EGLE Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION
C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type **C-001**	SRN B7061

Stationary Source Name Gerdau Macsteel Monroe Mill	
City Monroe	County Monroe

SUBMITTAL CERTIFICATION INFORMATION

1. Type of Submittal *Check only one box.*

☐ Initial Application (Rule 210) ☐ Notification / Administrative Amendment / Modification (Rules 215/216)

☒ Renewal (Rule 210) ☐ Other, describe on AI-001

2. If this ROP has more than one Section, list the Section(s) that this Certification applies to 1

3. Submittal Media ☒ E-mail ☐ FTP ☐ Disk ☒ Paper

4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal.

AI

CONTACT INFORMATION

Contact Name Christopher Hessler	Title Regional Environmental Manager
Phone number 734.384.6544	E-mail address Christopher.Hessler@Gerdau.com

This form must be signed and dated by a Responsible Official.

Responsible Official Name Daniel Mussap			Title VP/GM - Monroe Mill	
Mailing address 3000 E. Front St.				
City Monroe	State MI	ZIP Code 48161	County Monroe	Country United States

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.

Signature of Responsible Official

5/21/21
Date

EGLE

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
B7061	3312	331110	MI-ROP-B7061-2016	1

Source Name
Gerdau Macsteel Monroe Mill

Street Address
3000 East Front Street

City	State	ZIP Code	County
Monroe	MI	48161	Monroe

Section/Town/Range (if address not available)

Source Description
Gerdau Macsteel Monroe Mill is a specialty steel bar manufacturer.

☐ Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.

OWNER INFORMATION

Owner Name	Section Number (if applicable)
Gerdau Macsteel Inc.	1

Mailing address (☐ check if same as source address)
45591 Morrill Road

City	State	ZIP Code	County	Country
Jackson	MI	49201	Jackson	USA

☐ Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: B7061	Section Number (if applicable): 1

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name	Title			
Christopher Hessler	Regional Environmental Manager			
Company Name & Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number	E-mail address			
734.384.6544	Christopher.Hessler@Gerdau.com			

Contact 2 Name (optional)	Title			
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number	E-mail address			

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name	Title			
Daniel Mussap	Vice President and General Manager			
Company Name & Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number	E-mail address			
734.384.6510	Daniel.Mussap@Gerdau.com			

Responsible Official 2 Name (optional)	Title			
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number	E-mail address			

☐ Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

SRN: B7061	Section Number (if applicable): 1

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.	
☒ Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP using official version from the AQD website (required)	☒ Stack information
☒ Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☐ Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	☐ Cross-State Air Pollution Rule (CSAPR) Information
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	☒ Paper copy of all documentation provided (required)
☒ Compliance Assurance Monitoring (CAM) Plan	☒ Electronic documents provided (optional)
☒ Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	☐ Other, explain:

Compliance Statement	
This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	☒ Yes ☐ No
The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.	
If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.	

Name and Title of the Responsible Official (Print or Type)

Daniel Mussap, Vice President and General Manager

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Signature of Responsible Official	**Date**
[signature]	5/21/21

SRN: B7061	Section Number (if applicable): 1

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from **all** emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☒ Yes ☐ No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68)	☐ Yes ☒ No
	If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	☐ Yes ☐ No
C4.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO_2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.	☒ Yes ☐ No
C5.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.	☒ Yes ☐ No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	☐ Yes ☒ No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form.	☐ Yes ☒ No
	Is an Acid Rain Permit Renewal Application included with this application?	☐ Yes ☐ No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy.	☒ Yes ☐ No
	Is a CAM plan included with this application?	☒ Yes ☐ No
	If a CAM Plan is included, check the type of proposed monitoring included in the Plan:	
	1. Monitoring proposed by the source based on performance of the control device, or	☐
	2. Presumptively Acceptable Monitoring, if eligible	☐
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement?	☒ Yes ☐ No
	If Yes, then a copy must be submitted as part of the ROP renewal application.	
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable?	☐ Yes ☒ No
	If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	

☒ Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: **AI-PARTS-B&C**

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PARTS-B&C

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional information for Section B:

Please see the emissions data submitted in support of PTI 75-18 for Potential-to-Emit information for criteria and hazardous air pollutants.

Additional information for Sections C4 and C5:

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units and flexible groups, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application.

The requirements of PTI 75-18 become fully effective when the capital expenditure project is completed. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the ROP permit conditions for EUEAF, EULMF, EUVTD, EUROADS&PKG-01, FGMELTSHOP and FGMACT-YYYYY to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

The changes to the facility addressed in PTI 75-18 were subject to PSD review. The changes, when completed, will increase the maximum hourly, monthly and annual steel production capacities which also results in increases in the PTE's of criteria and HAP emissions. Please see the documentation provided in support of PTI 75-18 for further details regarding the facility's future PTE levels.

Additional information for Sections C8 and C9:

The current ROP references the following plans:

- Compliance Assurance Monitoring (CAM) Plan
- Fugitive Dust Plan
- Energy Efficiency Management Plan (EEMP)
- Malfunction Abatement Plan (MAP)
- Pollution Prevention Plan
- Startup, Shutdown and Malfunction (SSM) Plan

Copies of the facility's current versions of these plans are enclosed with this application. Several of the plans are being reviewed and updated by the facility's new Environmental Manager.

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. ☒ Yes ☐ No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]
EULIMEMATSTORAGE	Bulk lime unloading capture system	Rule 212(4)(h)	Rule 290
EUSTCFURNACES	2 7 MMBTU/hr natural gas fired steel heat treating furnaces	Rule 212(4)(c)	Rule 282(2)(a)(i)
EUSLIDEGATE	4 0.10 MMBTU/hr natural gas fired slidegate preheat burners	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUTUNDISH-DRYER	2.4 MMBTU/hr natural gas fired dryer to dry green refractory in tundishes	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUTUNDISH-PRHT	2 8 MMBTU/hr natural gas fired heaters to maintain high refractory temp in tundishes	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUADMINBOILER	4 0.5 MMBTU/hr natural gas fired boilers for the Administration Building	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUPROCBUILDHEAT	0.5 MMBTU/hr natural gas fired building heaters for process buildings	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUBUNDLERHTRS	2 1.3 MMBTU/hr natural gas fired bundler heaters	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUSCALEHTR	9.2 MMBTU/hr natural gas fired Roll Mill scale post heater	Rule 212(4)(c)	Rule 282(2)(b)(i)
EULADLE-DRYER	3.6 MMBTU/hr natural gas fired dryer to dry green refractory in ladles	Rule 212(4)(c)	Rule 282(2)(b)(i)
EULADLE-PREHEAT	2 15 MMBTU/hr natural gas fired heaters to maintain high refractory temp in ladles	Rule 212(4)(c)	Rule 282(2)(b)(i)
EUNG-HEATER-01	Multiple natural gas fired space heaters with heat inputs < 150,000 BTU/hr	Rule 212(4)(c)	Rule 282(2)(b)(i)

Comments:

☒ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**PART-D

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PART-D

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional Permit to Install (PTI) exempt emission unit:

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]
EUHEATERS	0.25 MMBTU/hr natural gas fired portable space heaters	Rule 212(4)(c)	Rule 282(2)(b)(i)

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to **all** emission units and **all** applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If Yes, identify changes and additions on Part F, Part G and/or Part H.	☒ Yes ☐ No
E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identity the stack(s) that was/were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If Yes, complete Part F with the appropriate information.	☒ Yes ☐ No
E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	☒ Yes ☐ No

Comments:

☒ Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: **AI-**PART-E

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PART-E

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional information for Sections E1 and E3:

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project since the current ROP was issued. PTI 75-18 revises existing limitations and requirements and establishes new limitations and requirements for several existing emission units and flexible groups. The PTI also authorized the reorganization and/or replacement of some existing emission units. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application.

The requirements of PTI 75-18 become fully effective when the capital expenditure project is completed. The capital expenditure project is expected to be completed during the 5-year term of the renewed ROP; therefore, Gerdau is proposing structural changes to the ROP permit conditions for EUEAF, EULMF, EUVTD, EUROADS&PKG-01, FGMELTSHOP and FGMACT-YYYYY to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

Gerdau is proposing the restructuring of the special conditions for several emission units affected under PTI 75-18 to clarify that the limitations and requirements specified in the existing ROP for these emission units/flexible groups apply until the capital expenditure project is completed and that the limitations and requirements established under PTI 75-18 apply once the capital expenditure project is completed.

Gerdau is proposing that several underlying requirement citations be added for existing Special Condition III.2 for EUEAF and a minor language change to FGMACT-YYYYY Special Condition VII.4 to provide more clarity.

The markup of the existing ROP conditions reflects updates to references in the conditions to MDEQ and/or DEQ, but these revisions are not specifically identified in Section H of this application.

Additional information for Section E3:

PTI 75-18 allows the construction of a new LMF process and demolition of the LMF equipment represented in the existing ROP.

The PTI also allows for the realignment of the exhaust system associated with the VTD operation. The existing ROP designates that the exhaust from the VTD operation is directed to the baghouse control serving the EAF. Under the PTI, the exhaust from the VTD is directed to the baghouse associated with the LMF operation.

Continued on AI-PART-E, Page 2

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PART-E

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional information for Section E4:

The LMF represented in the existing ROP under EULMF has been demolished. A replacement LMF has been constructed in the Melt Shop under PTI 75-18. The new LMF will assume the emission unit ID of EULMF.

SRN: B7061	Section Number (if applicable): 1

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. If No, go to Part G. ☒ Yes ☐ No

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed
75-18	See AI Form	See AI Form	Project in progress at time of this application

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. ☒ Yes ☐ No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. ☒ Yes ☐ No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☒ Yes ☐ No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. ☐ Yes ☒ No

Comments:

☒ Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: **AI-**PART-F

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PART-F

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional information for Section F1 and F2:

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project since the current ROP was issued. PTI 75-18 affects several existing emission units and flexible groups, the reorganization and/or replacement of some existing emission units, and the installation of one new emission unit. Existing emission units and flexible groups affected by PTI 75-18 include:

- EUEAF
- EULMF (demolition of the original LMF and construction of a new LMF)
- EUVTD
- EUROADS&PKG-01
- FGMELTSHOP
- FGMACT-YYYYY

The construction and modification activities approved under PTI 75-18 are underway at the time of this permit application. A markup of the existing ROP conditions is included as part of this permit application. The markups incorporate the requirements established under PTI 75-18.

Additional information for Section F3:

Two new 14 MMBTU/hr natural gas fired ladle preheaters are being installed under PTI 75-18. The new preheaters are identified in the PTI as EULADLEPREHEAT2.

A new flexible group is established under the PTI. The new flexible group is designated as FGLMFVTD and includes the emission units associated with DVLMFBAGHOUSE (EULMF, EUVTD and the new ladle preheaters installed as EULADLEPREAT2.)

The LMF represented in the existing ROP under EULMF has been demolished. A replacement LMF has been constructed in the Melt Shop under PTI 75-18. The new LMF will assume the emission unit ID of EULMF.

Continued on AI-PART-F, Page 2

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-PART-F

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Additional information for Section F4:

Under PTI 75-18, a second stack is being added to DVBAGHOUSE-01 serving the EAF. The second stack, designated as SVBH-01-STACK2, has not been included in MAERS reporting yet. A hard copy SV-001 form for this stack is included as part of this permit application.

The stack currently associated with DVBAGHOUSE-01 (SVBH-01-STACK) serving the EAF is not being modified under PTI 75-18; however, the stack ID is been revised to SVBH-01-STACK1 to differentiate it from the new stack being added to the baghouse.

SRN: B7061	Section Number (if applicable): 1

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H. ☒ Yes ☐ No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☒ Rule 290 process with limited emissions	EULIMEMATSTORAGE - Bulk lime unloading capture system	11/2000

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI-**

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes	☐ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes	☒ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes	☒ No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes	☒ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes	☒ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
H7. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes	☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**EAF	

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-EAF

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For EUEAF Gerdau proposes the following changes to the existing ROP conditions:

1. Restructure the existing emission limitations in EUEAF Section I into Subsection A to differentiate them from the emission limitations established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing emission limitations in EUEAF Section I:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:"

2. Revise the Monitoring/Testing Methods for existing EUEAF Special Conditions I.1, I.2 and I.3 as shown in the following table to reflect the proposed reorganization of existing monitoring/testing requirements into subsection A of the applicable sections of the conditions as a result of differentiating existing requirements from requirements established under PTI 75-18:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	3%[2]	6-minute average	EUEAF baghouse stack	SC VI.A.2	**R 336.2810 40 CFR 60.272a(a)(2)**
2. Visible Emissions	6%[2]	6-minute average	EUEAF Shop Building	SC VI.A.6	**40 CFR 60.272a(a)(3)**
3. PM	0.0052 gr/dscf[2]	Test Protocol*	EUEAF	SC V.A.1	**40 CFR 60.272a(a)(1)**

*Test Protocol specifies averaging time.

Continued on AI-EAF, Page 2

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-EAF

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

3. Addition of additional underlying regulatory requirement citations for existing SC III.2. to incorporate citations from PTI 75-18. The revised condition would read:

> "2. The permittee shall not transfer material to the LMF from the EAF without a ladle cover.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 226.1702, R 226.1910, R 336.2810)"**

4. Restructure the existing design/equipment parameters in EUEAF Section IV into Subsection A to differentiate them from the design/equipment parameters established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing design/equipment parameters in EUEAF Section IV:

> "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

5. Restructure the existing monitoring/recordkeeping requirements in EUEAF Section VI into Subsection A to differentiate them from the monitoring/recordkeeping requirements established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing monitoring/recordkeeping requirements in EUEAF Section VI:

> "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

6. Restructure the existing stack/vent restrictions in EUEAF Section VIII into Subsection A to differentiate them from the stack/vent restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing stack/vent restrictions in EUEAF Section VIII:

> "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirements shall apply:"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H18. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H19. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H20. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H21. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H22. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H23. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H24. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H25. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H26. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H27. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H28. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H29. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H30. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H31. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H32.	Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H33.	Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H34.	Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**ROADS

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-ROADS

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For EUROADS&PKG-01 Gerdau proposes the following changes to the existing ROP conditions:

1. PTI 75-18 included EUROADS&PKG-01 in FGMACTYYYYY in addition to FGGHG as identified in the existing ROP. Gerdau proposes to clarify the change in flexible group associations for EUROADS&PKG-01 by revising the existing Flexible Group ID language for EUROADS&PKG-01 to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGGHG"

2. Restructure the existing emission limitations in EUROADS&PKG-01 Section I into Subsection A to differentiate them from the emission limitations established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing emission limitations in EUROADS&PKG-01 Section I:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:"

3. Correct typo of "pipes" in existing condition I.1 in EUROADS&PKG-01. "Pipes" should be changed to "piles".

4. Restructure the existing process/operational restrictions in EUROADS&PKG-01 Section III into Subsection A to differentiate them from the process/operational restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing process/operational restrictions in EUROADS&PKG-01 Section III:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H35. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H36. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H37. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H38. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H39. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H40. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H41. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H42. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H43. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H44. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H45. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H46. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H47. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H48. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H49.	Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H50.	Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H51.	Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**LMF

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-LMF

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For EULMF Gerdau proposes the following changes to the existing ROP conditions:

1. PTI 75-18 included EULMF in the existing FGMACTYYYYY and the newly established FGLMFVTD in addition to FGMELTSHOP, FGBLDGFUG and FGGHG as identified in the existing ROP. Gerdau proposes to clarify the change in flexible group associations for EULMF by revising the existing Flexible Group ID language for EULMF to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDGFUG, FGGHG"

2. PTI 75-18 included additional language regarding the pollution control equipment for EULMF. Gerdau proposes to clarify the change in the pollution control equipment description for EULMF by revising the existing Pollution Control Equipment language for EULMF to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

   DVLMFBAGHOUSE"

3. Restructure the existing emission limitations in EULMF Section I into Subsection A to differentiate them from the emission limitations established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing emission limitations in EULMF Section I:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitation:"

