line installation allowed the existing the AP2 line to then operate as a "flexible" line either operating as a supplementary line for processing hot rolled products in support of the AP4 line or as another line for processing cold rolled product in conjunction with AP1 and AP3 lines.
- In recent years, the AP2 line has been used more as a cold rolled products line by receiving material from Z-mills instead of a hot rolled products line by receiving material from the Hot Mill. Unlike the other AP1 and AP3 lines used for processing cold rolled products, the AP2 line never had electrolytic pickling added because this process step is not needed for processing the types of hot rolled products that the AP2 line was originally designed and installed to process.

Emission Group 2 – Acid Pickling

- The installation of new shot blasters (as a replacement to the original shot blasters) and a new electrolytic section in the AP2 line will fully enable the AP2 line to operate with true hot rolled or cold rolled product production capability.

Electrolytic pickling is a stainless steel strip pretreatment process completed within the continuous process flow of the overall flat products pickling line. Electrolytic pickling is commonly completed in-line with other process steps of the flat products pickling line and would be located after the annealing furnace and prior to the acid pickling stage of the continuous process line. For electrolytic pickling, the stainless steel passes through cold tanks containing a solution of sodium sulfate with electrodes to initiate the conditioning of the scale. The new AP2 electrolytic section is not expected to generate any regulated air pollutant emissions. Including an electrolytic stage in a flat products pickling line offers more effective and efficient acid pickling to generate higher quality products.

The electrolytic section does generate water vapor/steam as this strip passes through the electrolytic chemical bath comprised of an aqueous solution of sodium sulfate. To ensure water vapor/steam does not accumulate inside of the production building, the electrolytic section is equipped with duct connection(s) to the existing fume exhaust system serving AP2 and is evacuated to the wet scrubber and selective catalytic reduction (SCR) unit also serving the AP1 line. Even though a fume exhaust system connection from the electrolytic section is being added, the additional water vapor/steam laden exhaust stream is not expected to alter the hydrogen fluoride (HF) and/or nitrogen oxides (NOx) emissions performance of the current AP1/AP2 air pollution control train. Also, the new electrolytic section exhaust duct connection(s) is not expected to contain any regulated air pollutant emissions that could pass through the control system and be discharged to the atmosphere.

Emission Group 3 – Coil Polishing

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	See PM BACT limits below	Assumed based on operating the control equipment and complying with BACT limits below
	EP 004	30 tpy	401 KAR 51:017	49.44 lb/ton; BACT limit	Stack testing; monitoring; recordkeeping
	EP 099	1.5 lb/hr; 6.6 tpy		2.308 lb/ton; BACT limit	

Emission Group 3 – Coil Polishing

Process Description:

Emission Point #	Description	Maximum Capacity (tons of steel/hr)	Control Equipment	Construction Commenced
004 (S-04)	Coil Polishing #1	65	Mist Collector	11/30/1991
099 (S-99)	Coil Polishing #2	65	Mist Collector	2/1/2006

Applicable Regulations:
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to mist collectors for controlling PM emissions.

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

Comments:
PM emissions are back calculated using established BACT limits. EP 004 is representative of EP 099.

Emission Group 4 – Z-Mills

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	See PM BACT limits below	Assumed based on operating the control equipment and complying with BACT limits below
	EP 005	25 tpy	401 KAR 51:017	4.756 lb/ton; BACT limit	Stack testing; monitoring; recordkeeping; CAM plan
	EP 011	25 tpy		3.567 lb/ton; BACT limit	
	EP 060	1.5 lb/hr; 6.6 tpy		1.5068 lb/ton; BACT limit	
	EP 092	1.5 lb/hr; 6.6 tpy		1.5068 lb/ton; BACT limit	
	EP 095	1.5 lb/hr; 6.6 tpy		0.9418 lb/ton; BACT limit	

Emission Group 4 – Z-Mills

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
VOC	EP 005	100 tpy	401 KAR 51:017	0.381 lb/ton; BACT limit	Stack testing; monitoring; recordkeeping
	EP 011	100 tpy		0.285 lb/ton; BACT limit	
	EP 060	100 tpy		0.4566 lb/ton; BACT limit	
	EP 092	100 tpy		0.4566 lb/ton; BACT limit	
	EP 095	100 tpy		0.2854 lb/ton; BACT limit	

Process Description:

Emission Point #	Description	Maximum Capacity	Control Equipment	Construction Commenced
005 (S-05)	Z-Mill #1 Cold Rolling Mill	60 tons of steel/hr;	Mist Collector	10/31/1991
011 (S-11)	Z-Mill #2 Cold Rolling Mill	80 tons of steel/hr;	Mist Collector	1/23/1995
060 (S-60)	Z-Mill #3 Cold Rolling Mill	50 tons of steel/hr	Oil Mist Eliminator	3/7/2001
092 (S-92)	Z-Mill #4 Cold Rolling Mill	40 tons of steel/hr	Oil Mist Eliminator	1/1/2004
095 (S-95)	Z-Mill #5 Cold Rolling Mill	80 tons of steel/hr	Oil Mist Eliminator	10/7/2007

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to oil mist eliminators for controlling PM emissions.

Comments:
PM and VOC emissions are back calculated using established BACT limits. EP 011 is representative of EP 005. EP 095 is representative of EP 060 and EP 092.
Maximum rolling oil usage for EP 005 and EP 011 is 17.5 gal/hr each.

EP 008 (S1): Lime Unloading				
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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	See PM BACT limits below	Assumed based on operating the control equipment
	7 tpy	To preclude 401 KAR 51:017	79.91 lb/ton; BACT limit	Monitoring; recordkeeping; CAM plan

Initial Construction Date: 3/1/1992

Process Description:
Pneumatic unloading of lime storage bin. Associated filters are located at the top of the silo.

Maximum Capacity: 1 ton/hr
Control Equipment: Fabric Filter with 98% control efficiency

Applicable Regulations:
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to fabric filter for controlling PM emissions.

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

Comments:
PM emissions are back calculated using BACT limits. Pressure drop monitoring is not available for the fabric filter due to its location.

Emission Group 5 – Boilers					
Pollutant	**Emission Limit or Standard**		**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
Opacity	20%		401 KAR 59:015, Section 4(2)	N/A	Assumed when burning natural gas
PM	EP 009 & 010	0.352 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	AP 42, Table 1.4-2	Assumed when burning natural gas

Emission Group 5 – Boilers					
	EP 110	0.320 lb/MMBtu			
	EP 103	0.299 lb/MMBtu			
	EPs 150 & 151	0.293 lb/MMBtu			
	EPs 009, 010, & 110	0.23 lb/hr; 1.0 tpy	401 KAR 51:017		Monitoring and recordkeeping
	EP 103	0.27 lb/hr; 1.18 tpy			
CO	EP 103	1.30 lb/hr; 5.68 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping
NO_x	EP 103	1.26 lb/hr; 5.52 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping
SO_2	EPs 009 & 010	1.334 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)(1)	AP 42, Table 1.4-2	Assumed when burning natural gas
	EP 110	1.129 lb/MMBtu			
	EP 103	1.003 lb/MMBtu			
	EP 150 & 151	0.971 lb/MMBtu			
	EPs 009, 010, & 110	0.23 lb/hr; 1.0 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping
VOC	EP 103	0.19 lb/hr; 0.85 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping

Process Description:

Emission Point #	Description	Maximum Capacity (MMBtu/hr)	Fuel	Control Equipment	Construction Commenced
009 (S-09)	Boiler #1	36	Natural Gas	None	2/1/1992
010 (S-10)	Boiler #2	36	Natural Gas	None	2/1/1992
110 (S-110)	Standby Boiler #3	36	Natural Gas	None	7/1/2000
103 (S-103)	Boiler #4	36	Natural Gas	None	4/1/2008
150	LP Boiler	6	Natural Gas	None	4/15/2016
151	LP Boiler	6	Natural Gas	None	4/15/2016

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

Emission Group 5 – Boilers

401 KAR 59:015, *New indirect heat exchangers*
401 KAR 60:005, Section 2(2)(d), 40 C.F.R. 60.40c to 60.48c (Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, applies to EPs 009, 010, 110, and 103.
401 KAR 63:002, Section 2(4)(iiii), **40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD)**, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, 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.

Comments:
Emissions are calculated using emission factors from AP-42, Section 1.4 and 40 CFR 98, Subpart C.
Pursuant to 40 CFR 63.7490(b), a boiler or process heater is new if the permittee commences construction of the boiler or process heater after June 4, 2010, and the permittee meets the applicability criteria at the time the permittee commences construction. While EP 150 and EP 151 were constructed after June 4, 2010, NAS did not meet the applicability criteria for 40 CFR 63, Subpart DDDDD at the time of commencing construction. Pursuant to 40 CFR 63.7490(d), a boiler or process heater is existing if it is not new or reconstructed. Therefore, all of the NAS boilers are considered existing sources.

EP 022 (S25): Slab Grinder

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	See PM BACT limits below	Assumed based on operating the control equipment
	5 tpy	To preclude 401 KAR 51:017	42.28 lb/ton; BACT limit	Monitoring; recordkeeping; CAM plan

Initial Construction Date: 5/30/1996

Process Description:
The slab grinder is equipped with a pressure sensor so that the baghouse filters are properly pulsed.
Maximum Capacity: 135 tons of steel/hr
Control Equipment: Baghouse with 98% control efficiency

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

EP 022 (S25): Slab Grinder

40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to fabric filter for controlling PM emissions.

Precluded Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
Comments:
PM emissions are back calculated using established BACT limits.

EP 023 (S-22): Reheat Furnace

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 when burning natural gas
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	Assumed when burning natural gas

Initial Construction Date: 5/30/1996

Process Description:
A direct-fired, natural gas reheat furnace.
Model: Stein Heurty
Maximum Capacity: 250 tons of steel/hr
Maximum Heat Input: 169 MMBtu/hr
Control Equipment: None

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

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances.* This regulation is applicable to each affected facility which emits or may potentially emit hazardous matter or toxic substances.

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

Comments:
Emissions are calculated using emission factors from AP-42, Section 1.4-2, 40 CFR 98, Subpart C, and stack testing.

Emission Group 6 – Rolling Mills					
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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	Assumed based on manufacturer's control efficiency and complying with BACT limit below
	EP 024	53 tpy	To Preclude 401 KAR 51:017	0.984 lb/ton; BACT limit	Monitoring; recordkeeping; CAM plan
	EP 025	53 tpy	To Preclude 401 KAR 51:017	0.984 lb/ton; BACT limit	Monitoring; recordkeeping; CAM plan

Initial Construction Date: EP 024: 5/30/1996; EP 025: 5/30/1996

Process Description:
EP 024 (S-24) Roughing Mill
Description: A Hitachi roughing mill.
Construction Commenced: 5/30/1996
Maximum Capacity: 250 tons of steel/hr
Control Equipment: Baghouse

EP 025 (S-22A, S-23b, S-26) Finishing Mill
Description: A Hitachi finishing mill and Steckel coiler with two natural gas burners to maintain metal temperature.
Construction Commenced: 5/30/1996
Maximum Capacity: 250 tons of steel/hr
Maximum Heat Input: 6 MMBtu/hr, each burner (12 MMBtu/hr total)
Control Equipment: Busch centrifugal dust collection system

Applicable Regulations:
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to fabric filter for controlling PM emissions.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances.* This regulation is applicable to each affected facility which emits or may potentially emit hazardous matter or toxic substances, applies to EP 025.

Emission Group 6 – Rolling Mills

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

Comments:
PM emissions are back calculated using established BACT limits. Natural gas emissions are calculated using emission factors from AP-42, Section 1.4-2 and 40 CFR 98, Subpart C.