Continued on AI-LMF, Page 2

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-LMF

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

4. Revise the Monitoring/Testing Methods for existing EULMF Special Condition I.1 as shown in the following table to reflect the proposed reorganization of existing monitoring/testing requirements into subsection A of the applicable sections of the conditions as a result of differentiating existing requirements from requirements established under PTI 75-18:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	5%[2]	6-minute average	LMF Baghouse stack	SC VI.A.1	**R 336.2810**

5. Restructure the existing process/operational restrictions in EULMF Section III into Subsection A to differentiate them from the process/operational restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing process/operational restrictions in EULMF Section III:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

6. Restructure the existing design/equipment parameters in EULMF Section IV into Subsection A to differentiate them from the design/equipment parameters established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing design/equipment parameters in EULMF Section IV:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:"

7. Restructure the existing monitoring/recordkeeping requirements in EULMF Section VI into Subsection A to differentiate them from the monitoring/recordkeeping requirement established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing monitoring/recordkeeping requirement in EULMF Section VI:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H52. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H53. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H54. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H55. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H56. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H57. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H58. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H59. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H60. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H61. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H62. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H63. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H64. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H65. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H66. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H67. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H68. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**VTD	

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-VTD

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For EUVTD Gerdau proposes the following changes to the existing ROP conditions:

1. A realignment of the exhaust system for EUVTD was approved under PTI 75-18. Prior to PTI 75-18, emissions from EUVTD were directed to the baghouse serving the EAF. Under PTI 75-18 Gerdau was allowed to redirect emissions from EUVTD to the baghouse serving the LMF. Gerdau proposes to clarify the change in the emission unit description for EUVTD by inserting the following language in front of the existing description for EUVTD:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:"

2. PTI 75-18 included EUVTD in the existing FGMACT-YYYYY and the newly established FGLMFVTD in addition to FGMELTSHOP, FGBLDGFUG and FGGHG as identified in the existing ROP. Gerdau proposes to clarify the change in flexible group associations for EUVTD by revising the existing Flexible Group ID language for EUVTD to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDGFUG, FGGHG"

3. As discussed in item 1 above, the emission control system arrangement for EUVTD is being modified under PTI 75-18. Gerdau proposes to clarify the change in the Pollution Control Equipment description for EUVTD allowed under PTI 75-18 by revising the existing Pollution Control Equipment language for EUVTD to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

   DVBAGHOUSE-01"

Continued on AI-VTD, Page 2

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-VTD

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

4. As discussed in item 1 above, the emission control system arrangement for EUVTD is being modified under PTI 75-18. With the realignment of EUVTD with the baghouse serving the LMF under PTI 75-18, the stack/vent associated with EUVTD also changes. To clarify the stack associations for EUVTD, Gerdau proposes that the existing stack/vent restrictions in EUVTD Section VIII be organized into a new Subsection A to differentiate them from the stack/vent restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing stack/vent restrictions in EUVTD Section VIII:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirements shall apply:"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H69.	Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H70.	Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H71.	Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H72.	Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H73.	Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H74.	Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H75.	Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H76.	Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H77.	Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H78.	Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H79.	Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H80.	Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H81.	Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H82.	Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H83.	Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H84.	Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H85.	Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
☒	Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**MELTSHOP	

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For FGMELTSHOP Gerdau proposes the following changes to the existing ROP conditions:

1. PTI 75-18 added “other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop” and new ladle preheaters (EULADLEPREHEATER2) to FGMELTSHOP. Gerdau proposes to clarify the emission units included in FGMELTSHOP until the construction and modifications allowed under PTI 75-18 have been completed by inserting the following language in front of the existing description for FGMELTSHOP:

   “Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:”

2. PTI 75-18 added new ladle preheaters (EULADLEPREHEATER2) to FGMELTSHOP in addition to EUEAF, EULMF and EUVTD as identified in the existing ROP. Gerdau proposes to clarify the change in emission unit associations for FGMELTSHOP by revising the existing Emission Unit ID language for FGMELTSHOP to read as follows:

   “EUEAF, EULMF, EUVTD (until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed)”

3. A realignment of the exhaust system for EUVTD was approved under PTI 75-18. Prior to PTI 75-18, emissions from EUVTD were directed to the baghouse serving the EAF. Under PTI 75-18 Gerdau was allowed to redirect emissions from EUVTD to the baghouse serving the LMF. Gerdau proposes to clarify the change in emission unit/control equipment association in the pollution control equipment description for FGMELTSHOP by inserting the following language in front of the existing pollution control equipment description for FGMELTSHOP:

   “Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:”

Continued on AI-MELTSHOP, Page 2

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

4. Restructure the existing emission limitations in FGMELTSHOP Section I into Subsection A to differentiate them from the emission limitations established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing emission limitations in FGMELTSHOP Section I:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:"

5. Revise the Monitoring/Testing Methods for existing FGMELTSHOP Special Conditions I.3, I.4, I.5, I.6, I.7, I.8, I.9, I.10, I.11, I.12, I.13, I.14, I.15, I.16, I.17, I.18, I.19, I.20, I.21, I.22, I.23, I.24, I.25, I.26 and I.27 as shown in the following table to reflect reorganization of existing monitoring/testing requirements into proposed subsections as a result of differentiating existing requirements from requirements established under PTI 75-18:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf[2]	Test Protocol*	FGMELTSHOP Each baghouse individually	SC V.1	**R 336.1331**
2. PM	7.2 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1331 R 336.2803 R 336.2804**
3. PM	29.2 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1331 R 336.2803 R 336.2804**
4. PM10	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803 R 336.2804 R 336.2810**

Continued on AI-MELTSHOP, Page 3

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. PM10	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
6. PM2.5	0.1 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803 R 336.2804 R 336.2810**
7. PM2.5	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.1205 R 336.2803 R 336.2804**
8. PM2.5	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1205 R 336.2803 R 336.2804**
9. SO2	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
10. SO2	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
11. SO2	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
12. CO	2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A..4	**R 336.2804 R 336.2810**

Continued on AI-MELTSHOP, Page 4

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
13. CO	260 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2804** **R 336.2810**
14. CO	850 tpy[2]	12-month rolling time period as determined at the end of each	FGMELTSHOP	SC VI.A.4	**R 336.2804** **R 336.2810**
15. NOx	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803** **R 336.2804** **R 336.2810**
16. NOx	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A..1	**R 336.2803** **R 336.2804** **R 336.2810**
17. NOx	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2803** **R 336.2804** **R 336.2810**
18. VOC	0.13 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A..1	**R 336.1702(a)**
19. VOC	16.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.1702(a)**
20. VOC	55.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1702(a)**

Continued on AI-MELTSHOP, Page 5

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
21. Lead	0.09 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2802(4)(d)**
22. Lead	2.15 lb/day[2]	Calendar Day	FGMELTSHOP	SC VI.A.4	**R 336.2802(4)(d)**
23. Lead	0.37 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2802(4)(d)**
24. GHG (as CO_2e)	320 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2810**
25. GHG (as CO_2e)	134,396 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2810**
26. Mercury (as Hg)	0.033 pph[1]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.2	**R 336.1224 R 336.1225**
27. Mercury (as Hg)	271 lb/year[1]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC V.A.2	**R 336.1224 R 336.1225**

*Test Protocol shall specify averaging time.

Continued on AI-MELTSHOP, Page 6

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

6. Restructure the existing material limits in FGMELTSHOP Section II into Subsection A to differentiate them from the material limits established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing material limits in FGMELTSHOP Section II:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following limitations:"

7. Revise the Monitoring/Testing Methods for existing FGMELTSHOP Special Conditions II.1 and II.2 as shown in the following table to reflect reorganization of existing monitoring/testing requirements into proposed subsections as a result of differentiating existing requirements from requirements established under PTI 75-18:

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Steel Output	130 tons liquid steel per hour[2]	Based on a 24-hour calendar day average	FGMELTSHOP-	SC VI.A.4	**R 336.2810**
2. Steel Output	850,000 tons liquid steel per year[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.A.4	**R 336.2810**

8. Restructure the existing process/operational restrictions in FGMELTSHOP Section III into Subsection A to differentiate them from the process/operational restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing process/operational restrictions in FGMELTSHOP Section III:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

Continued on AI-MELTSHOP, Page 7

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

9. PTI 75-18 established CERMS requirements for the baghouse associated with the EAF under EUEAF. When those requirements are incorporated into the ROP under EUEAF the existing requirements in FGMELTSHOP section IV will no longer apply. Gerdau proposes to clarify this change in permit conditions by revising the existing ROP conditions to indicate that the existing design/equipment parameters in FGMELTSHOP section IV apply until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed. Gerdau proposes the insertion of the following before the existing design/equipment parameters in FGMELTSHOP Section IV:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:"

10. PTI 75-18 established testing/sampling requirements for the EUEAF and the new FGLMFVTD. When those requirements are incorporated into the ROP under EUEAF and the new FGLMFVTD the existing requirements in FGMELTSHOP section V will no longer apply. Gerdau proposes to clarify this change in permit conditions by revising the existing ROP conditions to indicate that the existing testing/sampling requirements in FGMELTSHOP section V apply until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed. Gerdau proposes the insertion of the following before the existing design/equipment parameters in FGMELTSHOP Section V:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:"

11. Restructure the existing monitoring/recordkeeping requirements in FGMELTSHOP Section VI into Subsection A to differentiate them from the monitoring/recordkeeping requirements established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing monitoring/recordkeeping requirements in FGMELTSHOP Section VI:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

Continued on AI-MELTSHOP, Page 8

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MELTSHOP

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

12. Under PTI 75-18, the stack/vent parameters associated with DVBAGHOUSE-01 are specified under EUEAF and the stack/vent parameters associated with DVLMFBAGHOUSE are specified under EULMF, EUVTD and the new FGLMFVTD. Once the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed there will not be a need to specify these stack parameters under FGMELTSHOP. Gerdau proposes to clarify this change in permit conditions by revising the existing ROP conditions to indicate that the existing stack/vent restrictions in FGMELTSHOP section VIII apply until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed. Gerdau proposes the insertion of the following before the existing stack/vent restrictions in FGMELTSHOP Section VIII:

"A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H86.	Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H87.	Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H88.	Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H89.	Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H90.	Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H91.	Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H92.	Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H93. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H94. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H95. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H96. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H97. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H98. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H99. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H100. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H101. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H102. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**GHG	

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RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-GHG

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For FGGHG Gerdau proposes the following change to the existing ROP conditions:

1. PTI 75-18 added new ladle preheaters (EULADLEPREHEATER2) to FGGHG in addition to EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB as identified in the existing ROP. Gerdau proposes to clarify the change in emission unit associations for FGGHG by revising the existing Emission Unit ID language for FGGHG to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGGHG includes EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB"

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H103. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H104. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H105. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H106. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H107. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H108. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H109. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H110.	Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H111.	Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H112.	Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H113.	Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H114.	Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H115.	Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H116.	Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 1

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H117. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
H118. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
H119. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**MACTYYYYY		

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MACTYYYYY

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

PTI 75-18 was issued to Gerdau Monroe for a major capital expenditure project. PTI 75-18 affects several existing emission units, the reorganization and/or replacement of some existing emission units and the installation of one new emission unit. The facility continues to operate under the requirements of the existing ROP while construction and modification of facility operations under PTI 75-18 are underway at the time of this permit application. The capital expenditure project is expected to be completed before the 5-year term of the renewed ROP expires; therefore, Gerdau is proposing structural changes to the permit conditions for several emission units to clarify when the existing requirements apply and when the requirements established under PTI 75-18 apply.

For FGMACT-YYYY Gerdau proposes the following changes to the ROP:

1. The emission unit description for FGMACT-YYYYY should be updated to reflect the description specified in PTI 75-18. Gerdau proposes to update the emission unit description for FGMACT-YYYYY to read as follows:

   "The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions."

2. PTI 75-18 added EULMF, EUVTD, EUROADS&PKG-01 and new ladle preheaters (EULADLEPREHEATER2) to FGMACT-YYYYY in addition to EUEAF as identified in the existing ROP. Gerdau proposes to clarify the change in emission unit associations for FGMACT-YYYYY by revising the existing Flexible Group ID language for FGMACT-YYYYY to read as follows:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACT-YYYYY includes EUEAF."

3. A realignment of the exhaust system for EUVTD was approved under PTI 75-18. Prior to PTI 75-18, emissions from EUVTD were directed to the baghouse serving the EAF. Under PTI 75-18 Gerdau was allowed to redirect emissions from EUVTD to the baghouse serving the LMF. These changes are addressed in the proposed revision to incorporate PTI 75-18 requirements into EUEAF, EULMF, EUVTD and FGLMFVTD, therefore, Gerdau proposes to clarify the change in emission unit/control equipment association in the pollution control equipment description for FGMACT-YYYYY by inserting the following language in front of the existing pollution control equipment description for FGMACT-YYYYY:

   "Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:"

Continued on AI-MACTYYYYY, Page 2

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 1

1. Additional Information ID
AI-MACTYYYYY

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

4. Restructure the existing emission limitations in FGMACT-YYYYY Section I into Subsection A to differentiate them from the emission limitations established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing emission limitations in FGMACT-YYYYY Section I:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:"

5. Restructure the existing material limits in FGMACT-YYYYY Section II into Subsection A to differentiate them from the material limits established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing material limits in FGMACT-YYYYY Section II:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

6. Restructure the existing process/operational restrictions in FGMACT-YYYYY Section III into Subsection A to differentiate them from the process/operational restrictions established in PTI 75-18 which Gerdau proposes to incorporate in a new Subsection B. Gerdau proposes the insertion of the following before the existing process/operational restrictions in FGMACT-YYYYY Section III:

   "A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:"

7. Reword the first sentence of FGMACT-YYYYY Special Condition VII.4 as follows to provide more clarity:

   "If the permittee is subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10685(b)(1), the permittee shall submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities."

EGLE Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division

RENEWABLE OPERATING PERMIT APPLICATION
C-001: CERTIFICATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to provide this information may result in civil and/or criminal penalties. Please type or print clearly.

This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.

Form Type **C-001**	SRN B7061

Stationary Source Name Gerdau Macsteel Monroe Mill	
City Monroe	County Monroe

SUBMITTAL CERTIFICATION INFORMATION

1. Type of Submittal *Check only one box.*

☐ Initial Application (Rule 210) ☐ Notification / Administrative Amendment / Modification (Rules 215/216)

☒ Renewal (Rule 210) ☐ Other, describe on AI-001

2. If this ROP has more than one Section, list the Section(s) that this Certification applies to 1

3. Submittal Media ☒ E-mail ☐ FTP ☐ Disk ☒ Paper

4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal.

AI

CONTACT INFORMATION

Contact Name Christopher Hessler	Title Regional Environmental Manager
Phone number 734.384.6544	E-mail address Christopher.Hessler@Gerdau.com

This form must be signed and dated by a Responsible Official.

Responsible Official Name Daniel Mussap			Title VP/GM - Monroe Mill	
Mailing address 3000 E. Front St.				
City Monroe	State MI	ZIP Code 48161	County Monroe	Country United States

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.

Signature of Responsible Official

5/21/21
Date

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY
AIR QUALITY DIVISION

EFFECTIVE DATE: December 1, 2016

ISSUED TO

Gerdau Macsteel Monroe Mill and Tube City IMS

State Registration Number (SRN): B7061

LOCATED AT

3000 East Front Street, Monroe, Michigan 48161

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B7061-2016

Expiration Date: December 1, 2021

Administratively Complete ROP Renewal Application Due Between June 1, 2020 and June 1, 2021

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B7061-2016

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes and Energy

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Scott Miller, Jackson District Supervisor

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ROP No: MI-ROP-B7061-2016
Expiration Date: December 1, 2021
PTI No: MI-PTI-B7061-2016

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TABLE OF CONTENTS

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Expiration Date: December 1, 2021
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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes and Energy (EGLE) or his or her designee.