Emission Group 7 – Melt Shop Units

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
Opacity	Any opening or stack	20%	401 KAR 59:010, Section 3(1)(a)	N/A	Daily Method 9; Monitoring; recordkeeping; reporting
	Baghouse (EPs 057, 105, 058, & 106)	3%	40 CFR 60.272a(a)(2)		
	Dust Handling System (EPs 057, 105, 058, & 106)	10%	40 CFR 60.272a(b)		
	Building opening (EPs 057, 105, 058, & 106)	6%	40 CFR 60.272a(a)(3); 40 CFR 63.10686(b)(2)]		
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	Refer to PM BACT limits below	Assumed based on operating the control equipment and complying with PM BACT limits below
	EP 057	0.10 lb/ton; 13.94 lb/hr	401 KAR 51:017	20 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 057	0.0052 gr/dscf	40 CFR 60.272a (a)(1) & 40 CFR 63.10686(b)(1)	20 lb/ton; BACT limit	Monitoring; recordkeeping
	EP 105	0.193 lb/ton; 25.71 lb/hr	401 KAR 51:017	38.7 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 105	0.0052 gr/dscf	40 CFR 60.272a (a)(1) & 40 CFR 63.10686(b)(1)	38.7 lb/ton; BACT limit	Monitoring; recordkeeping

Emission Group 7 – Melt Shop Units					
	EP 057 & 105	138.24 tpy (combined)	401 KAR 51:017	For EP 057: 20 lb/ton BACT limit; For EP 105: 38.7 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058	0.13 lb/ton; 16.98 lb/hr	401 KAR 51:017	26 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058	0.0052 gr/dscf	40 CFR 60.272a (a)(1) & 40 CFR 63.10686(b)(1)	26 lb/ton; BACT limit	Monitoring; recordkeeping
	EP 106	0.193 lb/ton; 25.71 lb/hr	401 KAR 51:017	38.6 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 106	0.0052 gr/dscf	40 CFR 60.272a (a)(1) & 40 CFR 63.10686(b)(1)	38.6 lb/ton; BACT limit	Monitoring; recordkeeping
	EP 058 & 106	138.24 tpy (combined)	401 KAR 51:017	For EP 058: 26 lb/ton BACT limit; For EP 106: 38.6 lb/ton; BACT limit	Testing; monitoring; recordkeeping
CO	EP 057	2 lb/ton; 265.76 lb/hr	401 KAR 51:017	2 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 105	2 lb/ton; 266 lb/hr	401 KAR 51:017	2 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 057 & 105	1653.36 tpy (combined)	401 KAR 51:017	For EP 057: 2 lb/ton BACT limit; For EP 105: 2 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058	2.06 lb/ton; 273.75 lb/hr	401 KAR 51:017	2.06 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 106	2.06 lb/ton; 273.98 lb/hr	401 KAR 51:017	2.06 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058 & 106	1703 tpy (combined)	401 KAR 51:017	For EP 058: 2.06 lb/ton BACT limit; For EP 106: 2.06 lb/ton; BACT limit	Testing; monitoring; recordkeeping
Pb	EP 057	0.001 lb/ton; 0.167 lb/hr	401 KAR 51:017	0.251 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 105	0.002 lb/ton; 0.309 lb/hr	401 KAR 51:017	0.465 lb/ton; BACT limit	Testing; monitoring; recordkeeping

Emission Group 7 – Melt Shop Units					
	EP 057 & 105	1.66 tpy (combined)	401 KAR 51:017	For EP 057: 0.251 lb/ton BACT limit; For EP 105: 0.465 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058	0.002 lb/ton; 0.204 lb/hr	401 KAR 51:017	0.3068 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 106	0.002 lb/ton; 0.31 lb/hr	401 KAR 51:017	0.4662 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058 & 106	1.70 tpy (combined)	401 KAR 51:017	For EP 058: 0.3068 lb/ton BACT limit; For EP 106: 0.4662 lb/ton; BACT limit	Testing; monitoring; recordkeeping
NO_x	EP 057	1.32 lb/ton; 175 lb/hr	401 KAR 51:017	1.32 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 105	1 lb/ton; 133 lb/hr	401 KAR 51:017	1 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 057 & 105	1010.86 tpy (combined)	401 KAR 51:017	For EP 057: 1.32 lb/ton BACT limit; For EP 105: 1 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058	0.578 lb/ton; 76.83 lb/hr	401 KAR 51:017	0.578 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 106	0.58 lb/ton; 76.87 lb/hr	401 KAR 51:017	0.578 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 058 & 106	477.87 tpy (combined)	401 KAR 51:017	For EP 058: 0.578 lb/ton BACT limit; For EP 106: 0.578 lb/ton; BACT limit	Testing; monitoring; recordkeeping
VOC	EP 057	0.150 lb/ton; 19.95 lb/hr	401 KAR 51:017	0.15 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 105	0.15 lb/ton; 19.95 lb/hr	401 KAR 51:017	0.15 lb/ton; BACT limit	Testing; monitoring; recordkeeping
	EP 057 & 105	124.04 tpy (combined)	401 KAR 51:017	For EP 057: 0.15 lb/ton BACT limit; For EP 105: 0.15 lb/ton; BACT limit	Testing; monitoring; recordkeeping

Emission Group 7 – Melt Shop Units

Process Description:

Emission Point #	Description	Maximum Capacity	Control Equipment	Construction Commenced
057 (26)	Electric Arc Furnace 1 (EAF #1) and the associated dust handling equipment	154 tons per batch	EAF #1 Baghouse	11/1/1999
105 (105)	Electric Arc Furnace 2 (EAF #2) and the associated dust handling equipment	154 tons per batch	EAF #2 Baghouse	7/1/2003
058 (27)	Argon Oxygen Decarburization 1 (AOD #1) Vessel	165 tons per batch	AOD #1 Baghouse	11/1/1999
106 (106)	Argon Oxygen Decarburization 2 (AOD #2) Vessel	154 tons per batch	AOD #2 Baghouse	7/1/2007
034 (S-34)	Lime Hopper	80 tons/hr	EAF #1 Baghouse	11/1/1999
036 (S-36)	Receiving Bin/ Filling Station	132 tons/hr	EAF #1 Baghouse	11/1/1999
059 (S-28)	4 Argon Oxygen Decarburization Preheaters	13.66 MMBtu/hr, each	AOD #1 Baghouse	11/1/1999; Modified: 9/1/2005; Replaced low NO_x burner with oxyfuel burner: 2009; modified: 2025
049 (S-49)	11 Ladle Preheaters	8.54 MMBtu/hr, each	oxyfuel burner; AOD #1 Baghouse	11/1/1999; Modified: 9/1/2005; Replaced low NO_x burner with oxyfuel burner: 2009; modified: 2025

Applicable Regulations:

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

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

401 KAR 60:005, Section 2(2)(jj), 40 C.F.R. 60.270a to 60.276a (Subpart AAa), *Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels After August 17, 1983 and On or Before May 16, 2022,* applies to EP 057, EP 058, EP 105, and EP 106.

401 KAR 63:002, Section 2(4)(aaaaa), 40 C.F.R. 63.10680 to 63.10692, Table 1 (Subpart YYYYY), *National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities,* applies to all EPs listed above except EP 034 and EP 036.

40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to fabric filter for controlling PM

Emission Group 7 – Melt Shop Units

emissions.

Comments:
CO, PM, Pb, NO_x, and VOC emissions are back calculated using established BACT limits.
For each EAF and each AOD: The annual average liquid steel production rates as cast shall not exceed 133 tons per hour. The annual liquid steel produced as cast should not exceed 1,653,804 U.S short tons (1,500,000 metric tons).
For EP 059: Not more than three AOD preheaters shall be operated simultaneously when 2 EAFs and 2 AODs are operating & total annual gas usage for AOD preheaters shall not exceed 239 MMscf per year while using oxyfuel burners.
For EP 049: Not more than 9 ladle preheaters shall be operated simultaneously when 2 EAFs and 2 AODs are operating and total annual gas usage for ladle preheaters shall not exceed 673 MMscf per year while using oxyfuel burners.
In the absence of any MACT for steel making facilities that are major sources of HAPs and in lieu of applying 401 KAR 63:020, *Potentially hazardous matter or toxic substances*, 40 CFR 63, Subpart YYYYY continues to be applied to NAS.

Emission Group 8 – Miscellaneous Processing Operations

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	See PM BACT limits below	Assumed based on manufacturer's control efficiency and complying with PM BACT limit below
	EP 031	1.44 lb/hr	401 KAR 51:017	0.288 lb/ton; BACT limit	Monitoring; recordkeeping; CAM plan
	EP 065	0.86 lb/hr		245.71 lb/ton; BACT limit	
	EP 067	0.26 lb/hr		0.288 lb/ton; BACT limit	
	EP 068	0.26 lb/hr		74.29 lb/ton; BACT limit	

Process Description:

Emission Point #	Description	Maximum Capacity	Control Equipment	Construction Commenced
031 (S-31)	Ferro Alloy/ Flux Addition System	8,760,000 tons/yr	Baghouse	11/1/1999

Emission Group 8 – Miscellaneous Processing Operations

	065 (S-65)	Grinding Machine	306,600 tons/yr	Baghouse	3/15/2002
	067 (S-67)	Roughing Mill	306,600 tons/yr	Baghouse	3/15/2002
	068 (S-68)	Bars Cut-Off Station 1	306,600 tons/yr	Baghouse	3/15/2002

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM);* applicable to fabric filter for controlling PM emissions for EPs 031, 065, and 067.

Comments:
PM emissions are back calculated using established BACT limits.

Emission Group 9 – Caster Operations

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	For EPs 029, 030, & 113: Assumed when burning natural gas; using control equipment; complying with BACT limit below
	EPs 029, 030, 113, & 032	1.77 lb/hr	401 KAR 51:017		For EP 032: Assumed based on operating control equipment; complying with BACT limit below; CAM plan
	EP 032	0.95 lb/hr	401 KAR 51:017		
CO	EP 032	0.5235 lb/hr	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping
NO_x	EP 032	0.6304 lb/hr	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring and recordkeeping

Emission Group 9 – Caster Operations

Process Description:

Emission Point #	Description	Maximum Capacity	Fuel	Control Equipment	Construction Commenced
029	2 Tundish Preheaters & 2 Standby Units	3.8 MMBtu/hr, each	Natural Gas	Low NO_x Burner; Caster Baghouse	11/1/1999
030	10 SEN Preheaters & 5 Standby Units	0.16 MMBtu/hr, each	Natural Gas	Low NO_x Burner; Caster Baghouse	11/1/1999
113	2 Tundish Dryers & 1 Standby Unit	2.4 MMBtu/hr, each	Natural Gas	Low NO_x Burner; Caster Baghouse	2/2/2006
032 (S-32)	Continuous Caster with Oxy-Fuel Torch Cutting	165 tons of steel/hr	Natural Gas	Caster Baghouse	11/1/1999

Applicable Regulation:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
40 CFR 64, *Compliance Assurance Monitoring (CAM),* applicable to fabric filter for controlling PM emissions for EP 032.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances.* This regulation is applicable to each affected facility which emits or may potentially emit hazardous matter or toxic substances.

Comments:
Emissions are calculated using emission factors from AP-42, Section 1.4-2 and 40 CFR 98, Subpart C.
For Tundish preheaters: Not more than two Tundish preheaters shall be operated simultaneously, and gas usage shall not exceed 65.3 MMscf on a 12-month rolling total.
For SEN preheaters: Not more than 10 SEN preheaters shall be operated simultaneously, and gas usage shall not exceed 13.7 MMscf on a 12-month rolling total.

Emission Group 10 – Cooling Towers

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	Monthly qualitative observations; monitoring; recordkeeping

Emission Group 10 – Cooling Towers				
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	AP 42, Table 13.4-1	Assumed based on use of drift eliminators

Process Description:

Emission Point #	Description	Water Flow Rate to Tower (gal/hr)	Control Equipment	Construction Commenced
041	Miscellaneous Cooling Tower	242,536	Drift Eliminator	11/1/1999
042	Evaporation Cooler/Off Gas	409,510	Drift Eliminator	11/1/1999
046	Spray and Open Machine Cooling System	110,964	Drift Eliminator	11/1/1999
047	Closed Machine Cooling System	99,868	Drift Eliminator	11/1/1999
063	AP Cold #3 Cooling Tower	156,000	Drift Eliminator	3/7/2001
064	Z-Mill #3 Cooling Tower	177,000	Drift Eliminator	3/7/2001
081	Long Products Reheat & Roughing Cooling Tower	300,000	Drift Eliminator	3/15/2002
082	Long Products Rolling & Miscellaneous Cooling Tower	300,000	Drift Eliminator	3/15/2002
093	Z-Mill #4 Cooling Tower	177,000	Drift Eliminator	1/1/2004
094	Z-Mill #5 Cooling Tower	177,000	Drift Eliminator	2/2/2008
100	AP Cold #4 Cooling Tower	177,000	Drift Eliminator	5/1/2007
107	EAF #2 Cooling Tower	500,000	Drift Eliminator	8/1/2005
108	Melt Shop #2 Cooling Tower	177,000	Drift Eliminator	11/1/2007

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

Emission Group 10 – Cooling Towers

Precluded Regulations:
401 KAR 63:002, Section 2(4)(j), 40 C.F.R. 63.400 to 63.407, Table 1 (Subpart Q), *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers,* precluded by prohibiting the use of chromium-based water treatment chemicals in the cooling towers.

Comments:
Emissions are calculated using emission factors from AP-42, Section 13.4-1.

Emission Group 11 – Roads & Handling Operations (Fugitive Sources)

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	EP 033	0.665 lb/hr (PM/PM_{10})	401 KAR 51:017	0.043335 lb/ton (PM/PM_{10}); BACT limit	Assumed based on building design and operating limitation
		0.235 lb/hr ($PM_{2.5}$)		0.015317 lb/ton ($PM_{2.5}$); BACT limit	
	EP 037	0.00267 lb/hr		0.000205 lb/ton; BACT limit	Monitoring; recordkeeping
	EP 038	0.0829 lb/hr		0.00459 lb/ton; BACT limit	Monitoring; recordkeeping
	EP 117	0.115 lb/hr		0.0909 lb/ton; BACT limit	Monitoring; recordkeeping

Process Description:

Emission Point #	Description	Maximum Capacity	Control Equipment	Construction Commenced
033 (S-33)	Slag Dumping	448,000 tpy	3-Sided Enclosure	11/1/1999; Modified: 2015
037	Sludge Disposal	13 tons/hr	None	1/31/2000
038	Scrap Unloading	18.08 tons/hr	None	1/31/2000
048 (S-48)	Paved Roadways	38,807 Miles/yr	None	11/1/1999
117	Outdoor Refractory Brick Dumping	1.265 tons/hr	None	11/1/1999

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 63:010, *Fugitive emissions.* This regulation applies to each apparatus, operation, or road which emits or may emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapter 50 through 68.

Emission Group 11 – Roads & Handling Operations (Fugitive Sources)

Comments:
PM emissions are back calculated using established BACT limits. To preclude the applicability of 401 KAR 51:017, the permittee shall restrict throughput of Slag Dumping (EP 033) to 448,000 tons of total material (including water) on a 12-month rolling total basis.

Emission Group 12 – Direct-Fired Heating Operations

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	Monthly qualitative observations; monitoring; recordkeeping
PM	• $P \leq 0.5$ tph $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr		401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	Assumed when burning natural gas; complying with BACT limit below
	EP 066	0.56 lb/hr; 2.5 tpy	401 KAR 51:017		Monitoring; recordkeeping
	EP 083	0.023 lb/hr; 0.1 tpy	401 KAR 51:017		
CO	EP 066	3.29 lb/hr; 17.18 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring; recordkeeping
	EP 083	0.255 lb/hr; 1.12 tpy			
NO_x	EP 066	5.625 lb/hr; 24.64 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring; recordkeeping
	EP 083	0.304 lb/hr; 1.33 tpy			
VOC	EP 066	0.40 lb/hr; 1.77 tpy	401 KAR 51:017	AP 42, Table 1.4-2	Monitoring; recordkeeping
	EP 083	0.0167 lb/hr; 0.07 tpy			

Process Description:

Emission Point #	Description	Maximum Capacity (MMBtu/hr)	Fuel	Control Equipment	Construction Commenced
066 (S-66)	Long Products Reheat Furnace	75	Natural Gas	Low NO_x Burner	3/15/2002
083 (S-83)	2 Heaters	3.1 each	Natural Gas	Low NO_x Burner	3/15/2002

Emission Group 12 – Direct-Fired Heating Operations

Applicable Regulations:
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances*. This regulation is applicable to each affected facility which emits or may potentially emit hazardous matter or toxic substances.

Comments:
Emissions are calculated using emission factors from AP-42, Section 1.4-2 and 40 CFR 98, Subpart C.

Emission Group 13 – Existing Emergency Diesel Generators

Process Description:

Emission Point #	Description	Max. Capacity (HP)	Construction Commenced
128	MS Crane Emergency Generator	1500	1/1/2000
129	EAF2 Emergency Pump	210	1/1/2005
130	MS WTP Emergency Pump	205	1/1/2000
131	LPHM WTP Emergency Pump	325	1/1/2003
132	HM Emergency Electric Generator	900	1/1/1997
133	CM Courtyard Emergency Generator North Unit #1	335	1/1/1991
134	CM Courtyard Emergency Generator South Unit #2	890	1/1/1991
135	AP3 Emergency Generator	382	1/1/2003

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

Comments:
Emissions are calculated using emission factors from AP-42 Tables 3.3-1, 3.3-2, and 40 CFR 98, Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation. HHV of Diesel Fuel is 0.137 MMBtu/gal.

Emission Group 14 – Emergency Diesel Fire Pumps

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
CO	EPs 136 & 137	5.0 (3.7) g/KW-hr	40 CFR 60.4205(c)	AP 42, Table 3.3-1	Certified engine, monitoring;

Emission Group 14 – Emergency Diesel Fire Pumps

Pollutant	Emission Limit or Standard		Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
		(g/HP-hr)			recordkeeping
NMHC + NO_x	EPs 136 & 137	10.5 (7.8) g/KW-hr (g/HP-hr)	40 CFR 60.4205(c)	AP 42, Table 3.3-1	Certified engine, monitoring; recordkeeping
PM	EPs 136 & 137	0.80 (0.60) g/KW-hr (g/HP-hr)	40 CFR 60.4205(c)	AP 42, Table 3.3-1	Certified engine, monitoring; recordkeeping

Process Description:

Emission Point #	Description	Capacity (HP)	Construction Commenced
136	MS Emergency Fire Pump #1	288	1/1/2007
137	MS Emergency Fire Pump #2	288	1/1/2007

Applicable Regulations:

401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after June 12, 2006.

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

Comments:

Emissions are calculated using emission factors from AP42- Tables 3.3-1, 3.3-2, and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation. HHV of Diesel Fuel is 0.137 MMBtu/gal.

Emission Group 15 – New Emergency Diesel Generators

Process Description:

Emission Point #	Description	Capacity (HP)	Construction Commenced
138	AP 4#5 Emergency Generator	227	1/1/2008
139	AP 4#4 Emergency Generator	475	1/1/2007
140	Gate 1 Emergency Generator	97	1/1/2008
152	Bright Anneal Emergency Generator	580	1/7/2017
153	HM Water Treatment Emergency Generator	520	1/7/2017
155	Gate #5 Emergency Generator	36	6/15/2020

Applicable Regulations:

401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to

Emission Group 15 – New Emergency Diesel Generators

stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after June 12, 2006.

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

Comments:
Emissions are calculated using emission factors from AP42- Tables 3.3-1, 3.3-2, and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation. HHV of Diesel Fuel is 0.137 MMBtu/gal.

EP 148: Z-Mill #6 - Cold Rolling Mill

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	AP 42, Table 1.4-2	Monthly emission calculations; 98% control efficiency; manufacturer's guarantee
	1.5 lb/hr	To preclude 401 KAR 51:017	1.875 lb/ton	Monitoring; recordkeeping
VOC	8.0 lb/hr	To preclude 401 KAR 51:017	0.20 lb/ton	Monitoring; recordkeeping

Initial Construction Date: 7/1/2015

Process Description:
A 54" reverse cold rolling mill which is equipped with an integral oil mist eliminator with 98% control efficiency.

Maximum Capacity: 40 tons/hr
Control Equipment: integral oil mist eliminator

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

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

EP 148: Z-Mill #6 - Cold Rolling Mill

Comments:
PM and VOC emissions are back calculated based on the PSD preclusion limits.

EP 154: SI Emergency Fire Pump

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
CO	387 g/HP-hr	40 CFR 60.4233(d)	Manufacturer Spec	Certified engine, monitoring; recordkeeping
NO_x + HC	10 (g/HP-hr)	40 CFR 60.4233(d)	Manufacturer Spec	Certified engine, monitoring; recordkeeping

Initial Construction Date: 2/28/2019

Process Description:
Make, Model: Zenith, NA428
Maximum Capacity: 34.5 HP
Fuel: Natural gas
Manufactured: 2018
Control Equipment: None

Applicable Regulations:
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines,* applies to stationary spark ignition (SI) internal combustion engines (ICE) that commence construction after June 12, 2006.
401 KAR 63:002, Section 2(4)(eeee), **40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ),** *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions.

Comments:
Emissions are calculated using emission factors from AP42- Tables 3.3-1, 3.3-2, and 40 CFR 98 Tables C-1 and C-2, and an assumption of 500 hrs/yr to be conservative and account for emergency operation.

EP 143: Parts Washers (Cold Cleaners)

Construction Date: 1992 (existing cleaners, process #1-9); 6/30/2021 (new cleaners, process #10-18)

Process Description:
Nine existing cold cleaners and nine new cold cleaners.
Control equipment: None

Process #	Description	Maximum Solvent Usage (gal/yr)	Solvent Used	Manufacturer
1	HM Down Coiler Maintenance	100	D-Solv	Westward

EP 143: Parts Washers (Cold Cleaners)

2	HM Bolt Bin	100	D-Solv	Westward
3	HM H-1 Maintenance	100	D-Solv	Graymill
4	HM Plate	200	D-Solv	Westward
5	Z-Mill 3 Maintenance #1	200	D-Solv	Westward
6	Z-Mill 3 Maintenance #2	200	D-Solv	Westward
7	HM Finishing Mill	200	D-Solv	Graymill
8	AP4 Maintenance	100	D-Solv	Graymill
9	AP3 Furnace Maintenance	42	D-Solv	Graymill
10	LPHM Furnace	400	D-Solv	Graymill
11	LPFM Furnace	400	D-Solv	Graymill
12	CM Crane MTC	400	D-Solv	Graymill
13	LPFM CL 3 & 5	40	D-Solv	Westward
14	LPFM CL 4	40	D-Solv	Westward
15	LMFM Dye #1	40	D-Solv	Westward
16	LPFM CL 1 & 2	40	D-Solv	Westward
17	LMFM Dye #2	10	D-Solv	Graymill
18	LPHM Maintenance	400	D-Solv	Westward

Applicable Regulation:
401 KAR 59:185, *New Solvent Metal Cleaning Equipment*, applies to each cold cleaner commenced on or after June 29, 1979 that is part of a major source located in a county or portion of a county designated attainment or marginal nonattainment for ozone in 401 KAR 51:010.

Comments: Emission are calculated using emission factors from MSDS provided by the applicant.

EP 156: Brick Crushing

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr	401 KAR 59:010, Section 3(2)	AP 42, Table 11.19.2-2	Monthly emission calculations; 92% control efficiency; manufacturer's guarantee

Process Description:

Process ID #	Description	Maximum Capacity	Control Equipment	Construction Commenced
1	Brick Crusher Loading	131,400 ton/yr	Baghouse	6/30/2022
2	Brick Crushing	131,400 ton/yr	Baghouse	6/30/2022
3	Crushed Brick Bagging	131,400 ton/yr	Baghouse	6/30/2022

EP 156: Brick Crushing

4	Brick Crusher Caterpillar Diesel Non-Emergency Engine	320 HP	None	6/30/2022

Applicable Regulations:
401 KAR 59:010, *New process operations*, applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after June 12, 2006.
401 KAR 63:002, Section 2(4)(eeee), **40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ),** *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions.

Comments:
The brick crushing operation is equipped with a baghouse with 92% control efficiency which will be vented inside a closed building. Outside materials from another location/supplier will not be processed in this operation. Emissions for NO_x, CO, and PM are calculated using emission factors from certified engine provided in the application. Other emissions are calculated using AP-42 Tables 11.19.2-2, 3.3-1, 3.3-2, and 40 CFR 98, Tables C-1 and C-2, and an assumption of 8760 hrs/yr for the non-emergency engine. HHV of Diesel Fuel used is 0.137 MMBtu/gal.

EP 157: Reverse Cold Rolling Mill #7

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 $E = 2.34$ lb/hr • $0.5 < P \leq 30$ tph $E = 3.59P^{0.62}$ lb/hr • $P \geq 30$ tph $E = 17.31P^{0.16}$ lb/hr	401 KAR 59:010, Section 3(2)	Manufacturer Guarantee, stack testing (TBD)	90% control efficiency; manufacturer's guarantee; monitoring; recordkeeping

Initial Construction Date: 2023

Process Description:
A 1350 mm reverse cold rolling mill which is equipped with an integral oil mist eliminator with 90% control efficiency.
Maximum Capacity: 40 tons/hr
Control Equipment: integral oil mist eliminator

EP 157: Reverse Cold Rolling Mill #7

Applicable Regulation:
401 KAR 59:010, *New process operations;* applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.
Comments:
PM and VOC emissions are calculated using emission factors provided in the application based on similar sources, engineering estimates, and manufacturer's guarantees. The emission factors shall be verified through stack testing within 180 days after the issuance of the final permit.