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The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined, subsumed and/or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

ROP No: MI-ROP-B7061-2016
Expiration Date: December 1, 2021
PTI No: MI-PTI-B7061-2016

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SECTION 1 – Gerdau Macsteel Monroe Mill

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A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

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6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:" [2] **(R 336.1301(1))**
    a. A 6-minute average of 20 % opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

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Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

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22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

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d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

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Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

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Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.[2] **(R 336.1219)**

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46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

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Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

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C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUPAINTING	Spray painting of the ends of the steel bars using white latex paint.	10/01/1980	FGRULE290
EUPARTSWASHER	Parts washers, each with an air/vapor interface area of 10 square feet or less.	05/05/1978	FGCOLDCLEANERS
EUTURNER	Spray painting of steel bars with rust preventative coating. Emissions from this operation are discharged into the in-plant environment.	05/01/2006	FGRULE290
EUMILLSAWBH	Baghouse control for the Roll Mill Cutting saws.	01/01/2015	FGRULE290
EUENGINES	One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.	NA	FGENGINES
EUEAF	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EUEAF is defined as: The electric arc furnace (EAF) melts steel scrap in a batch operation. The EAF is a refractory lined cylindrical vessel with a bowl-shaped hearth and dome shaped roof. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. The EAF is controlled by DEC followed by a baghouse. The exhaust gases are cooled using a water quench system prior to baghouse control.	05/05/1978/ 01/04/2013/ 10/27/2014	FGMELTSHOP FGMACTYYYYY FGGHG

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUEAF	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EUEAF is defined as: An electric arc furnace (EAF) with 130 tons of liquid steel per hour capacity used to melt steel scrap in a batch operation. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. Emissions are captured from the EAF via the use of a Direct Evacuation Control (DEC) system and separately using a canopy hood located directly above the EAF. DEC captured emissions go through a duct elbow that contains an adjustable gap opening to allow extra air to enter the system so that CO and hydrogen are combusted prior to entering a reaction chamber that acts to further reduce CO and VOC emissions. DEC emissions are then directed to a baghouse (DVBAGHOUSE-01). Emissions not captured by the DEC are captured by the canopy hood and are also sent to DVBAGHOUSE-01.	05/05/1978/ 01/04/2013/ 10/27/2014 PTI 75-18 Issue Date	FGMELTSHOP FGMACTYYYYY FGGHG
EUDUST-SILO	This silo stores dust generated from DVBAGHOUSE-01 until it is properly disposed.	05/05/1978	FGGHG
EUROADS&PKG-01	Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.	05/05/1978	FGGHG
EUROADS&PKG-01	Facility roadways, parking area, material storage areas, stockpile areas, permittee slag transferring and hauling operations, and material handling operations.	05/05/1978	FGGHG FGMACTYYYYY
EUFLINN	25 MMBTU/HR natural gas heat treat furnace.	02/01/2006	FGGHG

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EULMF	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EULMF is defined as: The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. Emissions from EULMF are directed to DVLMFBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/02/2015	FGMELTSHOP FGBLDGFUG FGGHG
EULMF	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EULMF is defined as: The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF emissions are routed to a baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating. Fugitive emissions from this process exit via the West Ladle Bay roof monitor vent.	01/04/2013/ 10/27/2014 PTI 75-18 Issue Date	FGMELTSHOP FGBLDGFUG FGGHG FGMACTYYYYY FGLMFVTD
EUVTD	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EUVTD is defined as: Two vacuum tank degassers which remove entrained gases from the molten metal. This emission unit does not include reheating. Controlled by the existing EAF baghouse. Emissions are directed to the DVBAGHOUSE-01 via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/27/2014	FGMELTSHOP FGBLDGFUG FGGHG

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUVTD	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed EUVTD is defined as: Two vacuum tank degassers (VTD) which remove entrained gases from the molten metal. Only one station can be degassed at a time. This emission unit does not include reheating. The VTD emissions are routed to the LMF baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/27/2014 PTI 75-18 Issue Date	FGMELTSHOP FGBLDGFUG FGGHG FGMACTYYYYY FGLMFVTD
EUCASTER	Molten steel produced by the electric arc furnace is delivered to the continuous caster in a ladle via the ladle metallurgy system and twin tank vacuum degasser. The molten steel is gravity fed from the bottom of the ladle to the tundish enclosure. From the tundish, the molten steel flows into the enclosed caster strands. The semi-molten steel is then cut into billets by oxy-fuel cutting torches. The four cutting torches have a combined rated capacity of 4,413 cubic feet of natural gas per hour. EUCASTER also includes a 0.4 MMBtu/hour, natural-gas-fired, internally vented process heater that preheats the submerged entry nozzle (SEN) prior to it being inserted into the caster mold. Molten metal is added after the SEN is in place.	06/01/2013	FGBLDGFUG FGGHG
EUCASTERCOOLTWR	Cooling tower for caster process water. Maximum water flow rate for cooling tower is 1,630 gallons per minute.	06/01/2013	FGGHG
EUBILLETREHEAT-WB	A walking billet reheat furnace equipped with Ultra-Low Nox Burners with the total heat input capacity of 260.7 MMBtu/hr.	01/04/2013/ 01/27/2015	FGGHG
EUGASTANK	This emission unit is for the existing stationary gasoline dispensing facilities (GDFs) located at an area source of hazardous air pollutants (HAPs) that have a maximum monthly gasoline throughput of one of the following: 1. Less than 10,000 gallons	1997	NA

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Section 1 – Gerdau Macsteel Monroe Mill

ROP No: MI-ROP-B7061-2016
Expiration Date: December 1, 2021
PTI No: MI-PTI-B7061-2016

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUADMINGEN	Emergency generator for administration building (natural gas). 203 HP	2009	FGNSPS SI-ICE
EUFINISHINGGEN	Emergency generator for finishing (diesel). 229 HP.	2005	FGMACT-ZZZZ-EMERGENCY RICE
EUMAINPUMPHOUSEGEN	Emergency generator for main pump house. 200 HP.	Pre-2000	FGMACT-ZZZZ-EMERGENCY RICE
EULADLEPREHEAT2	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, two new 14 MMBTU/hr natural gas-fired ladle preheaters in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.	PTI 75-18 Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD FGGHG

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EUEAF
EMISSION UNIT CONDITIONS

DESCRIPTION

The electric arc furnace (EAF) melts steel scrap in a batch operation. The EAF is a refractory lined cylindrical vessel with a bowl-shaped hearth and dome shaped roof. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. The EAF is controlled by DEC followed by a baghouse. The exhaust gases are cooled using a water quench system prior to baghouse control.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGGHG

POLLUTION CONTROL EQUIPMENT

DVBAGHOUSE-01, and Direct Evacuation Control (DEC) and CO and VOC reaction chamber.

I. EMISSION LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	3%[2]	6-minute average	EUEAF baghouse stack	SC VI.A.2	**R 336.2810 40 CFR 60.272a(a)(2)**
2. Visible Emissions	6%[2]	6-minute average	EUEAF Shop Building	SC VI.A.6	**40 CFR 60.272a(a)(3)**
3. PM	0.0052 gr/dscf[2]	Test Protocol*	EUEAF	SC V.A.1	**40 CFR 60.272a(a)(1)**
*Test Protocol specifies averaging time.					

4. Visible emissions from openings and vents in the upper half of the EUEAF building portion of the facility shall not exceed a six-minute average of 0 percent opacity during operation of the electric arc furnace.[2] **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

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B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	3%[2]	6-minute average	EUEAF baghouse stacks	SC VI.B.2	**R 336.1362? R 336.2810 40 CFR 60.272a(a)(2)**

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Visible Emissions	6%[2]	6-minute average	Vents and openings in the upper portion of the EUEAF portion of the Melt Shop building including the roof that may receive fugitive emissions from the EAF.	SC VI.B.6	R 336.1331? R 336.2803? R 336.2804? 40 CFR 60.272a(a)(3)
3. PM	0.0052 gr/dscf[2]	Test Protocol*	EUEAF	SC V.A.1	40 CFR 60.272a(a)(1)
4. PM	0.0018 gr/dscf[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.1225 R 336.1331 CFR 60.272a(a)(1)
5. PM	7.84 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.1331 R 336.2803 R 336.2804
6. PM	32.15 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.1331 R 336.2803 R 336.2804
7. PM10	12.91 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.2803 R 336.2804 R 336.2810
8. PM10	49.7 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.2803 R 336.2804 R 336.2810
9. PM2.5	12.91 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.2803 R 336.2804
10. PM2.5	49.7 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.1205 R 336.2803 R 336.2804
11. SO2	0.25 lb/ton liquid steel[2]	Monthly average	EUEAF Baghouse	SC VI.B.15	R 336.2803 R 336.2804 R 336.2810
12. SO2	32.5 pph[2]	Hourly	EUEAF Baghouse	SC VI.B.14	R 336.2803 R 336.2804 R 336.2810
13. SO2	112.5 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.2803 R 336.2804 R 336.2810
14. CO	2.0 lb/ton liquid steel[2]	Monthly average	EUEAF Baghouse	SC VI.B.14 SC VI.B.15	R 336.2804 R 336.2810
15. CO	260.0 pph[2]	Hourly	EUEAF Baghouse	SC VI.B.14	R 336.2804 R 336.2810

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
16. CO	900 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.2804 R 336.2810
17. NOx	0.27 lb/ton liquid steel[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.2803 R 336.2804 R 336.2810 R 336.2908
18. NOx	35.1 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.2803 R 336.2804 R 336.2810 R 336.2908
19. NOx	121.5 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.2803 R 336.2804 R 336.2810 R 336.2908
20. VOC	0.1 lb/ton liquid steel[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.1702(a)
21. VOC	13.0 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.1702(a)
22. VOC	45.0 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.1702(a)
23. Lead	0.10 pph[2]	Hourly	EUEAF Baghouse	SC V.A.1	R 336.2802(4)(d)
24. Lead	0.4 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.2802(4)(d)
25. Mercury (as Hg)	0.033 pph[1]	Hourly	EUEAF Baghouse	SC V.A.2	R 336.1224 R 336.1225 40 CFR 63.108685
26. Mercury (as Hg)	271 lb/year[1]	12-month rolling time period as determined at the end of each calendar month	EUEAF Baghouse	SC VI.B.15	R 336.1224 R 336.1225 40 CFR 63.108685

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Underlying Applicable Requirement
NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

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1. The permittee shall not melt any radioactive scrap metal in the electric arc furnace.[2] **(40 CFR 52.21)**

2. The permittee shall not transfer material to the LMF from the EAF without a ladle cover.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 226.1702, R 226.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. The permittee shall not operate EUEAF unless the CO and VOC reaction chamber, DEC canopy hood, quench system, and baghouse are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

2. The permittee shall not operate EUEAF unless the combustion controls, including real time process optimization (RTPO) and the oxy-fuel burners are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

3. The permittee shall not operate EUEAF unless the transferring of liquid steel to the LMF ladles is accomplished by tapping the bottom of the unit.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the visible emissions from the FGMELTSHOP EAF baghouse stack (SVBH-01-Stack) on a continuous basis.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, R 336.2810, 40 CFR 64.6(c)(1)(ii))**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall not operate EUEAF unless the DEC, CO/VOC reaction chamber, the EAF canopy hood, quench system, the supersonic carbon injector system and DVBAGOUSE-01 are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810, R 336.1910)**

2. The permittee shall not operate EUEAF unless the combustion controls, including real time process optimization (RTPO) and the oxy-fuel burners are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810, R 336.2908)**

3. The permittee shall not operate EUEAF unless the transferring of liquid steel to the LMF ladles is accomplished by tapping the bottom of the unit.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the visible emissions from the EUEAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) on a continuous basis.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, R 336.2810)**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the SO2 and CO emissions and exhaust flow rate on a continuous basis, from the EUEAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2).[2] **(R 336.2802, R 336.2810)**

6. The permittee shall not operate the EUEAF unless the lime injection system for DVBAGHOUSE-01 that is used to precoat the bags is installed and operating properly.[2] **(R 336.1910, R 336.2802, R 336.2810)**

7. The permittee shall not operate the EUEAF unless the air-to-fuel ratio for the EAF burner is maintained to minimize NOx emissions.[2] **(R 336.1910, R 336.2908)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. Within 180 days from the data of the official notice of completion of the modification approved under PTI 75-18, and once every five years thereafter, the permittee shall verify the visible emissions, PM, PM10, PM2.5, NOx, VOC and Lead emission rates from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1702, R 226.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.272a)**

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2. Within 180 days from the data of the official notice of completion of the modification approved under PTI 75-18, and once every five years thereafter, the permittee shall verify the mercury (as Hg) emission rate from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1224, R 226.1225, R 336.1228, 40 CFR 63.10685)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from the EAF baghouse stack (SVBH-01-Stack) of FGMELTSHOP. The permittee shall operate the COM system to meet the timelines, requirements and reporting detailed in Appendix 9-1 and shall use the COM data for determining compliance with SC I.1.[2] **(R 336.1205, R336.1224, R 336.1225, R336.1301, R 336.1331, R 336.2802, 40 CFR 60.273a(a))**

3. The permittee shall use the COMS to assure compliance with the PM limit. An excursion for PM shall be 2 consecutive 1-hour block average opacity values greater than 3%. This condition does not affect compliance with R 336.1301.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.272a(a)(2), 40 CFR 64.6(c)(1)(ii))**

4. Monitoring and recording of emissions and operating information is required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart AAa. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.274a)**

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5. The permittee shall monitor all incoming material to determine if there are any radioactive materials mixed into the load. Monthly records of any shipments containing radioactive scrap material shall be recorded and kept on file for at least five years.[2] **(40 CFR 52.21)**

6. The permittee shall perform a visible emissions observation for the roofline portion of the shop building containing EUEAF a minimum of once per calendar day during charging. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.1303)**

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7. The permittee shall perform a visible emissions observation for the vents and openings in the upper portion of the shop building containing EUEAF a minimum of once per calendar day while the electric arc furnace is operating. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 0% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and initiate prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

8. The permittee shall keep all records required per 40 CFR 60.276a on file at the facility and make available to the AQD District Supervisor upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a)**

9. The permittee shall maintain records of all shop opacity observations made in accordance with 40 CFR 60.273a(d). All shop opacity observations in excess of 6% shall indicate a period of excess emission, and shall be reported to the administrator semiannually, according to 40 CFR 60.7(c).[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(g))**

10. The permittee has the option of monitoring the baghouse that controls emissions from EUEAF with either a COMS or a bag leak detection system. If applicable, the permittee shall maintain the following records for each bag leak detection system required under 40 CFR 60.273a(e):

    a. Records of the bag leak detection system output.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(1))**

    b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(2))**

    c. An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(3))**

11. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emission unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). The specific corrective actions for an excursion are outlined in the Malfunction Abatement Plan. **(40 CFR 64.7(d))**

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12. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

13. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

14. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

15. The permittee shall verify, annually, that the direction of air flow at each natural draft opening (NDO) is into the non-fugitive enclosure, using a smoke test (i.e., smoke bomb, smoke tube) or an approved alternate method. The permittee shall notify the AQD District Supervisor in writing at least 15 days before the test is scheduled. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of air flow direction includes the submittal of a complete report of the test results to the AQD District Supervisor within 30 days following the date of the test. After two consecutive tests demonstrate that the direction of air flow at each NDO is into the non-fugitive enclosure, the permittee may submit a request for a change in the testing frequency to the AQD District Supervisor for review and approval.[2] **(R 336.1810)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate the COM system to meet the timelines, requirements and reporting detailed in Appendix 9-1 and shall use the COM data for determining compliance with SC I.B.1 for the average of the two baghouse stacks.[2] **(R 336.1205, R336.1224, R 336.1225, R336.1301, R 336.1331, R 336.2802, 40 CFR 60.273a(a))**

3. The permittee shall use the COMS to assure compliance with the PM limit. An excursion for PM shall be 2 consecutive 1-hour block average opacity values greater than 3%. This condition does not affect compliance with R 336.1301.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.272a(a)(2), 40 CFR 64.6(c)(1)(ii))**

4. The permittee shall maintain a record of emissions, monitoring and operating information as required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR, Part 60, Subpart AAa. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.274a)**