Emission Group 16: Slag Processing - (Section H Only)

Process Description:

EP #	Description	Maximum Capacity	Control Equipment	Construction Commenced
ST1	Screening Operation: consists of Loader Feeding into Screen Hopper, Screen, Screen Output to Ground, Screen Output to Conveyor to Truck, 111 HP Diesel Engine	562,300 ton/yr	Moisture (Saturated*)	8/2022
ST2	Crushing Operation: consists of Load Feeding into Crusher, Crusher, 275 HP diesel Engine	562,300 ton/yr	Moisture (Saturated)	8/2022
ST3	Barge Loading Operation: consist of Truck Dumping to Pile, Loader Feeding onto Conveyor, Transfer Conveyor to Barge, 60 HP Diesel Engine	562,300 ton/yr	Moisture (Saturated)	8/2022

Applicable Regulations:
401 KAR 63:010, *Fugitive emissions***,** this regulation applies to each apparatus, operation, or road which emits or may emit fugitive emissions not elsewhere subject to an opacity standard within 401 KAR Chapter 50 through 68.
401 KAR 60:005, Section 2(2)(dddd), 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applies to stationary compression ignition (CI) internal combustion engines (ICE) that commence construction after June 12, 2006.
401 KAR 63:002, Section 2(4)(eeee), **40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ),** *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, applies to each stationary RICE located at a major or area source of HAP emissions.

State-Origin Requirement:
401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applicable to Manganese and Nickel.

Emission Group 16: Slag Processing - (Section H Only)

Comments:

The slag operation will be used when Metal Services LLC (AI #117650) is not able to process NAS's slag at their Ghent facility. Since it is possible that some slag may accumulate, it may be necessary for both operations to occur simultaneously to prevent a large backlog. NAS will not be importing slag from any other facility and the only slag that will be processed will be the slag generated at NAS. The slag pots are dumped in the slag barn (EP #033) where the slag is quenched inside the slag building. The slag movement and quenching of the slag in the slag barn is consistently managed by Metal Services LLC. The purpose of the quenching is to quickly reduce the temperature of the slag so that it can be more quickly processed as well as improve the processing of the slag.

Based on the maximum permitted steel production rates of the EAFs and AODs, there will be limited quantity of slag generated at NAS. The maximum quantity of slag that can be generated is 562,300 tons per year which is based on the maximum slag generation rate of the past 5 years.

Emissions are calculated using AP-42 Tables 12.5-4 & 11.19.2-2; MSDS for Chromium, Manganese, and Nickel; AP42- Tables 11.19.2-2, 3.3-1, 3.3-2, and 40 CFR 98 Tables C-1 and C-2, and an assumption of 8760 hrs/yr for non-emergency engine. HHV of Diesel Fuel is 0.139 MMBtu/gal.

The control efficiencies in the EPA background document for AP-42 Section 11.19-2 have been used for slag processing with a moisture content above 1.5%. In the permit, “saturated” operations are activities processed outdoors and that use moist material with at least 1.5% moisture content.

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 and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Long Products Pickling Line #1 (EP 074)	Scrubber	NO_x	401 KAR 52:020	Initial	Method 7E	9.61 lb/hr 100 ppm	5.7 lb/hr 48.4 ppm	Avg process rate: 10.7 tons/hr	CMN20030002	12/9/2003
Angle Pickling Line #1 (EP 078)	Scrubber	NO_x	401 KAR 52:020	Initial	Method 7E	9.61 lb/hr	0.13 lb/hr	Flow rate: 2,308 dscfm; stack gas temp: 79 ºF	CMN20040002	6/29/2004
Acid Pickling #3 (EP 062)	SCR	NO_x	401 KAR 52:020	Initial	Method 7E	2.55 lb/hr; 100 ppm	0.2 lb/hr; 4.4 ppm	Flow rate: 6,486 dscfm; stack gas temp: 355 ºF	CMN20040001	5/18/2004 - 5/20/2004
Flat Products Pickling #4 (EP 101)	SCR	NO_x	401 KAR 52:020	Initial	Method 7E	9.61 lb/hr	1.37 lb/hr; 14.22 ppm	Avg process rate: 102.3 ton/hr; flow rate: 13,475.6 dscfm; stack gas temp: 332.6 ºF	CMN20090007	6/10/2009

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
(1) Flat Products Pickling Line #4 (EP 101)	SCR	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	4.81 lb/hr	1.03 lb/hr; 0.0075 lb/ton	Avg process rate: 148.2 ton/hr; flow rate: 11,621.9 dscfm; stack gas temp: 381.9 ºF	CMN20160014	8/19/2016
		HF			Method 26A	---	0.54 lb/hr; 0.0038 lb/ton			
(2) Flat Products Pickling Line #4 (EP 101)	SCR	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	4.81 lb/hr	1.74 lb/hr; 0.010 lb/ton	Avg process rate: 168.08 ton/hr; flow rate: 9,448.5 dscfm; stack gas temp: 379.3 ºF	CMN20160015	8/26/2016
		HF			Method 26A	---	0.15 lb/hr; 0.0009 lb/ton			
Flat Products Pickling Line #4 (EP 101)	SCR	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	4.81 lb/hr	0.68 lb/hr; 0.0040 lb/ton	Avg process rate: 169.0 ton/hr; flow rate: 12,003.2 dscfm; stack gas temp: 369.0 ºF	CMN20170002	10/24/2017

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Flat Products Pickling Line #4 (EP 101)	SCR	HF	401 KAR 52:020	Every 5 years	Method 26A	---	0.15 lb/hr; 0.0009 lb/ton	Avg process rate: 172 ton/hr; flow rate: 13.550.5 dscfm; stack gas temp: 337.7 ºF	CMN20210005	8/20/2021
(3) & (4) Plate Pickling (EP 028)	Wet Scrubber	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	1.44 lb/hr	0.51 lb/hr; 0.024 lb/ton	Avg process rate: 21.14 ton/hr; flow rate: 1,712.2 dscfm; stack gas temp: 107.6 ºF	CMN20160008	7/20/2016
		HF			Method 26A	---	0.54 lb/hr; 0.027 lb/ton			
Plate Pickling (EP 028)	Wet Scrubber	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	1.44 lb/hr	0.44 lb/hr; 0.016 lb/ton	Avg process rate: 28.31 ton/hr; flow rate: 1,740.5 dscfm; stack gas temp: 105.4 ºF	CMN20160016	8/23/2016
		HF			Method 26A	---	0.42 lb/hr; 0.015 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Plate Pickling (EP 028)	Wet Scrubber	NO_x	401 KAR 52:020	Initial and every 5 years	Method 7E	1.44 lb/hr	0.16 lb/hr; 0.006 lb/ton	Avg process rate: 28.02 ton/hr; flow rate: 1,440.7 dscfm; stack gas temp: 91.5 ºF	CMN20170003	9/13/2017
Plate Pickling (EP 028)	Wet Scrubber	HF	401 KAR 52:020	Every 5 years	Method 26A	---	0.054 lb/hr; 0.0016 lb/ton	Avg process rate: 34.83 ton/hr; flow rate: 2,911.9 dscfm; stack gas temp: 99.6 ºF	CMN20210006	8/19/2021
Boiler #4 (EP 103)	None	PM	401 KAR 52:020	Initial and as needed	Method 5	0.27 lb/hr	0.17 lb/hr	Avg firing rate: 30.02 MMBtu/hr; flow rate: 4,684.5 dscfm; stack gas temp: 294.0 ºF	CMN20090006	8/19/2009
		CO			Method 10	1.30 lb/hr	0.37 lb/hr			
		NO_x			Method 7E	1.26 lb/hr	0.77 lb/hr			
		VOC			Method 25A	0.19 lb/hr	0.006 lb/hr			
Z-Mill #3 (EP 060)	Oil Mist Eliminator	PM	401 KAR 52:020	Initial	Method 5	1.5 lb/hr; 6.6 ton/yr	0.327 lb/hr; 6.96 E-04 gr/dscf	Flow rate: 51,778 dscfm; stack gas temp: 90 ºF	CMN20040001	5/18/2004 - 5/20/2004

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Z-Mill #4 (EP 092)	Oil Mist Eliminator	PM		Initial	Method 5	1.5 lb/hr	9.55E-04 gr/dscf; 0.366 lb/hr	Flow rate: 45,103 dscfm; stack gas temp: 96 ºF	CMN20060003	8/23/2006
		VOC			Method 25	100 ton/yr	9.93 lb/hr			
Z-Mill #5 (EP 095)	Oil Mist Eliminator	PM	401 KAR 52:020	Initial	Method 5	1.5 lb/hr	0.015 lb/ton; 0.83 lb/hr	Avg process rate: 55.09 ton/hr; flow rate: 98,020 dscfm; stack gas temp: 77.4 ºF	CMN20090008	10/15/2009
		VOC			Method 25	100 tpy	1.73 lb/hr; 0.031 lb/ton			
(5) Z-Mill #2 (EP 011)	Mist Collector	PM	401 KAR 52:020	Initial and every 5 years	Method 5	25 ton/yr	2.68 lb/hr; 0.038 lb/ton	Avg process rate: 68.89 ton/hr; flow rate: 56,980.4 dscfm; stack gas temp: 83.5 ºF	CMN20150005	11/12/2015 - 11/13/2015
		VOC			Method 25	100 ton/yr	2.21 lb/hr; 0.013 lb/ton			
Z-Mill #2 (EP 011)	Mist Collector	PM	401 KAR 52:020	Every 5 years	Method 5	25 ton/yr	3.98 lb/hr; 0.079 lb/ton	Avg process rate: 47.10 ton/hr; flow rate:	CMN20210003	4/13/2021