5. The permittee shall monitor all incoming material to determine if there are any radioactive materials mixed into the load. Monthly records of any shipments containing radioactive scrap material shall be recorded and kept on file for at least five years.[2] **(40 CFR 52.21)**

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6. The permittee shall conduct weekly visible emissions observations at the EAF portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the EAF is operating. At least two of the weekly EAF portion of the Melt Shop building visible emission observations per month shall cover a full Tapping cycle at the EAF. The permittee shall conduct the observations from a Method 9 sun compliant location where the EAF portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately perform a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings.[2] **(R 336.1301, R 336.1303, R 336.2803, R 336.2804, R 336.2810, 40 CFR Part 60 Subpart AAa))**

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7. The permittee shall keep all records required per 40 CFR 60.276a on file at the facility and make available to the AQD District Supervisor upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a)**

8. The permittee shall maintain records of all shop opacity observations made in accordance with 40 CFR 60.273a(d). Shop opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. All shop opacity observations in excess of 6% shall indicate a period of excess emission, and shall be reported to the administrator semiannually, according to 40 CFR 60.7(c).[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(g))**

9. The permittee has the option of monitoring each baghouse that controls emissions from EUEAF with either a COMS or a bag leak detection system. If applicable, the permittee shall maintain the following records for each bag leak detection system required under 40 CFR 60.273a(e):

   a. Records of the bag leak detection system output.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(1))**

   b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(2))**

   c. An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(3))**

10. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emission unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). The specific corrective actions for an excursion are outlined in the Malfunction Abatement Plan. **(40 CFR 64.7(d))**

11. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part,

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including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

12. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

13. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

14. The permittee shall continuously monitor and record, in a satisfactory manner, the SO2 and CO emissions and flow from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate each Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed In Appendix 9-1 and shall use the CERMS data for determining compliance with SC 1.B.11, 1.B.13, I..B.14, I..B.15, and I.B.16 for both stacks combined.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1602, R 336.1702, R 336.2802)**

15. The permittee shall keep the following records on a monthly base in accordance with SC VI.1:
    a. The annual emission rate of CO and SO2 based on CERMS data for a 12-month rolling time period.

    b. The annual emission rate of PM, PM10, PM2.5, NOx, VOC, Mercury, and Lead on a 12-month rolling time period determined at the end of each calendar month, either based on hours of operation and testing, or based on production and emission factors based on testing.

    c. The emissions of CO and SO2 as lb/ton of steel produced on a monthly average basis, by dividing the CERMS monthly mass of each pollutant by the monthly steel production. Monthly steel production values shall correspond with recordkeeping required under FGMELTSHOP SC VI.B.3.

    d. The amount of lime that is used to precoat bags in DVBAGHOUSE-01.

    e. The average air-to-fuel ratio for the EAF burner.

    The permittee shall keep the records on file at the facility in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. Each owner or operator shall submit a written report of exceedances of the control device opacity to the AQD District Supervisor semiannually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(b))**

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5. Operation at a furnace static pressure that exceeds the value established under 40 CFR 60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the AQD District Supervisor to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the AQD District Supervisor semiannually.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(c))**

6. The permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish the AQD District Supervisor a written report of the results of the test. This report shall include the information specified in 40 CFR 60.276a(f)(1)-(22).[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(f))**

7. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**

8. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

See Appendix 8-1

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VIII. STACK/VENT RESTRICTION(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirements shall apply:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirements shall apply:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK1	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**
2. SVBH-01-STACK2	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A, "General Provisions" and Subpart YYYYY, "Area Sources: Electric Arc Furnace Steelmaking Facilities".[2] **(40 CFR Part 63, Subparts A and YYYYY)**

2. The permittee shall comply with all applicable provisions of the New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A, "General Provisions" and Subpart AAa, "Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983".[2] **(40 CFR Part 60, Subparts A and AAa)**

3. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**

4. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUDUST-SILO
EMISSION UNIT CONDITIONS

DESCRIPTION

This silo stores dust generated from DVBAGHOUSE-01 until it is properly disposed.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

Bin vent fabric filter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.2 pph[2]	Test protocol*	EUDUST-SILO	SC.V1.1	**R 336.1331(1)(c)**
2. PM	0.8 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUDUST-SILO	SC VI.2	**R 336.1331**
*Test Protocol will specify averaging time					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUDUST-SILO unless the silo vent fabric filter is installed and operating properly.[2] **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1301, R 336.1303, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

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2. The permittee shall keep PM emission calculations on a monthly and 12-month rolling time period basis for EUDUST-SILO. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1225, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUROADS&PKG-01
EMISSION UNIT CONDITIONS

DESCRIPTION

Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.

Flexible Group ID: Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGGHG

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGGHG, FGMACTYYYYY

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POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

1. Visible emissions from all wheel loaders, all truck traffic, and each of the material storage piles, operated and maintained in conjunction with EUROADS&PKG-01, shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, R 336.2803, R 336.2804, R 336.2810, Act 451 Section 325.5525(j))**

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B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

1. Visible emissions from all wheel loaders, all truck traffic, and each of the material storage piles, operated and maintained in conjunction with EUROADS&PKG-01, shall not exceed a six-minute average of five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, R 336.2803, R 336.2804, R 336.2810, Act 451 Section 325.5525(j))**

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II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

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1. The permittee shall not operate EUROADS&PKG-01 unless an appropriate program for fugitive emissions control has been implemented and is maintained.[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**

2. The fugitive dust plan must include the following activities for EUROADS&PKG-01, or other activities that will result in equivalent control of fugitive emissions:[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**
   a. Dust suppressant will be applied to unpaved areas at least twice per month, weather permitting.
   b. The posted maximum vehicle speed within the plant shall not exceed 12 miles per hour.
   c. Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.
   d. South Road will be paved.

3. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient.[2] **(R 336.1371(5))**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

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1. The permittee shall not operate EUROADS&PKG-01 unless an appropriate program for fugitive emissions control has been implemented and is maintained.[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**

2. The fugitive dust plan must include the following activities for EUROADS&PKG-01, or other activities that will result in equivalent control of fugitive emissions:[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**
   a. Dust suppressant will be applied to unpaved areas at least twice per month, weather permitting.
   b. The posted maximum vehicle speed within the plant shall not exceed 12 miles per hour.
   c. The treatment of facility roadways, parking area, material storage areas, stockpile areas, slag transferring and hauling operations, and material handling operations.
   d. Paved areas must be wetted and swept twice a day. Wetting of the roads and sweeping may be omitted if weather allows natural wetting at the scheduled sweeping time. **(R 336.1371(5))**

3. The permittee shall operate EUROADS&PKG-01 according to the procedures outlined in the approved fugitive dust plan. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient.[2] **(R 336.1371(5))**

4. The permittee shall wet and sweep all paved roads twice a day. Wetting of the roads and sweeping may be omitted if weather allows natural wetting at the scheduled sweeping time.[2] **(R 336.1371(5))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), R 336.1372))**

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1. The permittee shall perform a non-certified visible emissions observation of EUROADS&PKG-01 at least once per day during yard activity, which includes the operation of vehicles on the South Road. The permittee shall initiate appropriate corrective action upon observation of visible emissions and shall keep a written record of each required observation and corrective action taken.[2] **(R 336.1301, R 336.1303)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the facility unless an AQD District approved fugitive dust control program is implemented and maintained. This program is designed to limit all fugitive dust emissions from the roadways, the material storage piles, the stock pile areas, and all of the Gerdau Monroe slag transferring and hauling operations throughout the plant.[2] **(R 336.1372, R 336.2810)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUFLINN
EMISSION UNIT CONDITIONS

DESCRIPTION

25 MMBTU/HR natural gas heat treat furnace.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_x	10.8 Tons[2]	Per 12-month rolling time period determined at the end of each calendar month	EUFLINN	SC VI.1 & 2	**R 336.1205**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn pipe-line quality natural gas in EUFLINN.[2] **(R 336.1205)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205)**

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2. The permittee shall keep natural gas usage records, acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EUFLINN. Based upon these records, the permittee shall calculate the NOx emissions from the EUFLINN. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the permittee shall use an emission factor of 100 pounds of NOx emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the AQD upon request.[2] **(R 336.1205)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

1. None of the operations within the EUFLINN shall be directly vented to the outside atmosphere.[1] **(R 336.1225)**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EULMF
EMISSION UNIT CONDITIONS

DESCRIPTION

The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. Emissions from EULMF are directed to DVLMFBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.

Flexible Group ID: Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDGFUG, FGGHG

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDGFUG, FGGHG, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVLMFBAGHOUSE

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVLMFBAGHOUSE for particulate control equipped with a lime injection system that is used primarily to control SO2 emissions.

I. EMISSION LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	5%[2]	6-minute average	LMF Baghouse stack	SC VI.A.1	**R 336.2810**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	6%[2]	6-minute average	EULMF Baghouse stack and West Ladle Bay Roof Monitor	SC VI.B.1	**R 336.2810**

II. MATERIAL LIMIT(S)

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Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall not operate EULMF, unless DVLMFBAGHOUSE is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not transfer material to EUVTD from EULMF without a ladle cover.[2] **(R 336.2810)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall not operate EULMF, unless DVLMFBAGHOUSE is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not transfer material to EUVTD from EULMF without a ladle cover.[2] **(R 336.2810)**

3. The permittee shall not operate the EUVTD from EULMF unless the lime injection system for DVLMFBAGHOUSE that is used to precoat the bags is installed and operating properly.[2] **(R 336.1910, R 336.2802, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.2810)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position. Operational position is defined as the ladle being underneath the evacuation hood.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:

1. The permittee shall perform a visible emissions observation for SVBHLMF-STACK a minimum of once per calendar day during operation of the LMF. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R336.1303)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall perform a visible emissions observation for SVBHLMF-STACK a minimum of once per week during operation of the LMF. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the stack exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken if any, and the time of completion of corrective action.[2] **(R 336.1301, R336.1303, R336.2810)**

2. The permittee shall conduct weekly visible emissions observations at the ladle bay portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the LMF is operating. The permittee shall conduct the observations from a Method 9 sun compliant location where the ladle bay portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately perform a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings.[2]

3. The permittee shall keep monthly records of the amount of lime that is used to precoat bags in DVLMFBAGHOUSE. The calculations/records shall be maintained in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

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3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110[2]	150[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUVTD
EMISSION UNIT CONDITIONS

DESCRIPTION

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

Two vacuum tank degassers which remove entrained gases from the molten metal. This emission unit does not include reheating. Controlled by the existing EAF baghouse. Emissions are directed to the DVBAGHOUSE-01 via removable covers or decks, which are located over the ladle while the process is operating.

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

Two vacuum tank degassers (VTD) which remove entrained gases from the molten metal. Only one station can be degassed at a time. This emission unit does not include reheating. The VTD emissions are routed to the LMF baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating

Flexible Group ID: Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDFUG, FGGHG

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After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGBLDFUG, FGGHG, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVBAGHOUSE-01

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVLMFBAGHOUSE

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

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1. The permittee shall not operate the EUVTD unless the process vessel roof is sealed and the baghouse control system is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirement shall apply:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the following requirement shall apply:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110[2]	150[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUCASTER
EMISSION UNIT CONDITIONS

DESCRIPTION

Molten steel produced by the electric arc furnace is delivered to the continuous caster in a ladle via the ladle metallurgy system and twin tank vacuum degasser. The molten steel is gravity fed from the bottom of the ladle to the tundish enclosure. From the tundish, the molten steel flows into the enclosed caster strands. The semi-molten steel is then cut into billets by oxy-fuel cutting torches. The four cutting torches have a combined rated capacity of 4,413 cubic feet of natural gas per hour. EUCASTER also includes a 0.4 MMBtu/hour, natural-gas-fired, internally vented process heater that preheats the submerged entry nozzle (SEN) prior to it being inserted into the caster mold. Molten metal is added after the SEN is in place.

Flexible Group ID: FGBLDGFUG, FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas Usage	36MMSCF/yr [2]	12-month rolling time period determined at the end of each calendar month	EUCASTER	SC VI.3	**R 336.2803 R 336.2804 R 336.2810**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The cutting torches of EUCASTER shall be equipped with oxy-fuel burners.[2] **(R 336.2810)**
2. The only fuel the permittee may burn in the cutting torches of EUCASTER is oxy-fuel, i.e. pipeline quality natural gas mixed with oxygen.[2] **(R 336.2810)**
3. The permittee shall only burn pipeline quality natural gas in the SEN process heater.[2] **(R 336.2810)**
4. The permittee shall operate EUCASTER using good combustion practices as described in the MAP.[2] **(R 336.2810)**

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IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the cutting torches of EUCASTER unless the oxy-fuel burners are installed, maintained and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810)**

2. The combined maximum design heat input rate of the cutting torches of EUCASTER shall not exceed 4.5 million British thermal units per hour (MMBtu/hr.) on a fuel heat input basis.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

3. The maximum design heat input rate of the SEN process heater shall not exceed 0.4 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis.[2] **(R 336.1224, R336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

4. The permittee shall not operate EUCASTER unless the liquid steel is tapped from the bottom of the ladle to the caster and sealed at the top of the caster.[2] **(R 336.2810)**

5. The permittee shall not operate EUCASTER unless the tundish is enclosed so that fugitive emissions do not occur from ladle tapping operations.[2] **(R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

2. The permittee shall retain design specification documentation of the heat input rating of the cutting torch oxy-fuel burners on file and make the information available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

3. The permittee shall monitor and record the natural gas usage on a monthly and 12-month rolling time period basis. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request.[2] **(R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

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VIII. STACK/VENT RESTRICTION(S)

1. Except for the steam generated from the caster cooling system, none of the operations within the EUCASTER shall be directly vented to the outside atmosphere.[1] **(R 336.1225)**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUCASTERCOOLTWR
EMISSION UNIT CONDITIONS

DESCRIPTION

Cooling tower for caster process water. Maximum water flow rate for cooling tower is 1,630 gallons per minute.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

Drift eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R 336.1301 R 336.1331**
2. PM10	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R 336.1331**
3. PM2.5	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R336.1331 R 336.2810**
*Test Protocol specifies averaging time.					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method
NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cooling tower shall not be operated unless the high efficiency drift eliminator is installed and operating properly.[2] **(R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall retain design specification documentation of the drift loss on file and make the information available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910, R 336.2810)**

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUBILLETREHEAT-WB
EMISSION UNIT CONDITIONS

DESCRIPTION

A walking beam billet reheat furnace equipped with Ultra-Low NOx burners with the total heat input capacity of 260.7 MMBtu/hr.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	5% (or 20% at startup**)[2]	6-minute average	EUBILLETREHEAT-WB	SC VI.4	**R 336.1301 R 336.2810**
2. CO	84 lb./MMSCF[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2804 R 336.2810**
3. CO	68.6 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.2804 R 336.2810**
4. NOx	0.07 lb./MMBTU[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
5. NOx	18.3 pph[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
6. NOx	57.9 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.2803 R 336.2804 R 336.2810**
7. VOC	5.5 lb./MMSCF[2]	Test Protocol*	EUBILLETREHEAT-WB	GC 13 SC VI.2	**R 336.1702(a)**
8. VOC	4.5 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.1702(a)**
9. GHG as CO2e	119 lb./MMBTU[2]	Test Protocol*	EUBILLETREHEAT-WB	GC 13, SC II.1	**R 336.2810**

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
10. GHG as CO2e	97,907 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.2810**

*Test Protocol will specify averaging time.
**Start-up conditions for this emission unit are defined as the time period from when a burner flame is first ignited until the unit reaches production operating conditions.