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		VOC			Method 25A	100 ton/yr	0.72 lb/hr; 0.020 lb/ton	51,061.5 dscfm; stack gas temp: 81.0 ºF		
(6) Z-Mill #5 (EP 095)	Oil Mist Eliminator	PM	401 KAR 52:020	Initial and every 5 years	Method 5	1.5 lb/hr	1.06 lb/hr; 0.015 lb/ton	Avg process rate: 69.59 ton/hr; flow rate: 79,815.4 dscfm; stack gas temp: 77.2 ºF	CMN20150006	11/10/2015
		VOC			Method 25	100 ton/yr	1.54 lb/hr; 0.012 lb/ton			
Z-Mill #5 (EP 095)	Oil Mist Eliminator	PM	401 KAR 52:020	Initial and every 5 years	Method 5	1.5 lb/hr	TBD	TBD	CMN20230002	4/13/2023 - 4/14/2023
		VOC			Method 25	100 ton/yr	TBD			
Z-Mill #6 (EP 148)	Oil Mist Eliminator	PM	401 KAR 52:020	Initial and every 5 years	Method 5	1.5 lb/hr	1.08 lb/hr; 0.039 lb/ton	Avg process rate: 28.18 ton/hr; flow rate: 59,449.5 dscfm; stack gas temp: 69.3 ºF	CMN20170004	11/20/2017
		PM_{10}			Method 201A	1.5 lb/hr	0.48 lb/hr; 0.018 lb/ton			
		PM2.5			Method 201A	1.5 lb/hr	0.43 lb/hr; 0.015 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		VOC			Method 25A	8 lb/hr	1.24 lb/hr; 0.054 lb/ton			
Z-Mill #6 (EP 148)	Oil Mist Eliminator	PM	401 KAR 52:020	Every 5 years	Method 5	1.5 lb/hr	TBD	TBD	CMN20230001	4/11/2023 - 4/12/2023
		PM_{10}			Method 201A	1.5 lb/hr	TBD			
		PM2.5			Method 201A	1.5 lb/hr	TBD			
		VOC			Method 25A	8 lb/hr	TBD			
Flat Products Annealing Furnace #3 (EP 061)	Low NO_x Burner	PM	401 KAR 52:020	Initial and every 5 years	Method 5	2.68 lb/hr	0.048 lb/hr; 9.09 E-04 gr/dscf	Flow rate: 6,790 dscfm; stack gas temp: 504 ºF	CMN20040001	5/18/2004 - 5/20/2004
		CO			Method 10	29.61 lb/hr	0.04 lb/hr			
		NO_x			Method 7E	21.15 lb/hr; 100 ppm	1.52 lb/hr; 29.9 ppm			
Flat Products Annealing Furnace #3 (EP 061)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.06 lb/hr	Avg process rate: 61.57 ton/hr; Avg firing rate: 61.71 MMBtu/hr; flow rate: 7,999 dscfm;	CMN20090012	12/15/2009
		CO			Method 10	29.61 lb/hr	0.007 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	2.63 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.0 lb/hr			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
								stack gas temp: 627.9 ºF		
Flat Products Annealing Furnace #3 (EP 061)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.15 lb/hr	Avg firing rate: 56.46 MMBtu/hr; flow rate: 8,154.8 dscfm; stack gas temp: 620.9 ºF	CMN20140005	12/16/2014 - 12/17/2014
		CO			Method 10	29.61 lb/hr	0.00 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	2.53 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.01 lb/hr			
Long Products Annealing Furnace #2 (EP 071)	Low NO_x Burner	PM	401 KAR 52:020	Initial	Method 5	0.14 lb/hr	0.115 lb/hr	Total batch weight: 34,562 lb; flow rate: 2,854.1 dscfm; stack gas temp: 132.17 ºF	CMN20080004	9/17/2008
		CO			Method 10	1.48 lb/hr	0.005 lb/hr			
		NO_x			Method 7E	1.35 lb/hr	0.80 lb/hr; 39 ppm			
		VOC			Method 25A	0.10 lb/hr	0.00 lb/hr			
Flat Products Annealing Furnace #2 (EP 001)	Low NO_x Burner	PM	401 KAR 52:020	Initial and every 5 years	Method 5	2.68 lb/hr	3.34 lb/hr	Avg firing rate: 88.12 MMBtu/hr; flow rate: 56,839.4 dscfm; stack gas temp: 352.5	CMN20080005	12/17/2008
		CO			Method 10	29.61 lb/hr	8.97 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	8.93 lb/hr; 8.9 ppm			
		VOC			Method	1.95	0.19			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
					25A	lb/hr	lb/hr	ºF		
Flat Products Annealing Furnace #2 (EP 001)	Low NO_x Burner	PM	401 KAR 52:020	Initial and every 5 years	Method 5	2.68 lb/hr	0.11 lb/hr	Avg firing rate: 69.91 MMBtu/hr; flow rate: 12,371 dscfm; stack gas temp: 538.7 ºF	CMN20090009	10/22/2009
		CO			Method 10	29.61 lb/hr	0.02 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	2.23 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.0 lb/hr			
Flat Products Annealing Furnace #2 (EP 001)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.21 lb/hr	Avg firing rate: 61.5 MMBtu/hr; flow rate: 9,688.2 dscfm; stack gas temp: 699.9 ºF	CMN20140004	10/2/2014
		CO			Method 10	29.61 lb/hr	0.019 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	2.33 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.003 lb/hr			
[7] Flat Products Annealing Furnace #2 (EP 001)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.14 lb/hr	Avg firing rate: 55.37 MMBtu/hr; flow rate: 62,00.8 dscfm; stack gas temp: 613.3 ºF	CMN20190002	9/19/2019
		CO			Method 10	29.61 lb/hr	0.01 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	1.65 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.001 lb/hr			
Flat Products	Low NO_x Burner	PM	401 KAR 52:020	Initial	Method 5	2.68 lb/hr	0.32 lb/hr	Avg process rate: 127.33	CMN20090004	6/9/2009

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Annealing Furnace #4 (EP 102)		CO			Method 10	29.61 lb/hr	0.05 lb/hr	ton/hr; avg firing rate: 101.68 MMBtu/hr; flow rate: 15,530.3 dscfm; stack gas temp: 314.9 ºF		
		NO_x			Method 7E	21.15 lb/hr	2.89 lb/hr; 25.93 ppm			
		VOC			Method 25A	1.95 lb/hr	0.054 lb/hr			
Flat Products Annealing Furnace #4 (EP 102)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.20 lb/hr	Average firing rate: 107.5 MMBtu/hr; flow rate: 24,155.7 dscfm; stack gas temp: 261.7 ºF	CMN20160005	5/11/2016
		CO			Method 10	29.61 lb/hr	0.29 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	2.27 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.07 lb/hr			
Flat Products Annealing Furnace #1 (EP 006)	Low NO_x Burner	PM	401 KAR 52:020	Initial and every 5 years	Method 5	2.68 lb/hr	0.04 lb/hr	Avg firing rate: 54.35 MMBtu/hr; flow rate: 9,163.0 dscfm; stack gas temp: 588.7 ºF	CMN20080005	12/16/2008 - 12/17/2008
		CO			Method 10	29.61 lb/hr	0.1 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	1.63 lb/hr; 24.8 ppm			
		VOC			Method 25A	1.95 lb/hr	0.03 lb/hr			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
Flat Products Annealing Furnace #1 (EP 006)	Low NO_x Burner	PM	401 KAR 52:020	Initial and every 5 years	Method 5	2.68 lb/hr	0.2 lb/hr	Avg process rate: 59.33 ton/hr; avg firing rate: 70.32 MMBtu/hr; flow rate: 11,958.9 dscfm; stack gas temp: 866.8 ºF	CMN20090005	8/19/2009
		CO			Method 10	29.61 lb/hr	0.005 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	3.17 lb/hr; 37.04 ppm			
		VOC			Method 25A	1.95 lb/hr	0.064 lb/hr			
Flat Products Annealing Furnace #1 (EP 006)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	2.68 lb/hr	0.27 lb/hr	Avg firing rate: 82.8 MMBtu/hr; flow rate: 17,315.9 dscfm; stack gas temp: 799.6 ºF	CMN20140003	9/30/2014
		CO			Method 10	29.61 lb/hr	0.00 lb/hr			
		NO_x			Method 7E	21.15 lb/hr	3.69 lb/hr			
		VOC			Method 25A	1.95 lb/hr	0.007 lb/hr			
Long Products Annealing Furnace #3 (EP 121)	Low NO_x Burner	PM	401 KAR 52:020	Every 5 years	Method 5	0.14 lb/hr	0.004 lb/hr	Flow rate: 3,537.9 dscfm; stack gas temp: 520 ºF	CMN20130005	9/26/2013 - 9/27/2013
		CO			Method 10	1.48 lb/hr	0.011 lb/hr			
		NO_x			Method 7E	1.35 lb/hr	0.49 lb/hr			
		VOC			Method 25A	0.10 lb/hr	0.015 lb/hr			
EAF #1	Baghouse	PM	401 KAR	According	Method 5	13.94	4.33	Flow rate:	CMN20040007	11/16/2004