II. MATERIAL LIMIT(S)

1. The permittee shall only burn pipe-line quality natural gas in EUBILLETREHEAT-WB.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not burn more than 1,633 MMSCF/yr. of natural gas in EUBILLETREHEAT-WB based on a 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage from EUBILLETREHEAT-WB on a continuous basis.[2] **(R 336.1205(1)(a) & (3), R 336.1225, R 336.2803, R 336.2804)**

2. The permittee shall operate EUBILLETREHEAT-WB using good combustion practices as described in the MAP.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a device to continuously monitor and record the natural gas usage rate for EUBILLETREHEAT-WB.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not operate EUBILLETREHEAT-WB unless the Ultra-Low NOx burners are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once every five (5) years, the permittee shall verify NOx and CO emission rates from EUBILLETREHEAT-WB by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1205, R 336.1299, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1301, R 336.1303, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall keep the following information on a monthly basis for EUBILLETREHEAT-WB:

   a. CO, NOx, VOC, and CO2e mass emission calculations determining the monthly emission rate in tons per calendar month.

   b. CO, NOx, VOC, and CO2e mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall monitor and record the natural gas usage rate for EUBILLETREHEAT-WB on a monthly and 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall perform a visible emissions observation for EUBILLETREHEAT-WB at a minimum of once per calendar day during routine operations. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:[2] **(R 336.1301, R 336.1303)**

   a. The permittee shall continue to perform the visible emissions readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.

   b. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).

   c. If the results of the Federal Reference Test Method 9 visible emissions observation indicate a violation of the opacity standard specified in General Condition 11, the permittee shall immediately initiate corrective actions.[2]

   d. The permittee shall keep records of all Method 9 readings that were performed.

5. The permittee shall keep records for EUBILLETREHEAT-WB that document when it operates in start-up mode or normal operation mode as defined in SC I.1.[2] **(R 336.1301, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

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See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVREHEAT-FRN	96[2]	185[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EUGASTANK
EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit includes existing stationary gasoline dispensing facilities (GDFs) located at an area source of hazardous air pollutants (HAPs) that have a maximum monthly gasoline throughput of one of the following:

1. Less than 10,000 gallons

GDF means any stationary source which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine use solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Required measures for a gasoline dispensing facility (GDF) with Monthly Throughput <10,000 gallons:
   a. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. **(40 CFR 63.11116(a))**
   b. The permittee shall minimize gasoline spills. **(40 CFR 63.11116(a)(1))**
   c. Spills shall be cleaned up as expeditiously as practicable. **(40 CFR 63.11116(a)(2))**
   d. The permittee shall cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use. **(40 CFR 63.11116(a)(3))**
      i. Portable gasoline containers that meet the requirements of 40 CFR Part 59, Subpart F, are considered acceptable for compliance with paragraph (1)(d) of this section

2. The permittee shall provide Gasoline Throughput Records upon request by USEPA or EGLE: **(40 CFR 63.11116(b))**
   a. Facilities are not required to submit notifications or reports, but must have records available.

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IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep a record of gasoline throughput to be able to demonstrate that monthly throughput is less than 10,000 gallons and such record must be made available to USEPA or to EGLE within 24 hours of a request. **(40 CFR 63.11116(b))**

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the Gasoline Distribution GACT as specified in 40 CFR Part 63, Subpart CCCCCC. **(40 CFR Part 63, Subpart CCCCCC)**

2. If the permittee's affected source's throughput ever exceeds an applicable throughput threshold, then the permittee's affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold. **(40 CFR 63.11111(i))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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EULADLEPREHEAT2
EMISSION UNIT CONDITIONS

DESCRIPTION

Two new 14 MMBTU/hr natural gas-fired ladle preheaters in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.

Flexible Group ID: After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT

DVLMFBAGHOUSE, Low NOx Burner.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.08 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810 R 336.2908
2. SO2	0.0006 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810
3. CO	0.084 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810
4. PM	0.0076 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810
5. PM10	0.0076 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810
6. PM2.5	0.0076 lb/MMBTU[2]	Hourly	EULADLEPREHEAT2	SC V.A.1	R 336.2810

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II. MATERIAL LIMIT(S)

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

1. The permittee shall only burn pipe-line quality natural gas in EULADLEPREHEAT2.[2] **(R 336.1225, R 336/1702, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

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III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

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1. The permittee shall not operate EULADLEPREAT2 unless the Low-NOx Burner is installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810, R 336.2908)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

1. Within 60 days of achieving the maximum production rate permitted under PTI 75-18, but not later than 180 days after commencement of initial startup of EULADLEPREHEAT2, the permittee shall verify NOx, SO2, CO, PM, PM10 and PM2.5 emissions from EULADLEPREHEAT2 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates include the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. If the AQD and permittee both agree that actual field testing to verify emission rates are not technically feasible, then the permittee shall propose an alternate method for laboratory bench testing of EULADLEPREHEAT2. The AQD must approve this alternative bench testing method prior to the permittee testing under it. Verification of emission rates include the submittal of a complete report of the bench test within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 33.2804, R 336.2810, R 336.2908)**

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VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110[2]	150[2]	R 336.1225, R 336.2803, R 336.2804

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IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGENGINES	One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.	EUENGINES
FGMELTSHOP	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMELTSHOP is defined as: The Melt Shop includes the EUEAF, EULMF, and two vacuum tank degasser operations (EUVTD) at the facility.	EUEAF, EULMF, EUVTD
FGMELTSHOP	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMELTSHOP is defined as: The Melt Shop includes EUEAF, EULMF, EUVTD ladle preheaters (including EULADLEPREHEAT2), and other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2
FGBLDGFUG	Processes located in the portion of the shop building that houses the EUCASTER, EULMF, and EUVTD, which vent fugitive emissions indoors that may escape the building through the roof monitor, as well as processes or activities other than EUEAF which are located in the portion of the shop building that houses EUEAF and which vent fugitive emissions that may escape though building vents. A portion of the plant ventilation that is vented through the ladle bay roof monitor is controlled by the LMF baghouse.	EUCASTER, EULMF, EUVTD

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGGHG	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the conditions in this table requiring a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan apply to the emission units associated with PTI No. 102-12A.	EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB
FGGHG	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the conditions in this table requiring a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan apply to the emission units associated with PTI No. 75-18.	EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB, EULADLEPREHEAT2
FGMACTYYYYY	Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACTYYYYY is defined as: The affected source is an existing electric arc furnace (EAF) steelmaking facility that is part of an area source of hazardous air pollutant (HAP) emissions. The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63, Subpart YYYYY.	EUEAF
FGMACTYYYYY	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACTYYYYY is defined as: The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 EUROADS&PKG-01
FGNSPS-SI-ICE	This table contains requirements of the New Source Performance Standards for Stationary Spark Ignition - Internal Combustion Engines, 40 CFR 60 Subpart JJJJ for spark ignition (SI, i.e. natural gas/propane) emergency generators.	EUADMINGEN
FGMACT-ZZZZ-EMERGENCY RICE	Each existing emergency stationary reciprocating internal combustion engines (RICE) as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g)	EUFINISHINGGEN, EUMAINPUMPHOUSEGEN
FGRULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.	EUPAINTING EUTURNER EUMILLSAWBH
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUPARTSWASHER

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGLMFVTD	After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGLMFVTD is defined as: FGLMFVTD includes the LMF and VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).	EULMF, EUVTD, EULADLEPREHEAT2

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FGENGINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.

Emission Unit: EUENGINES

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_x	515 lb./1000 gal[2]	Test Method	FGENGINES	SC V.1	**R 336.1205(1)(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Diesel Fuel-Sulfur content	0.05 percent by weight[2]	Annual average	FGENGINES	SC VI.3	**40 CFR Part 72.7**
2. Diesel Fuel	136,000 gallons[2]	Per 12-month rolling time period	FGENGINES	SC VI. 1 & 4	**R 336.1205(1)(a) R 336.1220 R 336.1224 R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate FGENGINES in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction.[2] **(R 336.1912)**

2. The permittee shall burn only diesel fuel in FGENGINES.[1] **(R 336.1224, R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The total capacity from each unit included in FGENGINES shall not exceed 5 MW.[2] **(40 CFR Part 72.7)**

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of the NOx emission limit (515 pounds NOx per 1000 gallon fuel used) from one or more representative units of FGENGINES, by testing at owner's expense, in accordance with Department requirements may be required. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of the emission factor includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205(1)(a), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the fuel use for FGENGINES on a monthly basis.[2] **(R 336.1205(1)(a), R 336.1220, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction, any maintenance performed and any testing results for FGENGINES. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(R 336.1912)**

3. If any electricity produced by FGENGINES is sold to a utility power distribution system, the permittee shall keep records of the sulfur content calculated in percent by weight, on an annual average as required by SC II.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(40 CFR Part 72.7)**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period fuel use records for FGENGINES. The records must indicate the total amount of fuel used in FGENGINES. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(R 336.1205(1)(a), R 336.1220, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

1. The exhaust gases from FGENGINES shall be discharged unobstructed vertically upwards to the ambient air.[2] **(R 336.1225, 40 CFR 52.21(c) & (d))**

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IX. OTHER REQUIREMENT(S)

1. The permittee shall not replace or modify FGENGINES, or any portion of FGENGINES, unless all of the following conditions are met:[2] **(R 336.1201(a)(1))**

   a. The permittee shall update the general permit by submitting a new Process Information form (EQP5787) to the AQD Permit Section and District Supervisor identifying the existing and new equipment a minimum of 10 days before the equipment is replaced or modified.

   b. The permittee shall continue to meet all general permit to install applicability criteria after the replacement or modification is complete.

   c. The permittee shall keep records of the date and description of the replacement or modification.

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGMELTSHOP
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

The Melt Shop includes the EUEAF, EULMF, and EUVTD.

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

The Melt Shop includes the EUEAF, EULMF, EUVTD, ladle preheaters (including EULADLEPREHEAT2), and other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop.

Emission Units: EUEAF, EULMF, EUVTD (until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed)

EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 (after the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed)

POLLUTION CONTROL EQUIPMENT

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVBAGHOUSE-01 for the EAF and vacuum tank degassers, DEC for the EAF, CO and VOC reaction chamber for the EAF, and DVLMFBAGHOUSE for the LMF.

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

DVBAGHOUSE-01 for the EAF, DEC for the EAF, CO and VOC reaction chamber for the EAF, and DVLMFBAGHOUSE for the LMF and VTD.

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I. EMISSION LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf[2]	Test Protocol*	FGMELTSHOP Each baghouse individually	SC V.1	**R 336.1331**
2. PM	7.2 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1331 R 336.2803 R 336.2804**

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
3. PM	29.2 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1331 R 336.2803 R 336.2804**
4. PM10	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803 R 336.2804 R 336.2810**
5. PM10	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
6. PM2.5	0.1 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803 R 336.2804 R 336.2810**
7. PM2.5	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.1205 R 336.2803 R 336.2804**
8. PM2.5	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1205 R 336.2803 R 336.2804**
9. SO2	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
10. SO2	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
11. SO2	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
12. CO	2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A..4	**R 336.2804 R 336.2810**
13. CO	260 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.A.1 SC VI.A.4	**R 336.2804 R 336.2810**
14. CO	850 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2804 R 336.2810**

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
15. NOx	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2803 R 336.2804 R 336.2810**
16. NOx	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A..1	**R 336.2803 R 336.2804 R 336.2810**
17. NOx	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2803 R 336.2804 R 336.2810**
18. VOC	0.13 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A..1	**R 336.1702(a)**
19. VOC	16.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.1702(a)**
20. VOC	55.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.1702(a)**
21. Lead	0.09 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2802(4)(d)**
22. Lead	2.15 lb/day[2]	Calendar Day	FGMELTSHOP	SC VI.A.4	**R 336.2802(4)(d)**
23. Lead	0.37 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2802(4)(d)**
24. GHG (as CO_2e)	320 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.1	**R 336.2810**
25. GHG (as CO_2e)	134,396 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.A.4	**R 336.2810**
26. Mercury (as Hg)	0.033 pph[1]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.A.2	**R 336.1224 R 336.1225**
27. Mercury (as Hg)	271 lb/year[1]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC V.A.2	**R 336.1224 R 336.1225**

*Test Protocol shall specify averaging time.

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. GHGs as CO2e	256,694 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.B.4	R 336.2803 R 336.2804 R 336.2810
2. Visible Emissions*	6%[2]	6-minute average	EAF and Ladle Bay portions of the Melt Shop Building	EUEAF SC VI.B.6 & EULMF SC VI.B.2	40 CFR 60.272a(a)(3)

*Emission Limit and compliance method previously specified in EUEAF and EULMF.

II. MATERIAL LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following limitations:

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Steel Output	130 tons liquid steel per hour[2]	Based on a 24-hour calendar day average	FGMELTSHOP-	SC VI.A.4	R 336.2810
2. Steel Output	850,000 tons liquid steel per year[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.A.4	R 336.2810

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following limitations:

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Steel Output	130 tons liquid steel per heat[2]	Every Heat in EUEAF	FGMELTSHOP-	SC VI.B.2	R 336.2810 R 336.2908
2. Steel Output	900,000 tons liquid steel per year[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.B.2	R 336.2810 R 336.2908

III. PROCESS/OPERATIONAL RESTRICTION(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. The permittee shall not operate FGMELTSHOP unless the baghouse control systems, pollution control equipment and canopy hood are installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not operate each of the emission units in FGMELTSHOP for more than 8,200 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.2803, R 336.2804, R 336.2810)**

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B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall not operate FGMELTSHOP unless the baghouse control systems, pollution control equipment and canopy hood are installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not operate each of the emission units in FGMELTSHOP for more than 8,200 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.2803, R 336.2804, R 336.2810)**

3. Within 180 days after the completion of the modification permitted under PTI 75-18, the permittee shall review and update the facility Energy Efficiency Management Plan (EEMP), as necessary. Either an updated Plan or notification that the plan does not need to be updated, shall be submitted to the AQD District Supervisor. Thereinafter, the permittee shall not operate equipment covered by this permit unless the EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, and EULADDLEPREHEAT2. At a minimum, the EEMP shall be updated to include the following:

   a. Work practices to be followed to ensure optimal energy efficiency in the operation of all equipment necessary to operate the modified EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2 (in addition to the existing EUBILLETREHEATWB, and EUCASTER).
   b. A maintenance plan to be followed to ensure optimal energy efficiency of all equipment necessary to operate the modified EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2 (in addition to the existing EUBILLETREHEATWB, and EUCASTER) in accordance with manufacturer's recommendations.

   The permittee shall amend the EEMP within 180 days if any changes are deemed necessary, or upon request by the AQD District Supervisor. The permittee shall submit the EEMP and any amendments to the AQD District Supervisor for review and approval. **(R 336.2810)**

4. The permittee shall not operate an emission unit or process equipment included in this permit unless a maintenance and malfunction abatement plan (MAP) as described in Rule 911(2), for the emission unit or process equipment has been submitted to the AQD District Supervisor within 365 days of PTI 75-18 issuance and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The MAP shall address the following emission units and flexible groups:

   a. EUEAF for the CO and VOC reaction chamber, DEC, quench system, DVBAGHOUSE-01, and the oxy-fuel burners (in EUEAF)
   b. EULMF, EUVTD, and ladle bay roof monitor for DVLMFBAGHOUSE
   c. EUCASTER, defining good combustion practices for the oxy-fuel torches and requiring parameters for natural gas meter calibration.
   d. EUCASTERCOOOLTWR for the drift eliminator.
   e. EUBLILLETREHEATWB, for the Ultra-Low NOx Burners.
   f. EUDUST-SILO for the silo vent fabric filter.