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
(EP 057)			52:020	to permit testing requirements		lb/hr; 0.10 lb/ton	lb/hr; 2.80E-02 lb/ton	532,683 dscfm; stack gas temp: 129 ºF		- 11/17/2004
		CO			Method 10	265.76 lb/hr; 2 lb/ton	21.84 lb/hr; 0.15 lb/ton			
		Pb			Method 12	0167 lb/hr; 0.001 lb/ton	0.05 lb/hr; 4.7E-03 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	27.02 lb/hr; 0.2 lb/ton; 7.11 ppm			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	1.83 lb/hr; 3.71E-02 lb/ton			
EAF #1 (EP 057)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 129.6 ton/hr; flow rate: 490,589.9 dscfm; stack gas	CMN20090010 & CMN20090011	1/12/2010 - 1/13/2010
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	6.04 lb/hr; 0.047 lb/ton; 0.0014 gr/dscf			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		CO			Method 10	265.76 lb/hr; 2 lb/ton	27.1 lb/hr; 0.21 lb/ton	temp: 109 ºF		
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.036 lb/hr; 0.0003 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	64.8 lb/hr; 0.50 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	7.29 lb/hr; 0.056 lb/ton			
EAF #1 (EP 057)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 132.7 ton/hr; flow rate: 496,894.4 dscfm; stack gas temp: 143.7 ºF	CMN20100005	10/13/2010 - 10/14/2010
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	3.90 lb/hr; 0.029 lb/ton; 0.0009 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	56.7 lb/hr; 0.43 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.006 lb/hr; 0.00005 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	81.7 lb/hr; 0.62 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	5.30 lb/hr; 0.040 lb/ton			
EAF #1 (EP 057)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 125.6 ton/hr; flow rate: 490,068.1 dscfm; stack gas temp: 141.2 ^oF	CMN20150003	10/7/2015 - 10/8/2015
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	6.94 lb/hr; 0.055 lb/ton; 0.0017 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	77.0 lb/hr; 0.61 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.014 lb/hr; 0.00011 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	29.0 lb/hr; 0.23 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	7.43 lb/hr; 0.059 lb/ton			
EAF #1 (EP 057)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 120.6 ton/hr; flow rate: 543,470.5 dscfm; stack gas temp: 152.5 ºF	CMN20160012	10/4/2016 - 10/5/2016
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	4.52 lb/hr; 0.038 lb/ton; 0.0010 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	90.52 lb/hr; 0.78 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.009 lb/hr; 0.00008 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	39.56 lb/hr; 0.33 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	8.57 lb/hr; 0.072 lb/ton			
EAF #1 (EP 057)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 119.3 ton/hr; flow rate: 522,835.6 dscfm; stack gas temp: 149.5 ºF	CMN20210008	12/14/2021 - 12/15/2021
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	9.77 lb/hr; 0.083 lb/ton; 0.0012 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	100.1 lb/hr; 0.84 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.035 lb/hr; 0.0003 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	38.09 lb/hr; 0.32 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	4.15 lb/hr; 0.035 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
AOD #1 (EP 058)	Baghouse	PM	401 KAR 52:020	According to permit testing requirements	Method 5	16.98 lb/hr; 0.13 lb/ton	7.846 lb/hr; 0.0556 lb/ton; 1.33E+02 gr/dscf	Flow rate: 530,504 dscfm; stack gas temp: 121 ºF	CMN20040007	11/16/2004 - 11/17/2004
		CO			Method 10	273.75 lb/hr; 2.06 lb/ton	132.5 lb/hr; 0.963 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.068 lb/hr; 4.87E-04 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	4.001 lb/hr; 280E-02 lb/ton; 0.36 ppm			
AOD #1 (EP 058)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 153.2 ton/hr; flow rate: 512,339.2 dscfm; stack gas	CMN20090010 & CMN20090011	1/12/2010 - 1/13/2010
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052	4.70 lb/hr; 0.031 lb/ton; 0.0011			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
						gr/dscf	gr/dscf	temp: 101.5 ºF		
		CO			Method 10	273.75 lb/hr; 2.06 lb/ton	167.0 lb/hr; 1.1 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.012 lb/hr; 0.0001 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	12.10 lb/hr; 0.080 lb/ton			
AOD #1 (EP 058)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 134.6 ton/hr; flow rate: 505,851.7 dscfm; stack gas temp: 138.5 ºF	CMN20100004	10/13/2010 – 10/14/2010
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	4.31 lb/hr; 0.032 lb/ton; 0.0010 gr/dscf			
		CO			Method 10	266 lb/hr; 2.06 lb/ton	115.2 lb/hr; 0.88 lb/ton			
		Pb			Method 12	0.204 lb/hr;	0.014 lb/hr;			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
						0.002 lb/ton	0.0001 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	16.9 lb/hr; 0.127 lb/ton			
AOD #1 (EP 058)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 128.0 ton/hr; flow rate: 560,571.4 dscfm; stack gas temp: 145.6 ^oF	CMN20150004	10/7/2015 - 10/8/2015
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	7.78 lb/hr; 0.062 lb/ton; 0.0016 gr/dscf			
		CO			Method 10	266 lb/hr; 2.06 lb/ton	76.7 lb/hr; 0.59 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.006 lb/hr; 0.00005 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	11.4 lb/hr; 0.089 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
AOD #1 (EP 058)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 131.3 ton/hr; flow rate: 561,637.9 dscfm; stack gas temp: 147.8 ºF	CMN20160013	10/4/2016 - 10/5/2016
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	2.65 lb/hr; 0.02 lb/ton; 5.50E-04 gr/dscf			
		CO			Method 10	266 lb/hr; 2.06 lb/ton	103.4 lb/hr; 0.79 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.0025 lb/hr; 0.00002 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	13.96 lb/hr; 0.11 lb/ton			
AOD #1 (EP 058)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 122.2 ton/hr; flow rate: 684,162.9 dscfm; stack gas temp: 101 ºF	CMN20210007	12/14/2021 - 12/15/2021
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	2.2 lb/hr; 0.018 lb/ton; 0.00037 gr/dscf			
		CO			Method 10	273.75	124.5			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
						lb/hr; 2.06 lb/ton	lb/hr; 1.02 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.0042 lb/hr; 0.000035 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	19.38 lb/hr; 0.16 lb/ton			
EAF #2 (EP 105)	Baghouse	PM	401 KAR 52:020	Initial	Method 5	25.71 lb/hr; 0.193 lb/ton; 0.0052 gr/dscf	5.13 lb/hr; 3.63E-02 lb/ton; 6.85E-04 gr/dscf	Flow rate: 623,877 dscfm; stack gas temp: 154 ºF	CMN20070001	5/8/2007 - 5/9/2007
		CO			Method 10	266 lb/hr; 2 lb/ton	30.98 lb/hr; 0.21 lb/ton			
		Pb			Method 12	0.309 lb/hr; 0.002 lb/ton	0.05 lb/hr; 1.4E-02 lb/ton			
		NO_x			Method 7E	133 lb/hr	36.67 lb/hr; 0.26			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
							lb/ton; 8.25 ppm			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	3.21 lb/hr; 1.14E-01 lb/ton			
EAF #2 (EP 105)	Baghouse	PM	401 KAR 52:020	According to permit testing requirements	Method 5	25.71 lb/hr; 0.193 lb/ton; 0.0052 gr/dscf	2.98 lb/hr; 0.023 lb/ton; 5.63E-04 gr/dscf	Avg process rate: 129.1 ton/hr; flow rate: 618,713.9 dscfm; stack gas temp: 124.7 ºF	CMN20080003	4/15/2008 - 4/16/2008
		CO			Method 10	266 lb/hr; 2 lb/ton	37.1 lb/hr; 0.29 lb/ton			
		Pb			Method 12	0.309 lb/hr; 0.002 lb/ton	4.37E-03 lb/hr; 3.39E-05 lb/ton			
		NO_x			Method 7E	133 lb/hr	47.8 lb/hr; 0.37 lb/ton; 20.66 ppm			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	10.1 lb/hr; 0.078 lb/ton			
EAF #2 (EP 105)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 126.3 ton/hr; flow rate: 553,321.5 dscfm; stack gas temp: 131.2 °F	CMN20130003	5/7/2013 - 5/8/2013
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	5.14 lb/hr; 0.041 lb/ton; 0.0011 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	158.5 lb/hr; 1.26 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	6.88E-05 lb/hr; 5.44E-07 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	53.0 lb/hr; 0.42 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	8.6 lb/hr; 0.068 lb/ton			
EAF #2 (EP 105)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 129.6 ton/hr; flow rate: 576,545.7 dscfm; stack gas temp: 145.5 ºF	CMN20140002	7/8/2014 - 7/9/2014
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	14.0 lb/hr; 0.108 lb/ton; 0.0028 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	130.5 lb/hr; 0.81 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.038 lb/hr; 0.00029 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	55.7 lb/hr; 0.43 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	5.71 lb/hr; 0.045 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
EAF #2 (EP 105)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 121.3 ton/hr; flow rate: 495,653.3 dscfm; stack gas temp: 168.9 ºF	CMN20180002	8/28/2018 - 8/29/2018
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton; 0.0052 gr/dscf	10.14 lb/hr; 0.084 lb/ton; 0.0024 gr/dscf			
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	44.86 lb/hr; 0.37 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.070 lb/hr; 0.00058 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	33.27 lb/hr; 0.273 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	2.65 lb/hr; 0.021 lb/ton			
EAF #2 (EP 105)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 124.4 ton/hr; flow rate: 616,236.8	CMN20190003	11/6/2019 - 11/7/2019
		PM			Method 5	13.94 lb/hr; 0.10 lb/ton;	5.27 lb/hr; 0.044 lb/ton;			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
						0.0052 gr/dscf	0.0010 gr/dscf	dscfm; stack gas temp: 119.8 °F		
		CO			Method 10	265.76 lb/hr; 2.0 lb/ton	181.8 lb/hr; 1.48 lb/ton			
		Pb			Method 12	0.167 lb/hr; 0.001 lb/ton	0.0003 lb/hr; 0.00003 lb/ton			
		NO_x			Method 7E	175 lb/hr; 1.32 lb/ton	33.65 lb/hr; 0.27 lb/ton			
		VOC			Method 25A	19.95 lb/hr; 0.15 lb/ton	9.49 lb/hr; 0.077 lb/ton			
AOD #2 (EP 106)	Baghouse	PM	401 KAR 52:020	Initial	Method 5	25.71 lb/hr ; 0.193 lb/ton; 0.0052 gr/dscf	2.35 lb/hr; 0.015 lb/ton; 0.00036 gr/dscf	Avg process rate: 157.52 ton/hr; flow rate: 779,0854.4 dscfm; stack gas temp: 96.9 °F	CMN20090002	3/3/2009 - 3/4/2009
		CO			Method 10	273.98 lb/hr; 2.06 lb/ton	232 lb/hr; 1.47 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		Pb			Method 12	0.31 lb/hr	Not Detected			
		NO_x			Method 7E	76.87 lb/hr; 0.58 lb/ton	6.37 lb/hr; 0.04 lb/ton; 1.17 ppm			
AOD #2 (EP 106)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 142.93 ton/hr; flow rate: 917,920.2 dscfm; stack gas temp: 133.0 ºF	CMN20100003	4/13/2010 – 4/14/2010
		PM			Method 5	25.71 lb/hr; 0.193 lb/ton; 0.0052 gr/dscf	7.75 lb/hr; 0.054 lb/ton; 9.84E-04 gr/dscf			
		CO			Method 10	273.98 lb/hr; 2.06 lb/ton	148.1 lb/hr; 1.04 lb/ton			
		Pb			Method 12	0.31 lb/hr; 0.002 lb/ton	0.016 lb/hr; 0.00011 lb/ton			
		NO_x			Method 7E	76.87 lb/hr; 0.58 lb/ton	46.1 lb/hr; 0.32 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
AOD #2 (EP 106)	Baghouse	CO	401 KAR 52:020		Method 10	266 lb/hr; 2.06 lb/ton	136.1 lb/hr; 1.03 lb/ton	Avg process rate: 131.7 ton/hr; flow rate: 1,018,860 dscfm; stack gas temp: 120.4 ºF	CMN20110003	3/22/2011 – 3/23/2011
AOD #2 (EP 106)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 126.1 ton/hr; flow rate: 916,356.6 dscfm; stack gas temp: 125.8 ºF	CMN20150001	5/12/2015 - 5/13/2015
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	6.44 lb/hr; 0.051 lb/ton; 8.17E-04 gr/dscf			
		CO			Method 10	266 lb/hr; 2.06 lb/ton	128.5 lb/hr; 1.02 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.0072 lb/hr; 0.00006 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	32.9 lb/hr; 0.26 lb/ton			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
AOD #2 (EP 106)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 128.3 ton/hr; flow rate: 906,320.3 dscfm; stack gas temp: 114.5 ºF	CMN20160003	4/12/2016 - 4/13/2016
		PM			Method 5	16.98 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	3.75 lb/hr; 0.029 lb/ton; 4.84E-04 gr/dscf			
		CO			Method 10	266 lb/hr; 2.06 lb/ton	179.9 lb/hr; 1.40 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.0104 lb/hr; 0.00008 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	28.84 lb/hr; 0.22 lb/ton			
AOD #2 (EP 106)	Baghouse	Opacity	401 KAR 52:020	According to permit testing requirements	Method 9	3%	0%	Avg process rate: 128.1 ton/hr; flow rate: 868,072.3 dscfm; stack gas temp: 126.2 ºF	CMN20210002	4/6/2021 - 4/7/2021
		PM			Method 5	16.9 lb/hr; 0.13 lb/ton; 0.0052 gr/dscf	7.84 lb/hr; 0.0618 lb/ton; 0.0011 gr/dscf			
		CO			Method 10	266 lb/hr;	84.55 lb/hr;			

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
						2.06 lb/ton	0.67 lb/ton			
		Pb			Method 12	0.204 lb/hr; 0.002 lb/ton	0.019 lb/hr; 0.00015 lb/ton			
		NO_x			Method 7E	76.83 lb/hr; 0.578 lb/ton	47.46 lb/hr; 0.37 lb/ton			
[8] Coil Polishing (EP 004)	Mist Collector	PM	401 KAR 52:020	Initial and every 5 years	Method 5	30 ton/yr	0.30 lb/hr; 0.012 lb/ton	Avg process rate: 27.81 ton/hr; flow rate: 17,046 dscfm; stack gas temp: 85 ºF	CMN20160001	3/29/2016
		Opacity			Method 9	20%	0%			
Coil Polishing (EP 004)	Mist Collector	PM	401 KAR 52:020	Every 5 years	Method 5	30 ton/yr	0.41 lb/hr; 0.013 lb/ton	Avg process rate: 31.6 ton/hr; flow rate: 20,244 dscfm; stack gas temp: 85.9 ºF	CMN20210001	3/26/2021
		Opacity			Method 9	20%	3.4%			
[9] Roughing Mill (EP 024)	Wet Scrubbing Dust Collection	PM	401 KAR 52:020	Initial and every 5 years	Method 5	53 ton/yr	1.74 lb/hr; 0.0053 lb/ton	Avg process rate: 345 ton/hr; flow rate:	CMN20160002	6/9/2016

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
		Opacity			Method 9	20%	0%	26,818.8 dscfm; stack gas temp: 104.8 ºF		
Roughing Mill (EP 024)	Wet Scrubbing Dust Collection	PM	401 KAR 52:020	Every 5 years	Method 5	53 ton/yr	0.54 lb/hr; 0.0018 lb/ton	Avg process rate: 301.8 ton/hr; flow rate: 30,417.2 dscfm; stack gas temp: 102.1 ºF	CMN20210004	6/3/2021
		Opacity			Method 9	20%	0%			

Footnotes:

(1) EP 101 is representative of EP 003, EP 007, & EP 062 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Flat Products Pickling #4 (EP 101) is representative for Mixed Acid Pickling #1 and #2 (EPs 003 & 007) and Flat products Pickling #3 (EP 062).

(2) Irregularities in following Method 26A had NAS questioning the validity of the test and resulted in the August 26th, 2016 retest.

(3) Irregularities in following Method 26A had NAS questioning the validity of the test and resulted in the August 23rd, 2016 retest.

(4) EP 028 is representative of EP 074 & EP 078 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Plate Pickling Section (EP 028) is representative for Long Products Pickling Line #1 (EP 074) & Angle Pickling Line (EP 078).

(5) EP 011 is representative of EP 005 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Z-Mill #2 (EP 011) is representative emission for Z-Mill #1 (EP 005).

(6) EP 095 is representative of EP 060 and EP 092 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Z-Mill #5 (EP 095) is representative emission for Z-Mill #3 (EP 060) and Z-Mill #4 (EP 092).

(7) EP 001 is representative of EP 006 and EP 061 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Annealing Furnace #2 (EP 001) is representative emission for Annealing Furnace #1 (EP 006) and Annealing Furnace # (EP 061).

(8) EP 004 is representative of EP 099 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Coil Polishing (EP 004) is representative for Coil Polishing (EP 099).
(9) EP 024 is representative of EP 025 per Division's approval letter "Representative Testing" dated September 2, 2015 under Activity APE20140002. Test results for Roughing Mill (EP 024) is representative emission for Finishing Mill (EP 025).