   If an emission unit or flexible group specified in PTI 75-18 has not been installed or modified within 180 days of the issuance of PTI 75-18, then the permittee shall revise the MAP within 90 days after completion of the initial

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operating period for the new or modified emission unit or flexible group. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request of the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

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IV. DESIGN/EQUIPMENT PARAMETER(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:

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1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the SO2 and CO emissions and exhaust flow rate on a continuous basis, from the FGMELTSHOP (EAF) baghouse stack (SVBH-01-STACK).[2] **(R 336.2802, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirement:

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1. Once every five (5) years, the permittee shall verify visible emissions, PM, PM10, PM2.5, CO, NOx, VOC, SO2, Lead and CO2e emission rates from FGMELTSHOP by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. As used in these permit conditions, "start-up" means the time when FGMELTSHOP begins processing liquid steel after the facility has the capacity to operate at increased output and "initial trial operating period" means the period of time when FGMELSTSHOP is undergoing "Preproduction Approval Process" certification.[2] **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.272a)**

2. Once every five (5) years, the permittee shall verify the mercury emission rate from FGMELTSHOP by testing at owner's expense, in accordance with Department requirements. After the initial stack test, subsequent testing for mercury shall be conducted at least once every year for five years and once every 5 years thereafter. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[1] **(R 336.1224, R 336.1225, R 336.1228)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1901, R 336.2803, R 336.2804)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the SO2 and CO emissions and flow from the EAF baghouse stack (SVBH-01-STACK) of FGMELTSHOP. The permittee shall operate each

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Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed in Appendix 9-1 and shall use the CERMS data for determining compliance with SC I.9, I.10, I.11, I.12, I.13, I.14.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1602, R 336.1702, R 336.2802)**

3. The permittee shall monitor and record the 24-hour calendar day liquid metal production rate for the electric arc furnace and use the data to demonstrate compliance with SC II.1 and II.2 in a format approved by the AQD District Supervisor. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

4. The permittee shall keep the following records on a monthly basis:

   a. The hourly emission rates of PM, PM10, PM2.5, CO, SO2, NOx, VOC and Lead on a monthly average basis.
   b. The calendar day emission rate of lead on a month average.
   c. The annual emission rate of PM, PM10, PM2.5, CO, SO2, NOx, VOC and Lead, Mercury and CO2e on a 12-month rolling time period determined at the end of each calendar month.
   d. The emissions of CO and, SO2 as lb./ton of steel produced on a monthly average basis.

   The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1205 R 336.2803, R 336.2804, R 336.2810)**

5. The permittee shall monitor and record the hours of operation of FGMELTSHOP on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep records on file at the facility and make them available to the AQD District Supervisor upon request.[2] **(R 336.1225, R 336.2810)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1901, R 336.2803, R 336.2804)**

2. The permittee shall monitor and record the metal production rate per heat, per month, and per 12-month rolling time period for the electric arc furnace in a format approved by the AQD District Supervisor. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

3. The permittee shall monitor and record the hours of operation of each emission unit in FGMELTSHOP on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep records on file at the facility and make them available to the AQD District Supervisor upon request.[2] **(R 336.1225, R 336.2810, R 336.2908)**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period CO2e emission calculation records for FGMELTSHOP, as required by SC I.B.1. The permittee shall keep all records on files at the facility and make them available to the Department upon request. **(R 336.1810)**

See Appendix 10-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

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2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK-2	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**
2. SVLMF-STACK-2	110[2]	150[2]	**R 336.1225, R 336.2803, R 336.2804**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	**NA**

IX. OTHER REQUIREMENT(S)

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. The permittee shall provide written notification, within 14 days, to the EGLE-AQD upon completion of the modifications allowed under PTI 75-18. Completion of the modifications will be considered to occur following a 90-day period for startup and initial trial operation of the modified equipment. The notification shall be made to the AQD District Supervisor. (R 336.2810, R 336.2908)

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Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGBLDGFUG
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Processes located in the portion of the shop building that houses the EUCASTER, EULMF, and EUVTD, which vent fugitive emissions indoors that may escape the building through the roof monitor, as well as processes or activities other than EUEAF which are located in the portion of the shop building that houses EUEAF and which vent fugitive emissions that may escape through building vents. A portion of the plant ventilation that is vented through the ladle bay roof monitor is controlled by the LMF baghouse.

Emission Units: EUCASTER, EULMF, EUVTD

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	6%[2]	6-minute average	EUCASTER as measured at the roof monitors of FGBLDGFUG	SC VI.2	**R 336.1301 R 336.1365 R 336.2004(1)(l) R 336.2803 R 336.2804 R 336.2810**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1901, R 336.2803)**

2. The permittee shall perform visible emissions observations for FGBLDGFUG from the two uncontrolled ladle bay roof monitors and vents in the portions of the shop building containing material handling for EUEAF, as well as the portion of the shop building containing EULMF, EUVTD, and EUCASTER, a minimum of once per calendar day. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions, and initiate prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When the records are required, the records will include the time that the visible emissions were observed, identification on the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.1303)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the facility unless an AQD District approved fugitive dust control program is implemented and maintained. This program is designed to limit all fugitive dust emissions from the material storage piles and containers, and the Gerdau Monroe slag transferring and hauling operations throughout the plant.[2] **(R 336.2810)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGGHG
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The conditions in this table require a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan.

Emission Units: Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGGHG includes EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB,

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After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGGHG includes EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. GHG as CO2e	294,201 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGGHG	SC VI.2	**R 336.2810**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall develop and submit an approvable Energy Efficiency Management Plan (EEMP) to the AQD District Supervisor. Thereinafter, the permittee shall not operate the process equipment covered by FGGHG unless EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER. At a minimum, the EEMP shall specify the following:

   a. Work practices to be followed to ensure optimal energy efficiency in the operation of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER.
   b. A maintenance plan to be followed to ensure optimal energy efficiency of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER in accordance with manufacturer's recommendations.

   The permittee shall amend the EEMP within 180 days if any changes are deemed necessary, or upon request by the AQD District Supervisor. The permittee shall submit the EEMP and any amendments to the AQD District Supervisor for review and approval.[2] **(R 336.2810)**

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2. The permittee shall not operate an emission unit or process equipment included in FGGHG unless a maintenance and malfunction abatement plan (MAP) as described in Rule 911(2), for the emission unit or process equipment has been submitted to the AQD District Supervisor, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The MAP shall address the following emission units and flexible groups:

    a. EUEAF and EUVTD for the CO and VOC reaction chamber, Direct Evacuation Control (DEC), quench system, DVBAGHOUSE-01, and the oxy-fuel burners (in EUEAF)
    b. EULMF and ladle bay roof monitor for DVLMFBAGHOUSE
    c. EUCASTER, defining good combustion practices for the Oxy-fuel torches and requiring parameters for natural gas meter calibration.
    d. EUCASTERCOOLTWR for the drift eliminator.
    e. EUBILLETREHEAT-WB, for the Ultra-Low NOx Burners.
    f. EUDUST-SILO for the silo vent fabric filter.

The permittee shall amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.[2] **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804)**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period CO_2e emission calculation records for FG102-12A, as required by SC I.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

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VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGMACT-YYYYY
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.

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Emission Unit: Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACT-YYYYY includes EUEAF.

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After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACT-YYYYY includes EUEAF, EULMF, EUVTD, EULADLEPREHEAT2, EUROADS&PKG-01.

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POLLUTION CONTROL EQUIPMENT

Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed FGMACT-YYYYY includes DVBAGHOUSE-01.

I. EMISSION LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0052 grains/dscf[2]	Test Protocol*	EAF control device	SC V.1	**40 CFR 63.10686(b)(1)**
2. VE	6%[2]	Test Protocol*	Melt Shop**	SC V.2	**40 CFR 63.10686(b)(2)**

* Test protocol shall specify averaging time
** Melt shop emissions include only emissions from an EAF

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following emission limitations and requirements:

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM**	0.0052 grains/dscf[2]	Hourly	EAF control device	SC V.1	**40 CFR 63.10686(b)(1)**
2. Visible Emissions**	6%[2]	6-minute average	EUEAF*	SC V.2	**40 CFR 63.10686(b)(2)**

* Emissions include only emissions from an EAF
** These emission limits and associated compliance method were previously included in EUEAF

II. MATERIAL LIMIT(S)

A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

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1. For metallic scrap utilized in the EAF at the facility, the permittee must comply with the requirements in paragraph (a)(1) of 40 CFR 63.10685.[2] **(40 CFR 63.10685)**

   a. For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685(a)(1) (Pollution Prevention Plan), the scrap utilized shall meet the following requirements:[2] **(40 CFR 63.10685)**

      i. Scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.[2] **(40 CFR 63.10685(a)(1)(i))**

      ii. Scrap shall be depleted (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.[2] **(40 CFR 63.10685(a)(1)(ii)**

      iii. The requirements of 40 CFR 63.10685(a)(1) do not apply to the routine recycling of baghouse bag or other internal process or maintenance materials in the furnace.[2] **(40 CFR 63.10685(a)(1)(iv)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. For metallic scrap utilized in the EAF at the facility, the permittee must comply with the requirements in paragraph (a)(1) or (2) of 40 CFR 63.10685. The permittee may have certain scrap at the facility subject to paragraph (a)(1) and other scrap subject to paragraph (a)(2) provided the scrap remains segregated until charge make-up[2] **(40 CFR 63.10685)**

   a. For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685(a)(1) (Pollution Prevention Plan), the scrap utilized shall meet the following requirements:[2] **(40 CFR 63.10685)**

      i. Scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.[2] **(40 CFR 63.10685(a)(1)(i))**

      ii. Scrap shall be depleted (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.[2] **(40 CFR 63.10685(a)(1)(ii)**

      iii. The requirements of 40 CFR 63.10685(a)(1) do not apply to the routine recycling of baghouse bag or other internal process or maintenance materials in the furnace.[2] **(40 CFR 63.10685(a)(1)(iv))**

   b. For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685(a)(2) (Restricted metallic scrap), the scrap utilized shall meet the following requirements:

      i. For the production of steel other than leaded steel, the permittee must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engines blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids. **(40 CFR 63.10685(a)(2)**

      ii. For the production of leaded steel, the permittee must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of section 40 CFR 63.10685. **(40 CFR 63.10685(a)(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

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A. Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall implement and maintain an approved Pollution Prevention Plan by the applicable compliance date specified in 40 CFR 63.10680. The Pollution Prevention Plan shall be kept on site and include the following, as applicable:

   a. Control (to the extent practicable) of chlorinated plastics, lead, and free organic liquids per 40 CFR 63.10685(a)(1)(i-iv).

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   b. Provisions to meet the mercury requirements as specified in 40 CFR 63.10685(b). The permittee shall revise the plan within 60 days after a change occurs.

   The permittee shall submit the scrap pollution prevention plan to the permitting authority for approval. The permittee shall operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. The permittee may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permittee shall keep a copy of the plan onsite, and must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties.[2] **(40 CFR 63.10685)**

B. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall comply with the following requirements:

1. The permittee shall implement and maintain an approved Pollution Prevention Plan by the applicable compliance date specified in 40 CFR 63.10680. The Pollution Prevention Plan shall be kept on site and include the following, as applicable:

   a. Control (to the extent practicable) of chlorinated plastics, lead, and free organic liquids per 40 CFR 63.10685(a)(1)(i-iv) and/or restricted metallic scrap provisions in 40 CFR 63.10685(a)(2).

   b. Provisions to meet the mercury requirements as specified in 40 CFR 63.10685(b).

   The permittee shall revise the plan within 60 days after a change occurs. The permittee shall submit the scrap pollution prevention plan to the permitting authority for approval. The permittee shall operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. The permittee may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permittee shall keep a copy of the plan onsite and must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties.[2] **(40 CFR 63.10685)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any EAF at the steelmaking facility unless a capture and collection system is properly installed, maintained, and operated. Collection from an EAF must include charging, melting and tapping operations.[2] **(40 CFR 63.10686(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days after the applicable compliance date specified in 40 CFR 63.10681, the permittee shall conduct a performance test to demonstrate initial compliance with PM emission limits for each EAF. The permittee shall

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conduct the performance test as specified in §63.7 and 40 CFR 60.275a, and 40 CFR 63.10686(d)(1)(i)-(vi). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(40 CFR 63.10686(d)(1))**

2. The permittee shall conduct each opacity test for melt-shop fugitive emissions according to the requirements in §63.6(h) and Method 9 of Appendix A-4 of 40 CFR Part 60. When emissions from an EAF vessel are combined with emissions from emission sources not subject to this subpart, compliance with the melt shop opacity limit shall be based on emissions from only the emission sources subject to this subpart. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(40 CFR 63.10686(d)(2))**

3. During any performance test, the permittee shall monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test.[2] **(40 CFR 63.10686(d)(3)))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records for the Pollution Prevention Plan in SC II.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(40 CFR 63.10685(c)(1)(i) & (2))**

2. The permittee shall comply with the requirements of the General Provisions of 40 CFR Part 63, Subpart A according to Table 1 in 40 CFR Part 63, Subpart YYYYY.[2] **(40 CFR 63.10690(a))**

3. The notification of compliance status required by 40 CFR 63.9(h) shall include each applicable certification of compliance, signed by a responsible official, according to 40 CFR 63.10690(b)(1)-(6).[2] **(40 CFR 63.10690(b))**

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the permittee shall also comply with the following requirement:

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1. The permittee shall keep records, on a monthly basis, as required by 40 CFR 63.10685(c), concerning the Pollution Prevention Plan, or records that the scrap does not contain motor vehicle scrap, as applicable. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 63.10685(c)(1)(i) & (2))**

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VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. If the permittee is subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10685(b)(1), the permittee shall submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports shall include a certification that the permittee has conducted inspections or taken other means of corroboration as required under 40 CFR 63.10685(b)(1)(ii)(C). This information may be included in the semiannual compliance reports required under SC VII.2.[2] **(40 CFR 63.10685(c)(1)(ii))**

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5. The permittee shall submit semiannual compliance reports regarding the control of contaminants from scrap according to the requirements in 40 CFR 63.10(e). The report must clearly identify any deviation from the requirements in 40 CFR 63.10685(a) and (b) and the corrective action taken. The permittee shall identify which compliance option in paragraph (b) applies to each scrap provider, contract, or shipment.[2] **(40 CFR 63.10685(c)(3))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart YYYYY for Area Sources: Electric Arc Furnace Steel Making Facilities by the initial compliance date.[2] **(40 CFR Part 63, Subparts A and YYYYY)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGNSPS-SI-ICE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This table contains requirements of the New Source Performance Standards for Stationary Spark Ignition - Internal Combustion Engines, 40 CFR Part 60, Subpart JJJJ for spark ignition (SI, i.e natural gas/propane) emergency generators.

Emission Unit: EUADMINGEN

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
***Spark Ignition Engines* HP≥130, 2009 Model Years and Later**					
1. NOx	2.0 g/HP-hr. (160 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**
2. CO	4.0 g/HP-hr. (540 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**
3. VOC	1.0 g/HP-hr. (86 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**

*beginning model year

4. Emergency engines manufactured after January 1, 2009, which are greater than or equal to 25 horsepower (HP) must comply with the emission standards in Table 1 of 40 CFR Part 60, Subpart JJJJ (with the exception of gasoline and rich burn engines that use liquefied petroleum gas [LPG]).[2] **(40 CFR 60.4233(d))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the emergency generators for more than 500 hours per year.[2] **(R 336.1213(3)**

2. The permittee shall operate each emergency generator according to the requirements in paragraphs below:

   a. There is no time limit on the use of emergency stationary RICE in emergency situations.[2] **(40 CFR 60.4243(d)(1))**

   b. The permittee may operate each emergency stationary ICE for a maximum of 100 hours per calendar year for any of the following:

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i. For maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission authority or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.[2] **(40 CFR 60.4243(d)(2)(i))**

3. The permittee may operate the emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.[2] **(40 CFR 60.4243(d)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip the SI generator with a non-resettable hour meters to track the number of operating hours.[2] **(40 CFR 60.4237)**

2. Except as provided in SC IV.3, and SC V.1, the engine must be installed and configured according to the manufacturer's emission-related specifications.[2] **(40 CFR 60.4243(a)(1))**

   a. Operate and maintain the stationary SI ICE and control device according to the manufacturer's emission-related written instructions.

   b. Adjust engine settings according to and consistent with the manufacturer's instructions, and your stationary SI ICE will not be considered out of compliance.

   c. Meet the requirements of 40 CFR Part 1068, Subparts A to D, as applicable.

3. If the engine and control device, if applicable, is not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered non-certified and you must demonstrate compliance as follows:[2] **(40 CFR 60.4243(a)(2)(ii),(iii))**

   a. For each stationary SI ICE greater than or equal to 100 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. If the engine and control device (if applicable) is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:[2] **(40 CFR 60.4243(a)(2)(ii))**

   a. For each stationary SI ICE greater than or equal to 100 HP and less than 500 HP conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Except as provided in SC IV.2 and SC V.1 for 2009 model year and later engines, the permittee must comply with the emission standards specified in 40 CFR 60.4233(d) by purchasing an engine certified to the emission standards in Table 1 to Subpart JJJJ for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.[2] **(40 CFR 60.4243(a))**

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2. Records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter.[2] **(40 CFR 60.4245(b))**

3. Record the time of operation of the engine and the reason the engine was in operation during that time.[2] **(40 CFR 60.4245(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the SI ICE NSPS, 40 CFR Part 60, Subpart JJJJ.[2] **(40 CFR Part 60, Subpart JJJJ)**

2. Compliance with this Flexible Group represents compliance with 40 CFR Part 63, Subpart ZZZZ, and 40 CFR Part 60, Subpart JJJJ.[2] **(40 CFR Part 63, Subpart ZZZZ, 40 CFR Part 60, Subpart JJJJ)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGMACT-ZZZZ-EMERGENCY RICE FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Each existing emergency stationary reciprocating internal combustion engines (RICE) as identified within 40 CFR Part 63, Subpart ZZZZ, 40 CFR 63.6590(a)(1), and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g)

Compliance date – May 3, 2013 for CI Engines

Emission Units: EUFINISHINGGEN, EUMAINPUMPHOUSEGEN

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain any affected RICE, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[2] **(40 CFR 63.6605(b))**

2. The permittee shall operate each existing emergency stationary RICE according to the requirements in paragraphs below:

   a. There is no time limit on the use of emergency stationary RICE in emergency situations.[2] **(40 CFR 63.6640(f)(1))**

   b. The permittee may operate each emergency stationary RICE for a maximum of 100 hours per calendar year for any of the following purpose: **(40 CFR 63.6640(f)(2))**

      i. For maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission authority or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.[2] **(40 CFR 63.6640(f)(2)(i))**

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c. The permittee may operate each emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year operation provided for maintenance and testing in SC III.2.b. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.[2] **(40 CFR 63.6640(f)(4))**

3. The permittee shall comply with the following requirements, for each existing emergency stationary RICE, by the applicable compliance date.[2] **(40 CFR 63.6603, Table 2d)**

   a. **For CI Engines:**
      i. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.5.
      ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.
      iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

4. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6603 and as listed in SC III.2. The oil analysis program must be performed at the same frequency as oil changes are required. The analysis program must analyze the parameters and keep records as required in 40 CFR 63.6625(i) for CI engines or 40 CFR 63.6625(j) for SI engines.[2] **(40 CFR 63.6625(i) & (j))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each existing emergency stationary RICE with a non-resettable hour meter.[2] **(40 CFR 63.6625(f))**

2. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air-pollution control practice for minimizing emissions.[2] **(40 CFR 63.6625(e); 40 CFR 63.6640(a), Table 6)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. If using the oil analysis program for CI Engine(s), the permittee shall test for Total Base Number, viscosity and percent water content. **(40 CFR 63.6625(i))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep all records required by 40 CFR 63.6655 (except 63.6655(c)).[2] **(40 CFR 63.6655(a))**

2. The permittee shall maintain, at a minimum, the following records by the applicable compliance date:

   a. A copy of each notification and report that is submitted to comply with 40 CFR Part 63, Subpart ZZZZ and the documentation supporting each notification and report.[2] **(40 CFR 63.6655(a)(1))**

   b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.[2] **(40 CFR 63.6655(a)(2))**

   c. Records of all required maintenance performed on the air pollution control and monitoring equipment.[2] **(40 CFR 63.6655(a)(4))**

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d. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.[2] **(40 CFR 63.6655(a)(5))**

3. The permittee shall keep records as required in SC IV.2 to show continuous compliance with each emission or operating limit that applies.[2] **(40 CFR 63.6655(d), 40 CFR 63.6660)**

4. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the permittee's maintenance plan.[2] **(40 CFR 63.6655(e), 40 CFR 63.6660)**

5. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document: [2] **(40 CFR 63.6655(f), 40 CFR 63.6660)**

   a. How many hours are spent for emergency operation.
   b. What classified the operation as emergency.
   c. How many hours are spent for non-emergency operation.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to FGMACT-ZZZZ-EMERGENCY RICE. The permittee may choose an alternative compliance method not listed in FGMACT-ZZZZ-EMERGENCY RICE by complying with all applicable provisions required by Subpart ZZZZ for the compliance option chosen.[2] **(40 CFR 70.6(9), 40 CFR 63.9(j), 40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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FGRULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission Units: EUPAINTING, EUTURNER, and EUMILLSAWBH

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(i))**

2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(a)(ii))**

   a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(ii)(A))**

   b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(B))**

   c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(C))**

   d. The emission unit shall not emit any air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(a)(ii)(D))**

3. Each emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met: **(R 336.1290(a)(iii))**

   a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(a)(iii)(A))**

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b. The visible emissions from the emission unit are not more than five percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(a)(iii)(B))**

c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the EGLE, AQD Rule 290, Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**

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   a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**

   b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**

   c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**

   d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(a)(ii) and (iii). **(R 336.1213(3))**

   e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. **(R 336.1213(3), R 336.1290(c))**

2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**

   a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(b), R 336.1213(3))**

   b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate**. (R 336.1213(3))**

3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating

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conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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FGCOLDCLEANERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUPARTSWASHER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:

   a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(h))**

   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**

2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**

3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

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a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**

c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**

2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**

   a. A serial number, model number, or other unique identifier for each cold cleaner.

   b. The date the unit was installed, manufactured or that it commenced operation.

   c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).

   d. The applicable Rule 201 exemption.

   e. The Reid vapor pressure of each solvent used.

   f. If applicable, the option chosen to comply with Rule 707(2).

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**

4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

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See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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FGLMFVTD
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: FGLMFVTD includes the LMF and VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).

Emission Units: After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: EULMF, EUVTD, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT

After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed: DVLMFBAGHOUSE equipped with a lime injection system used to control the LMF, the VTD and fugitive emissions that exit the Melt Shop via the East Ladle Bay roof monitor vent.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf[2]	Hourly	FGLMFVTD	SC V.1	R 336.1331
2. PM	3.88 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.1331 R 336.2803 R 336.2804
3. PM	15.92 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.1331 R 336.2803 R 336.2804
4. PM10	8.95 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.2803 R 336.2804 R 336.2810
5. PM10	33.47 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.2803 R 336.2804 R 336.2810
6. PM2.5	8.95 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.1205 R 336.2803 R 336.2804
7. PM2.5	33.47 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.1205 R 336.2803 R 336.2804

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
8. SO2	13.05 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.2803 R 336.2804 R 336.2810
9. SO2	45.22 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.2803 R 336.2804 R 336.2810
10. CO	18.55 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.2804 R 336.2810
11. CO	70.69 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.2804 R 336.2810
12. NOx	10.3 pph[2]	Hourly	FGLMFVTD	SC V.1 SC VI.A.2	R 336.2803 R 336.2804 R 336.2810 R 336.2908
13. NOx	42.23 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.2803 R 336.2804 R 336.2810 R 336.2908
14. VOC	1.63 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.1702(a)
15. VOC	6.08 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.1702(a)
16. Lead	0.03 pph[2]	Hourly	FGLMFVTD	SC V.1	R 336.2802(4)(d)
17. Lead	0.13 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGLMFVTD	SC VI.A.2	R 336.2802(4)(d)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

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1. The permittee shall not operate FGLMFVTD unless DVLMFBAGHOUSE is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

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V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days from the date of the official notice of completion of the modification allowed under PTI 75-18, and once every five years thereafter, the permittee shall verify visible emissions, PM, PM10, PM2.5, CO, NOx, SO2, VOC, and Lead emission rates from FGLMFVTD by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date for the test.[2] **(R 336.1702, R336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, R 336.2908, 40 CFR 60.272a)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

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1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804)**

2. The permittee shall maintain a record of the emission rate of PM, PM10, PM2.5, CO, SO2, NOx, VOC and Lead on a monthly and 12-month rolling time period determined at the end of each calendar month. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

A. After the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed:

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Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110[2]	150[2]	R 336.1225

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			R 336.2803 R 336.2804

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

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APPENDICES-

Appendix 1-1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
EGLE	Michigan Department of Environment, Great Lakes and Energy	NO_x	Oxides of Nitrogen
		ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants		
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SDS	Safety Data Sheet	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

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Appendix 2-1. Schedule of Compliance

The permittee certified in this ROP application that the stationary source is in compliance with all applicable requirements of this ROP.

Appendix 3-1. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

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Appendix 4-1. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable

Appendix 5-1. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6-1. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B7061-2016. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

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Source-Wide PTI No MI-PTI-B7061-2016 is being reissued as Source-Wide PTI No. MI-PTI-B7061-2016.

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Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
75-18	NA	Melt Shop Optimization	EUEAF EULMF EUVTD EULADLEPREHEAT2 EUROADS&PKG-01 FGMELTSHOP FGLMFVTD FGMACT-YYYYY

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Appendix 7-1. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible group Special Conditions. Therefore, this appendix is not applicable

Appendix 8-1. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

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B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Appendix 9-1. Continuous Emission Monitoring Systems

A. CO and SO2 Monitoring Continuous Emission Rate Monitoring System (CERMS) Requirements.

For an existing CERMS: If the permittee has satisfied the installation and testing requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after the commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CERMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CERMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CERMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
CO	4
SO2	2
CERMS	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 6 of Appendix B to 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CERMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in special conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CERMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) A report of any periods that the CERMS exceeds the instrument range.
   e) If no exceedances or CERMS downtime occurred during the reporting period, the permittee shall report that fact.

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The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

B. Continuous Opacity Monitoring System (COMS) Requirements

For an existing COMS: If the permittee has satisfied the installation and performance specification requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required COMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the COMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.

7. The permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, “Performance Audits Procedures for Opacity Monitors”, or a procedure acceptable to AQD. The results of the annual audit shall be submitted to the AQD within 30 days after the end of the next calendar quarter in which the audit results are received.

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above limit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of COMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

   All monitoring data shall be kept on file for a period of at least five (5) years and made available to the AQD upon request.

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Appendix 10-1. Compliance Demonstration for SO_2 and CO Emission Limitations for FGMELTSHOP

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Until the construction and modifications associated with the capital expenditure project evaluated and allowed under PTI 75-18 have been completed, the Sulfur Dioxide and Carbon Monoxide emission limitations specified in FGMELTSHOP, SC I.A.9, I.A.10, I.A.12, and I.A.13 are combined limits for EUEAF, EULMF and EUVTD.

Emissions from EUEAF and EUVTD will be captured and directed to the DVBAGHOUSE-01. Controlled emissions from the baghouse will be emitted from SVBH-01-Stack. SVBH-01-Stack will be equipped with SO_2 and CO CERMS.

Emissions from EULMF will be captured and directed to the LMF Baghouse. Controlled emissions from the LMF Baghouse will be released from SVBHLMFBaghouse-STACK. Emissions from SVBHLMFBaghouse-STACK will be evaluated via periodic stack sampling.

Compliance with the emission limitations in FGMELTSHOP, SC I.A.9, I.A.10, I.A.12, and I.A.13 will be demonstrated as follows:

For SO_2

Compliance with the pound/ton of liquid steel and pound/hour SO_2 emission limitations specified in FGMELTSHOP SC I.A.9 and I.A.10, respectively, shall be demonstrated using the following algorithm:

FGMELTSHOP SO_2 lb/hr = EAF/VTD CEMS Lb/hr + LMF SO2 lb/hr (stack test value)

FGMELTSHOP SO_2 lb/ton = EAF/VTD CEMS Lb/ton + LMF SO2 lb/ton (stack test value)

For CO

Compliance with the pound/ton of liquid steel and pound/hour CO emission limitations specified in FGMELTSHOP SC I.A.12 and I.A.13, respectively, shall be demonstrated using the following algorithm:

FGMELTSHOP CO lb/hr = EAF/VTD CEMS Lb/hr + LMF CO lb/hr (stack test value)

FGMELTSHOP CO lb/ton = EAF/VTD CEMS Lb/ton + LMF CO lb/ton (stack test value)

SECTION 2 – Tube City IMS

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**

- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**

- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:" [2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUSLAGPLANT	Slag processing plant – consisting of a hopper/feeder with grizzly, two shaker screens and several belt conveyors and stackers, water sprays as needed	1989	FGPLANT PROC
EUDROPBALL	Large slag pieces broken into smaller pieces by dropballing	1989	FGPLANT PROC
EUROADS	Roadway emissions resulting from the transfer of slag	1989	FGPLANT PROC
EUSTOCKPILES	Slag stockpiles assorted to various size fractions	1989	FGPLANT PROC
EUSLAGPIT	Slag pit digging and dumping of molten slag	1989	FGPLANT PROC
EUSCRAPCUT	Large scrap pieces cut by either a torch or lance into smaller pieces	1989	FGPLANT PROC

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGPLANT PROC	Metal Recovery Processes	EUSLAGPLANT EUDROPBALL EUROADS EUSTOCKPILES EUSLAGPIT EUSCRAPCUT

FGPLANT PROC
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Metal Recovery Processes

Emission Units: EUSLAGPLANT, EUDROPBALL, EUROADS, EUSTOCKPILES, EUSLAGPIT, EUSCRAPCUT

POLLUTION CONTROL EQUIPMENT

Water Spray

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fugitive Dust	15% opacity[2]	15-minute average	EUSLAGPLANT (Slag Crushers)	SC VI.1 & 2	**R 336.1301 R 336.1331**
2. Fugitive Dust	10% opacity[2]	15-minute average	EUDROPBALL EUSLAGPIT EUSLAGPLANT (Belts conveyors, screens, and all transfer points on the belt conveyors)	SC VI.1 & 2	**R 336.1301 R 336.1331**
3. Fugitive Dust	5% opacity[2]	3-minute average[a,b]	EUROADS EUSTOCKPILES (Any road, lot, storage pile, or material handling activity at a storage pile)	SC VI.1 & 2	**Act 451, Section 5524, Paragraph (2) and Section 5525, Paragraph (j)**

[a] in accordance with Test Method 9D at Act 451, Section 5525, Paragraph (j)
[b] The provisions of this subsection shall not apply to storage pile material handling activities when wind speeds are in excess of 25 miles per hour (40.2 kilometers per hour).

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall implement the program for fugitive dust control specified in Appendix 3-2.[2] **(R 336.1371, Act 451 324.5524)**

2. For EUSCRAPCUT, the permittee shall submit a Best Management Practices (BMPs) plan for torch cutting within 60 days of the ROP issuance to the AQD District Supervisor for approval. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep, in a satisfactory manner, daily records of dust control activities for FGPLANT PROC. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(Act 451, Section 324.5524, R 336.1301, R 336.1371)**

2. The permittee shall perform a non-certified visible emission observation of the fugitive dust sources at least 5 days per week, excluding non-operating days, during March through October. The permittee shall initiate corrective action upon observation of visible emissions and shall keep a written or electronic record of each required observation and corrective action taken. **(R 336.1213(3))**

See Appendix 3-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1-2. Abbreviations and Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2-2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3-2. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGPLANT PROC.

FUGITIVE DUST CONTROL PLAN

PURPOSE: This plan provides dust control strategies for the areas adjacent to and associated with the metal recovery plant.

1. SITE MAINTENANCE.

a. The unpaved travel surfaces shall be treated with water, or other acceptable dust control agents as needed on a frequency sufficient to meet the visible emission opacity standard of 5% opacity specified in Michigan Act 451, Section 5524.

b. Stock piling will be performed in a manner that minimizes freefall drop distance.

c. Piles will be maintained to prevent fugitive dust. This may include the use of watering, covering and/or encrusting agents.

d. Any scrap or slag material spillage on roads shall be removed immediately.