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
29.61 lb/hr & 129.71 ton/yr for CO 2.68 lb/hr & 11.74 ton/yr for PM 21.15 lb/hr & 92.64 ton/yr for NO_x 1.95 lb/hr & 8.5 ton/yr for VOC	401 KAR 51:017	001, 006, 061 & 102
1.48 lb/hr & 6.5 ton/yr for CO 0.14 lb/hr & 0.59 ton/yr for PM 1.35 lb/hr & 5.91 ton/yr for NO_x 0.1 lb/hr & 0.43 ton/yr for VOC	401 KAR 51:017	071 & 121
133 tons per hour liquid steel cast	401 KAR 51:017	057, 058, 105 & 106
1,653,804 tons cast steel production	401 KAR 51:017	057, 058, 105 & 106
3% Opacity	40 CFR 60.272a(a)(2)	057, 058, 105 & 106
6% Opacity	40 CFR 60.272a(a)(3); 40 CFR 63.10686(b)(2)	057, 058, 105 & 106 building openings
1653.36 ton/yr for CO 138.24 ton/yr for PM 1.66 ton/yr for Pb 1010.86 ton/yr for NO_x 124.04 ton/yr for VOC	401 KAR 51:017	057 & 105
1703 ton/yr for CO 138.24 ton/yr for PM 1.7 ton/yr for Pb 477.87 ton/yr for NO_x	401 KAR 51:017	058 & 106

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 51:017, *Prevention of significant deterioration of air quality,* applies to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and locates in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii).	006, 001, 061, 102, 026, 070, 071, 121, 003, 007, 028, 062, 074, 078, 101, 005, 011, 060, 092, 095, 009, 010, 110, 103, 057, 105, 058, 106, 034, 036, 059, 049, 031, 033, 065, 067, 068, 048, 029, 030, 113, 032, 041, 042, 046, 047, 063, 064, 081, 082, 093, 094, 100, 107, 108, 037, 038, 117, 066, 083
401 KAR 53:010, *Ambient air quality standards.*	003, 007, 028, 062, 074, 078, 101, 004, 099
401 KAR 59:010, *New process operations*, applies to each affected facility or source, associated with a process operation, which is not subject to another emission standard with respect to particulates in 401 KAR 59, commenced on or after July 2, 1975.	006, 001, 061, 102, 026, 070, 071, 121, 003, 007, 028, 062, 074, 078, 101, 005, 011, 060, 092, 095, 008, 022, 023, 024, 025, 057, 105, 058, 106, 034,

Applicable Regulations	Emission Unit
	036, 059, 049, 031, 033, 065, 067, 068, 029, 030, 113, 032, 041, 042, 046, 047, 063, 064, 081, 082, 093, 094, 100, 107, 108, 066, 083, 148, 156, 157
401 KAR 59:015, ***New indirect heat exchangers***, applies to each indirect heat exchanger having a heat input capacity greater than one (1) million Btu per hour (MMBtu/hr) commenced on or after April 9, 1972.	009, 010, 110, 103, 150, 151
401 KAR 59:185, ***New solvent metal cleaning equipment***, applies to each cold cleaner commenced on or after June 29, 1979 that is part of a major source located in a county or portion of a county designated attainment or marginal nonattainment for ozone in 401 KAR 51:010.	143
401 KAR 60:005, Section 2(2)(d), 40 C.F.R. 60.40c to 60.48c (Subpart Dc), ***Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units***, applies to each steam generating unit for which construction 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).	009, 010, 110, 103
401 KAR 60:005, Section 2(2)(jj), 40 C.F.R. 60.270a to 60.276a (Subpart AAa), ***Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983 and On or Before May 16, 2022,*** applies to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems that commence construction, modification, or reconstruction after August 17, 1983 and on or before May 16, 2022.	057, 105, 058, 106
401 KAR 60:005, Section 2(2)(dddd), **40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII)**, ***Standards of Performance for Stationary Compression Ignition Internal Combustion Engines,*** applies to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in 40 CFR 60.4200(a)(1) through (4). For the purposes of 40 CFR 60, Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator.	136, 137, 138, 139, 140, 152, 153, 155, 156, ST1, ST2, ST3
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), ***Standards of Performance for Stationary Spark Ignition Internal Combustion Engines,*** applies to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in 40 CFR 60.4230(a)(1) through (6). For	154

Applicable Regulations	Emission Unit
the purposes of 40 CFR 60, Subpart JJJJ, the date that construction commences is the date the engine is ordered by the owner or operator.	
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), ***National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines***, applies to each stationary RICE located at a major or area source of HAP emissions.	128, 129, 130, 131, 132, 133, 135, 135, 136, 137, 138, 139, 140, 152, 153, 155, 154, 156, ST1, ST2, ST3
401 KAR 63:002, Section 2(4)(iiii), **40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD)**, ***National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters,*** 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.	009, 010, 110, 103, 150, 151
401 KAR 63:002, Section 2(4)(aaaaa), 40 C.F.R. 63.10680 to 63.10692, Table 1 (**Subpart YYYYY**), ***National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities***, applies to each electric arc furnace (EAF) steelmaking facility.	057, 105, 058, 106
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.	033, 048, 037, 038, 117, ST1, ST2, ST3
401 KAR 63:020, ***Potentially hazardous matter or toxic substances,*** applies to each affected facility which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.	006, 001, 061, 102, 026, 070, 071, 121, 023, 025, 066, 083, ST1, ST2, ST3
40 CFR 64, ***Compliance Assurance Monitoring***, applicable to each pollutant-specific emission units (PSEU) that is subject to an emission limitation, uses a control device to achieve compliance, and has pre-control emissions that exceed a major source threshold.	003, 007, 028, 062, 074, 078, 101, 004, 099, 005, 011, 060, 092, 095, 008, 022, 024, 025, 057, 105, 058, 106, 031, 065, 067, 068, 032

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 51:017, ***Prevention of significant deterioration of air quality.*** This regulation is precluded by taking limits to avoid classification as a major modification.	004, 099, 023, 024, 025

Precluded Regulations	Emission Unit
401 KAR 63:002, Section 2(4)(j), 40 C.F.R. 63.400 to 63.407, Table 1 (Subpart Q), *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers,* precluded by prohibiting the use of chromium-based water treatment chemicals in the cooling towers	041, 042, 046, 047, 063, 064, 081, 082, 093, 094, 100, 107, 108

Table D - Summary of Non Applicable Regulations:
N/A

Air Toxic Analysis
401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*
The Division for Air Quality (Division) has determined based upon the use of natural gas and other pertinent information provided by the applicant that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

401 KAR 53:010, *Ambient Air Quality Standards*
The Division has performed air dispersion modeling in November 2016 for HF emissions based upon the process rates, emission factors, control efficiencies, stack height, and other pertinent information provided in the application and supplemental information submitted by the source. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with 401 KAR 53:005 and the AAQS in 401 KAR 53:010.

Single Source Determination
NAS, Source ID # 21-041-00034 (A.I. # 711), and the co-located processing plants, Metal Services LLC, Source ID # 21-041-00047 (A.I. # 117650), and Calvert Steel, Source ID # 21-041-09290 (A.I. # 112822), are considered by the Cabinet to be one stationary source as defined in 401 KAR 52:001, Definitions for 401 KAR Chapter 52. Each source is subject to 401 KAR 52:020 and will be issued individual Title V operating permits. Pursuant to the respective Title V permits, each permittee is responsible and liable for their own violations unless there is a joint cause for the violations.

SECTION 5 – PERMITTING HISTORY

Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
V-03-037 R1	Sig revision	APE20050001	6/27/2005	8/8/2005	PSD review	PSD
V-03-037 R2	Sig revision	APE20050004	3/20/2006	10/26/2006	PSD review	PSD
V-03-037 R3	Admin Revision	APE20070002	6/4/2007	6/18/2007	Admin Amend	N/A
V-08-022	Sig Revision & Renewal	APE20080001	9/15/2008	8/7/2009	Modification of existing units, addition of new units, permit renewal	PSD
V-08-022 R1	Minor Revision	APE20100003	9/15/2008	9/22/2010	Addition of new equipment and Pollution Prevention Plan	N/A
V-08-022 R2	Minor Revision	APE20120002	9/15/2008	9/26/2012	Construction of annealing furnace #3, removal of unconstructed equipment	N/A
V-15-019	Permit Renewal	APE20140002	6/9/2014	3/8/2016	Addition of new units, permit renewal	N/A
V-15-019 R1	Minor Revision	APE20160002	3/30/2016	8/15/2016	Installation of two natural gas 6 MMBTU/hr boilers	N/A
V-15-019 R2	Minor Revision	APE20170001	2/28/2017	5/14/2017	Addition of two new emergency generators	N/A
V-15-019 R3	Minor Revision	APE20190002	2/27/2019	5/21/2019	Addition of one new emergency fire pump	N/A
V-15-019 R4	Minor Revision	APE20200001	6/18/2020	9/20/2020	Addition of a new CI emergency generator EP #155	N/A
V-23-003	Renewal	APE20200003; APE20220002; APE20220003; APE20220006; APE20230001	9/3/2020	10/6/2023	Permit renewal; addition of brick crushing operation & slag processing; change from minor source of HAP to major source of HAP; modification of EP 007, addition of EP 157, and insignificant activities: EP 158, EP 159, and EP 160	N/A

SECTION 6 – PERMIT APPLICATION HISTORY

Permit Number: V-23-003 Activities: APE20200003; APE20220002; APE20220003; APE20220006; APE20230001

Received: 7/8/2020; 4/13/2022; 7/1/2022; 11/23/2022; 3/23/2023 Application Complete Date(s): 9/3/2020; 5/4/2022; 7/28/2022; 12/8/2022; 5/3/2023

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

- *APE20210003 – Section 502(b)10 Change: Temporary Slag Processing*
- *APE20220001 – Section 502(b)10 Change: Temporary Slag Processing (extension)*

Description of Action:

NAS submitted an application on July 8, 2020 to renew their existing Title V permit V-15-019 R4. With this permit renewal V-23-003, the following changes have been made.

- Added 18 washers/cold cleaners (nine new and nine existing) to Section B of the permit V-23-003. Insignificant activities that were subject to 401 KAR 59:185 were moved to section B of the permit. This regulation is not considered a "Generally Applicable Regulation" and therefore cannot be included in the insignificant activities list. This includes the EP 143 parts washers. Nothing regarding the existing units has changed, they are simply being moved to the correct location in the permit.
- Removed Lime Injection Burners for EAF #1 (EP 141) and EAF #2 (EP 142). These emission points have not been constructed and will not be constructed in the future.
- On August 10, 2022, updates to 40 CFR 60, Subparts IIII and JJJJ, and 40 CFR 63, Subpart ZZZZ to remove the vacated emergency demand response provisions were published in the federal register. Accordingly, the Vacatur language for emergency demand response in 40 CFR 60, Subparts IIII and JJJJ, and 40 CFR 63, Subpart ZZZZ for emergency engines and fire pumps has been removed from the permit and Statement of Basis, and the regulatory language in the permit has been updated to reflect the published changes.
- As part of the Title V renewal process, NAS was required to submit an updated CAM Plan pursuant to 40 CFR 64. The updated CAM plan, received March 7, 2023 was added to the permit as Appendix A.
- The Division updated and made formatting changes throughout the permit to be consistent and clear.

On April 13, 2022, NAS submitted a minor permit application requesting to add a new brick crushing operation to their permit V-15-019 R4, which was deemed complete on May 4, 2022. NAS applied to refractory bricks and tundish material to reduce the sizes using a Bison Crusher. The crushed material is bagged into supersacks and recycled in the EAFs. The operation will be conducted inside a building. The brick crushing has been added as emission point 156 (EP 156) in Section B of the permit. The increase in emissions from this project are less than the significant emission rates that would trigger PSD review and BACT analysis.

On July 1, 2022, NAS submitted a minor permit application requesting to add the temporary slag processing operation to their permit V-15-019 R4, which was deemed complete on July 28, 2022. The slag operation will be used when Metal Services LLC (AI #117650) is not able to process NAS's slag at their Ghent facility. Since it is possible that some slag may accumulate, it may be necessary for both operations to occur simultaneously to prevent a large backlog. NAS will not be importing slag from any other facility. The three diesel engines used for slag processing (emission points ST1, ST2, & ST3) do not meet the definition of nonroad engine per 40 CFR 1068.30 and have the potential to remain in any one location for 12 consecutive months or more. Therefore, the requirements of 40 CFR 63, Subpart ZZZZ and 40 CFR 60, Subpart IIII are applicable to the engines. The operation will be conducted outside the slag barn building (EP 033). The slag processing has been added as emission group 16 in Section H of the permit as an Alternate Operating Scenario. The increase in emissions from this project are less than the significant emission rates that would trigger PSD review and BACT analysis.

On November 23, 2022, NAS submitted a significant permit revision application to their permit V-15-019 R4. NAS and the affiliated single sources (AIs 112822 and 117650) currently have a combined total HAP PTE of slightly less than 25 tpy. However, NAS anticipates that any future expansion will likely increase the total HAPs to be greater than 25 tpy, therefore, to expedite future permitting actions, NAS has, with this significant revision, requested designation and regulation as a major source of HAPs. The Division has included this determination in the renewal and applied all the requirements for major sources of HAPs as appropriate in the permit. This reclassification to voluntary major source is effective upon the final issuance of this permit, at which time NAS is considered a major source of HAPs and must comply with all the relevant requirements for major sources of HAPs. This change to major source affects only some requirements in the permit – the requirements in the affiliated single sources (AIs 112822 and 117650) do not change with the change in source status, even though they are also now considered major sources of HAP and will be regulated as such. The following regulatory changes were made in the permit due to the change from minor to major source of HAP:

- The requirements for minor sources of HAPs from 40 CFR 63, Subparts ZZZZ, IIII, and JJJJ were removed and the requirements for major sources of HAPs were added from these subparts.
- The requirements of 40 CFR 63, Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters,* were added to Boilers (Emission Group 5).
- 40 CFR 63, Subpart CCCCCC is no longer applicable to Gasoline Tanks (EP 127) due to the regulatory applicability only pertaining to minor sources of HAPs. Therefore, these tanks have been moved to permit Section C – Insignificant Activities due to the PTE.
- 40 CFR 63, Subpart YYYYY, *National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities* continues to be applied to the Melt Shop Units, despite them now being part of a major source, in lieu of applying 401 KAR 63:020 and because no major source NESHAP exists for these sources.

On March 23, 2023, NAS submitted a minor permit application requesting to install new equipment and make physical changes to the pickling section of Flat Products Mixed Acid Pickling #2 (AP2). The Division requested additional information on March 31, 2023, NAS provided the requested information on April 20, 2023, and the application was deemed complete on May 3, 2023. The following changes have been made to the permit as a result of the requested revision:

- Installation of a new AP2 shot blaster. The AP2 Shot Blaster operates in concert with the annealing furnace and acid pickling sections of the overall AP2 line. The emissions from the shot blaster are vented inside the building and the unit is equipped with HEPA filter media which is necessary to meet the allowable particulate emission limit in 401 KAR 59:010. The shot blasting step of the flat products annealing and pickling line does not dictate the steel processing capacity of the continuous process line as a whole. Rather, the metallurgical practices performed in the annealing furnace and steel surface treatment process completed in the acid pickling section determine the line speed and associated steel processing capacity. Therefore, installing the AP2 shot blaster is not expected to cause any upstream or downstream impacts within the AP2 line or other equipment in the Cold Mill process area. The new AP2 shot blasters will allow for the AP2 line to achieve higher product quality and has been added as EP 158 (AP2 Shot Blaster) to the Insignificant Activities List in Section C of the permit.
- Installation of a new Long Products (LP) Shot Blaster. The LP Shot Blaster is used as a batch operation in an "off-line" configuration with the LP production area of the NAS facility. The emissions from this shot blaster are vented inside the building and the unit is equipped with HEPA filter media which is necessary to meet the allowable particulate emission limit in 401 KAR 59:010. The new LP Shot Blaster improves the pickling quality, and by removing the scale by this process, the scale can be recycled. Installation of this LP Shot Blaster does not influence the steel processing capacity or actual utilization of other related equipment used for manufacturing of the types of steel products planned to be processed in the new shot blaster and is not expected to have any emissions impacts on upstream or downstream units. This shot blaster has been added as EP 159 (LP Shot Blaster) to the Insignificant Activities List in Section C of the permit.
- Installation of a new Skin Pass Mill. This process improves the mechanical properties, surface texture, and flatness of the products. The Skin Pass Mill uses a dry process without the addition of any coolants or lubricants to the steel product surface or mill roll interfaces. However, the skin pass mill is equipped with an integral vacuum system to remove particles and debris from the very smooth work rolls used in the Skin Pass Mill to achieve the desired surface finish of the product stainless steel coils. The emissions from the Skin Pass Mill are vented inside the building and the unit is equipped with HEPA filters as part of the integral vacuum system. The Skin Pass Mill operates as a stand-alone, "off-line" unit in the Cold Mill process area for processing only a small subset of flat products manufactured at NAS. Similar in-line and off-line Skin Pass Mills are already present at NAS. The proposed addition of a new Skin Pass Mill is intended to enable more operating flexibility for the routing of the specific coils that need this additional process step for meeting consumer product specifications. The level of production for skin pass coils at NAS is solely determined by customer demand for a specific rolled finish. Therefore, the installation of this unit is not expected to have upstream or downstream emissions impacts. The new Skin Pass Mill has been added as EP 160 (Skin Pass Mill) to the Insignificant Activities List in Section C of the permit.
- Addition of a new AP2 Electrolytic Section. The electrolytic section on the existing AP2 line enables enhanced strip cleaning upstream of the main upstream acid pickling stage and enables NAS to achieve higher product quality when processing cold rolled products. The electrolytic section is located after the shot blasting section and before the acid pickling section of the AP2 continuous process line. This additional process step is not expected to itself create any emissions and is not expected to influence the existing regulated pollutant emission profile of the AP2 process because the emission profile is determined by the acid pickling section, which is not being modified. The electrolytic section does not offer the ability to increase the hourly or annual process rate of the flat products pickling line or otherwise influence the nominal

production capacity of the line, and its installation is independent of other process operations at the facility. Adding the AP2 electrolytic section is not expected to create an upstream or downstream emissions impacts on the overall AP2 line because the electrolytic process does not enable any increased steel coil throughput rates or material usage. Effectively, the electrolytic section will operate at the same line speed as the other main process steps in the continuous process line and does not enable an increase in line speed or changes in the steel coil process rate on a short-term or long-term basis because the line speed and process rate are dictated by the primary annealing furnace and acid pickling operations. Therefore, the installation of this unit is not expected to have emissions impacts on any upstream or downstream units.

- Installation of a new Reverse Cold Rolling Mill #7. The new reversing-type cold rolling mill is similar to the existing cold mills (Z-mills) currently installed at the facility. The new cold mill uses an interlocked mist eliminator to control PM emissions and the mill cannot operate without the air pollution control equipment. This new cold mill has been added to Section B of the permit as EP 157 (Reverse Cold Rolling Mill #7). Installation of the new Reverse Cold Rolling Mill #7 has the potential to cause associated increases in actual emissions at unmodified upstream and downstream emission units within the annealing and pickling operations of the Cold Mill and various operations within the Coil Finishing area.

The project emissions increase calculations for affected existing units uses the maximum annual production capacity of the new Cold Rolling Mill #7 to define a worst case attributable emissions increase that could theoretically occur from the new cold mill installation at these potentially affected upstream and downstream emission units. To assess the annual air emissions impacts at upstream and downstream units within the Cold Mill, NAS has chosen to conservatively assume the full annual potential production rate for Cold Rolling Mill #7 would be directly passed to the upstream/downstream units and cause a corresponding and equivalent actual annual process rate increase (i.e., as if a "one-for-one" process impact did theoretically occur). Additionally, the Division used a conservative building removal efficiency of 70% for particulate emissions emitted indoors. This is in lieu of the submitted 90% building removal efficiency for particulate which did not have enough supporting information provided in the application to justify its use. However, because this conservative change to emission calculations did not cause the project to exceed the significant emission rate for particulate, the Division did not request additional information from NAS.

The project emissions increases from the new emission units and unmodified and existing affected emission units are shown in Tables 1 and 2, respectively.

Table 1 – Project Emissions Increases for New Emission Units

Emission Point	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	NO_x (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)
Reverse Cold Rolling Mill #7 (EP 157)	7.01	7.01	6.57	---	---	---	35.05
AP2 Shot Blaster (EP 158)	1.13	1.13	1.13	---	---	---	---
Long Products Shot Blaster (EP 159)	0.45	0.45	0.45	---	---	---	---
Skin Pass Mill (EP 160)	0.34	0.34	0.34	---	---	---	---
Total for New Units	8.92	8.92	8.57	---	---	---	35.04

Table 2 – Unmodified and Affected Existing Emission Units

Emission Point	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	NO_x (tpy)	CO (tpy)	SO_2 (tpy)	VOC (tpy)
Flat Products Annealing Furnace #2 (EP 001)	0.21	0.21	0.21	2.57	0.02	0.05	0.01
Flat Products Annealing Furnace #4 (EP 102)	0.21	0.21	0.21	2.44	0.31	0.07	0.07
Flat Products Mixed Acid Pickling #2 (EP 007)	---	---	---	0.01	---	---	---
Flat Products Pickling #4 (EP 101)	---	---	---	0.02	---	---	---
Flat Products Annealing Furnace #1 (EP 006)	0.34	0.34	0.34	4.23	0.03	0.08	0.01
Flat Products Annealing Furnace #3 (EP 061)	0.20	0.20	0.20	2.48	0.02	0.05	0.01
Flat Products Mixed Acid Pickling #1 (EP 003)	---	---	---	0.01	---	---	---
Acid Pickling #3 (EP 062)	---	---	---	0.01	---	---	---
Total for Affected Units	0.95	0.95	0.95	11.78	0.38	0.26	0.1
Total Project Emissions Increase	9.87	9.87	9.52	11.78	0.38	0.26	35.14
SER	25	15	10	40	100	40	40
PSD	No	No	No	No	No	No	No

When the project emissions increases from the new units are added to the newly calculated associated emissions increases for unmodified units, the total project emissions increases continue to remain below the applicable significant emission rates for all regulated NSR pollutants. Therefore, the "true minor" PSD non-applicability status of the proposed project continues to apply even after considering the worst-case upstream and downstream emissions impacts that could hypothetically occur from the installation of the new Cold Rolling Mill #7. The increase in emissions from these units are less than the significant emission rates that would trigger PSD review and BACT analysis.

- NAS also proposed to update the process description for AP2 emission unit (EP 007) and change the referenced hourly process rate of the line to accommodate running either hot rolled or cold rolled products. The current process rate in AP2 emission unit description is reflective of processing only cold rolled products whereas a prior version of the emission unit description included higher process rates which are reflective of processing hot rolled products. The Flat Products Mixed Acid Pickling #1 and #2 (EP 003 and EP 007) were previously described as having a maximum processing capacity of 200 ton/hr on a combined basis (100 ton/hr for each AP line) versus the current Title V permit V-15-019 R4 emission unit description with a maximum processing capacity of 130 ton/hr on a combined basis (75 ton/hr for AP1 and 55 ton/hr for AP2). NAS is requesting the process rate description for AP2 to be revised from 55 ton/hr to 100 ton/hr to effectively reverse back to a prior permit basis without making any corresponding changes to the current NO_x emission limits. The Division has updated the processing rate for AP2 from 55 ton/hr to 100 ton/hr.
- On July 19, 2023, co-located Phoenix Services LLC submitted an application and requested to transfer ownership and operational responsibility to Metal Services LLC. As a result, the Division changed all references to Phoenix Services LLC in NAS's Statement of Basis and

permit to Metal Services LLC to reflect this name and ownership change of the co-located part of the source.

- On August 25, 2023, final updates to 40 CFR 60, Subpart AAa were published in the federal register. Accordingly, the regulatory language in the final permit and Statement of Basis have been updated to reflect the published changes.

V-23-003 Emission Summary		
Pollutant	(1) 2021 Actual (tpy)	(2) PTE V-23-003 (tpy)
CO	1398.39	3,586
NO_X	470.80	1,899
PT	185.26	583
PM_{10}	183.84	579
$PM_{2.5}$	84.22	413
SO_2	2.01	14.14
VOC	60.70	716
Lead	0.048	3.39
Greenhouse Gases (GHGs)		
Carbon Dioxide	242812.85	496,041
Methane	4.65	9.50
Nitrous Oxide	4.45	(3) 1.99
CO2 Equivalent (CO2e)	244255.2	496,871
Hazardous Air Pollutants (HAPs)		
Chromium, Total (as Cr)	2.3945	3.46
Hexane; N-Hexane	0.0153	7.39
Hydrofluoric Acid	2.0338	3.96
Manganese, Total (as Mn)	5.2450	6.99
Nickel, Total (as Ni)	1.5629	2.27
Combined HAPs	11.36	(4) 24.69

(1) Based on 2021 EIS Report.
(2) Includes controlled emissions based on federally enforceable control devices, and only those contributions associated with North American Stainless.
(3) Based on most recent values in 40 CFR 98, Subpart C.
(4) Due to NAS's total HAP PTE approaching major source status, NAS has opted to be regulated as a major source of HAPs.

APPENDIX A – ABBREVIATIONS AND ACRONYMS

AAQS – Ambient Air Quality Standards
BACT – Best Available Control Technology
Btu – British thermal unit
CAM – Compliance Assurance Monitoring
CO – Carbon Monoxide
Division – Kentucky Division for Air Quality
ESP – Electrostatic Precipitator
GHG – Greenhouse Gas
HAP – Hazardous Air Pollutant
HF – Hydrogen Fluoride (Gaseous)
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
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
PSD – Prevention of Significant Deterioration
PTE – Potential to Emit
SER – Significant Emission Rate
SO_2 – Sulfur Dioxide
TF – Total Fluoride (Particulate & Gaseous)
VOC – Volatile Organic Compounds