2. MANAGEMENT OF FRONT-END LOADER OPERATIONS.

The front-end loader operator shall be directed to avoid overfilling the bucket of the loader and the feed hoppers to prevent spillage, and to minimize the drop height of the materiel when loading the feed hoppers or transferring material to stockpiles.

3. RECORDKEEPING.

Records of dust control activities on storage piles, travel surfaces and other surfaces where fugitive dust emissions occur shall be kept on file for a period of at least five years and made available to MDEQ staff upon request. The records will indicate the date, time, what was observed or the reason for the dust control activity (routine or other), and what action was taken.

Appendix 4-2. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5-2. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6-2. Permits to Install

The following table lists any Permit to Install and/or Operate, that relate to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. MI-PTI-B7061-2016. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
537-89A	Metal Recovery Plant	FGPLANT PROC

Appendix 7-2. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 8-2. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

October 29, 2018

PERMIT TO INSTALL
75-18

ISSUED TO
Gerdau MacSteel, Inc.

LOCATED AT
3000 Front Street
Monroe, Michigan

IN THE COUNTY OF
Monroe

STATE REGISTRATION NUMBER
B7061

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **September 18, 2018**	
DATE PERMIT TO INSTALL APPROVED: **October 29, 2018**	SIGNATURE: MaryAnn Dolehanty
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Section **Page**

Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUEAF	An electric arc furnace (EAF) with 130 tons of liquid steel per hour capacity used to melt steel scrap in a batch operation. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. Emissions are captured from the EAF via the use of a Direct Evacuation Control (DEC) system and separately using a canopy hood located directly above the EAF. DEC captured emissions go through a duct elbow that contains an adjustable gap opening to allow extra air to enter the system so that CO and hydrogen are combusted prior to entering a reaction chamber that acts to further reduce CO and VOC emissions. DEC emissions are then directed to a baghouse (DVBAGHOUSE-01). Emissions not captured by the DEC are captured by the canopy hood and are also sent to DVBAGHOUSE-01.	05/05/1978/ 01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY
EULMF	The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF emissions are routed to a baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating. Fugitive emissions from this process exit via the West Ladle Bay roof monitor vent.	01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EUVTD	Two vacuum tank degassers (VTD) which remove entrained gases from the molten metal. Only one station can be degassed at a time. This emission unit does not include reheating. The VTD emissions are routed to the LMF baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EULADLEPREHEAT2	A new 30 MMBTU/hr natural gas-fired ladle preheater will be installed in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.	Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EUROADS&PKG-01	Facility roadways, parking area, material storage areas, stockpile areas, permittee slag transferring and hauling operations, and material handling operations.	05/05/1978	FGMACTYYYYY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to:
EUEAF

DESCRIPTION: An electric arc furnace (EAF) with 130 tons of liquid steel per hour capacity used to melt steel scrap in a batch operation. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. Emissions are captured from the EAF via the use of a Direct Evacuation Control (DEC) system and separately using a canopy hood located directly above the EAF. DEC captured emissions go through a duct elbow that contains an adjustable gap opening to allow extra air to enter the system so that CO and hydrogen are combusted prior to entering a reaction chamber that acts to further reduce CO and VOC emissions. DEC emissions are then directed to a baghouse (DVBAGHOUSE-01). Emissions not captured by the DEC are captured by the canopy hood and are also sent to DVBAGHOUSE-01.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY

POLLUTION CONTROL EQUIPMENT: DVBAGHOUSE-01 and Direct Evacuation Control (DEC) and CO and VOC reaction chamber

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Visible Emissions	3%	6-minute average	EUEAF baghouse stacks	SC VI.2	R 336.1362, R 336.2810, 40 CFR 60.272a(a)(2)
2. Visible Emissions	6%	6-minute average	Vents and openings in the upper portion of the EUEAF portion of the Melt Shop building including the roof that may receive fugitive emissions from the EAF.	SC VI.7	R 336.1331, R 336.2803, R 336.2804, 40 CFR 60.272a(a)(3)
3. PM	0.0018 gr/dscf	Hourly	EUEAF Baghouse	SC V.1	R 336.1225, R 336.1331, 40 CFR 60.272a(a)(1)
4. PM	7.84 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.1331, R 336.2803, R 336.2804
5. PM	32.15 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1331, R 336.2803, R 336.2804
6. PM10	12.91 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810
7. PM10	49.7 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
8. PM2.5	12.91 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
9. PM2.5	49.7 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1205, R 336.2803, R 336.2804
10. SO_2	0.25 lb/ton liquid steel	Monthly average	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
11. SO_2	32.5 pph	Hourly	EUEAF Baghouse	SC VI.4	R 336.2803, R 336.2804, R 336.2810
12. SO_2	112.5 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
13. CO	2.0 lb/ton liquid steel	Monthly average	EUEAF Baghouse	SC VI.4 SC VI.5	R 336.2804, R 336.2810
14. CO	260.0 pph	Hourly	EUEAF Baghouse	SC VI.4	R 336.2804, R 336.2810
15. CO	900 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2804, R 336.2810
16. NO_x	0.27 lb/ton liquid steel	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810, R 336.2908
17. NO_x	35.1 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810, R 336.2908
18. NO_x	121.5 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810, R 336.2908
19. VOC	0.1 lb/ton liquid steel[1]	Hourly	EUEAF Baghouse	SC V.1	R 336.1702(a)
20. VOC	13.0 pph[1]	Hourly	EUEAF Baghouse	SC V.1	R 336.1702(a)
21. VOC	45.0 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1702(a)
22. Lead	0.10 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2802(4)(d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
23. Lead	0.4 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2802(4)(d)
24. Mercury (as Hg)	0.033 pph	Hourly	EUEAF Baghouse	SC V.2	R 336.1224, R 336.1225, 40 CFR 63.10685
25. Mercury (as Hg)	271 lb/year	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1224, R 336.1225, 40 CFR 63.10685

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not melt any radioactive scrap metal in EUEAF. **(40 CFR 52.21)**

2. The permittee shall not transfer material from EUEAF to the LMF without a ladle cover. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUEAF unless the DEC, CO/VOC reaction chamber, the EAF canopy hood, quench system, the supersonic carbon injector system and DVBAGHOUSE-01 are installed and operating properly. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810, R 336.1910)**

2. The permittee shall not operate EUEAF unless the combustion controls, including real time process optimization (RTPO) and the oxy-fuel burners are installed and operating properly. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810; R 336.2908)**

3. The permittee shall not operate EUEAF unless the transferring of liquid steel to the LMF ladles is accomplished by tapping the bottom of the unit. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the visible emissions from the EUEAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) on a continuous basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, R 336.2810)**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the SO_2 and CO emissions and exhaust flow rate on a continuous basis, from the EUEAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2). **(R 336.2802, R 336.2810)**

6. The permittee shall not operate the EUEAF unless the lime injection system for DVBAGHOUSE-01 that is used to precoat the bags is installed and operating properly. **(R 336.1910, R 336.2802, R 336.2810)**

7. The permittee shall not operate the EUEAF unless the air-to-fuel ratio for the EAF burner is maintained to minimize NO_x emissions. **(R 336.1910, R 336.2908)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC IX.1), and once every five years thereafter, the permittee shall verify the visible emissions, PM, PM10, PM2.5, NO_x, VOC, and Lead emission rates from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.272a)**

2. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC XI.1), and once every five years thereafter, the permittee shall verify the mercury (as Hg) emission rate from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.1228, 40 CFR 63.10685)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate the COM system to meet the timelines, requirements and reporting detailed in Appendix A and shall use the COM data for determining compliance with SC I.1 for the average of the two baghouse stacks. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, 40 CFR 60.273a(a))**

3. The permittee shall maintain a record of emissions, monitoring, and operating information as required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR, Part 60, Subpart AAa. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.274a)**

4. The permittee shall continuously monitor and record, in a satisfactory manner, the SO2 and CO emissions and flow from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate each Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed in Appendix B and shall use the CERMS data for determining compliance with SC I.10, I.12, I.13, I.14, and I.15 for both stacks combined. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1602, R 336.1702, R 336.2802)**

5. The permittee shall keep the following records on a monthly basis in accordance with SC VI.1:
   a) The annual emission rate of CO and SO_2 based on CERMS data for a 12-month rolling time period.
   b) The annual emission rate of PM, PM10, PM2.5, NO_x, VOC, Mercury, and Lead on a 12-month rolling time period determined at the end of each calendar month, either based on hours of operation and testing, or based on production and emission factors based on testing.
   c) The emissions of CO and SO_2 as lb/ton of steel produced on a monthly average basis, by dividing the CERMS monthly mass of each pollutant by the monthly steel production. Monthly steel production values shall correspond with recordkeeping required under FGMELTSHOP.
   d) The amount of lime that is used to precoat bags in DVBAGHOUSE-01.
   e) The average air-to-fuel ratio for the EAF burner.

   The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

6. The permittee shall monitor all incoming material to determine if there are any radioactive materials mixed into the load. Monthly records of any shipments containing radioactive scrap material shall be recorded and kept on file for five years. **(40 CFR 52.21)**

7. After 180 days of permit issuance, the permittee shall conduct weekly visible emission observations at the EAF portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the EAF is operating. At least two of the weekly EAF portion of the Melt Shop building visible emission observations per month shall cover a full Tapping cycle at the EAF. The permittee shall conduct the observations from a Method 9 sun compliant location where the EAF portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately conduct a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings. **(R 336.1301, R 336.1303, R 336.2803, R 336.2804, R 336.2810, 40 CFR Part 60 Subpart AAa)**

8. The permittee shall keep on file all records required per 40 CFR 60.276a on file at the facility and make available to the AQD District Supervisor upon request. **(40 CFR Part 60 Subpart AAa, 40 CFR 60.276a)**

9. The permittee shall maintain records of all shop opacity observations made in accordance with 40 CFR 60.273a(d). Shop opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. All shop opacity observations in excess of 6% shall indicate a period of excess emission, and shall be reported to the administrator semi-annually, according to §60.7(c). **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(g))**

10. The permittee has the option of monitoring each baghouse that controls emissions from EUEAF with either a COMS or a bag leak detection system. If applicable, the permittee shall maintain the following records for each bag leak detection system required under §60.273a(e):
    a) Records of the bag leak detection system output; **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(1))**
    b) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(2))**

c) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(3))**

VII. REPORTING

1. Each owner or operator shall submit a written report of exceedances of the control device opacity to the AQD District Supervisor semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(b))**

2. Operation at a furnace static pressure that exceeds the value established under 40 CFR 60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the AQD District Supervisor to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the AQD District Supervisor semiannually. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(c))**

3. The permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish the AQD District Supervisor a written report of the results of the test. This report shall include the information specified in 40 CFR Part 60.276a(f)(1)-(22)). **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(f))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK1	136	120	R 336.1225, R 336.2803, R 336.2804
2. SVBH-01-STACK2	136	120	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A, “General Provisions” and Subpart YYYYY, “Area Sources: Electric Arc Furnace Steelmaking Facilities”. **(40 CFR Part 63, Subparts A and YYYYY)**

2. The permittee shall comply with all applicable provisions of the New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A, “General Provisions” and Subpart AAa, “Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983”. **(40 CFR Part 60, Subparts A and AAa)**

The following conditions apply to:
EULMF

DESCRIPTION: The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF emissions are routed to a baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating. Fugitive emissions from this process exit via the West Ladle Bay roof monitor vent.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE for particulate control equipped with a lime injection system that is used primarily to control SO2 emissions.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Visible Emissions	6%	6-minute average	EULMF Baghouse stack and West Ladle Bay Roof Monitor	SC VI.1	R 336.2810

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EULMF unless the DVLMFBAGHOUSE is installed and operating properly. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not transfer material to EUVTD from EULMF without a ladle cover. **(R 336.2810)**

3. The permittee shall not operate the EUVTD from EULMF unless the lime injection system for DVLMFBAGHOUSE that is used to precoat the bags is installed and operating properly. **(R 336.1910, R 336.2802, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position. Operational position is defined as the ladle being underneath the evacuation lid. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.2810 910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall perform a visible emission observation for SVBHLMF-STACK a minimum of once per week during operation of the LMF. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the stack exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken if any, and the time of completion of the corrective action. **(R 336.1301, R 336.1303, R 336.2810)**

2. After 180 days of permit issuance, the permittee shall conduct weekly visible emission observations at the ladle bay portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the LMF is operating. The permittee shall conduct the observations from a Method 9 sun compliant location where the ladle bay portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately conduct a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings.

3. The permittee shall keep monthly records of the amount of lime that is used to precoat bags in DVLMFBAGHOUSE. The calculations/records shall be maintained in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUVTD

DESCRIPTION: Two vacuum tank degassers (VTD) which remove entrained gases from the molten metal. Only one station can be degassed at a time. This emission unit does not include reheating. The VTD emissions are routed to the LMF baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the EUVTD unless the process vessel roof is sealed, and the baghouse control system is installed and operating properly. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EULADLEPREHEAT2

DESCRIPTION: A new 30 MMBTU/hr natural gas-fired ladle preheater will be installed in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE, Low NOx Burner

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_X	0.08 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810, R 336.2908
2. SO_2	0.0006 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
3. CO	0.084 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
4. PM	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
5. PM10	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
6. PM2.5	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810

II. MATERIAL LIMITS

1. The permittee shall only burn pipe-line quality natural gas in EULADLEPREHEAT2. **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EULADLEPREHEAT2 unless the Low-NO_x Burner is installed and operating properly. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810, R 336.2908)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup of EULADLEPREHEAT2, the permittee shall verify NO_X, SO_2, CO, PM, PM10, and PM2.5 emissions from EULADLEPREHEAT2 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates include the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. If the AQD and permittee both agree that actual field testing to verify emission rates are not technically feasible, then the permittee shall propose an alternative method for laboratory bench testing of EULADLEPREHEAT2. The AQD must approve this alternative bench testing method prior to the permittee testing under it. Verification of emission rates include the submittal of a complete report of the bench test within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R336.2810, R 336.2908)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUROADS&PKG-01

DESCRIPTION: Facility roadways, parking area, material storage areas, stockpile areas, permittee slag transferring and hauling operations, and material handling operations.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

1. Visible emissions from all wheel loaders, all truck traffic, and each of the material storage piles, operated and maintained in conjunction with EUROADS&PKG-01, shall not exceed a six minute average of five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, R 336.2803, R 336.2804, R 336.2810, Act 451 Section 325.5525(j))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall operate EUROADS&PKG-01 according to the procedures outlined in the approved fugitive dust plan. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient. **(R 336.1371(5))**

2. The permittee shall wet and sweep all paved roads twice a day. Wetting of the roads and sweeping may be omitted if weather allows natural wetting at the scheduled sweeping time. **(R 336.1371(5))**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall perform a non-certified visible emission observation of EUROADS&PKG-01 at least once per day during yard activity, which includes the operation of vehicles on the South Road. The permittee shall initiate appropriate corrective action upon observation of visible emissions and shall keep a written record of each required observation and corrective action taken. **(R 336.1301, R 336.1303)**

2. The fugitive dust plan must include the following activities for EUROADS&PKG-01, or other activities that will result in equivalent control of fugitive emissions:[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**
   a) Dust suppressant will be applied to unpaved areas at least twice per month, weather permitting.
   b) The posted maximum vehicle speed within the plant shall not exceed 12 miles per hour.
   c) Treatment of facility roadways, parking area, material storage areas, stockpile areas, slag transferring and hauling operations, and material handling operations.
   d) Paved areas must be wetted and swept twice a day. Wetting of the roads and sweeping may be omitted if weather allows natural wetting at the scheduled sweeping time. **(R 336.1371(5))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMELTSHOP	The Melt Shop includes EUEAF, EULMF, EUVTD ladle preheaters (including EULADLEPREHEAT2), and other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2
FGLMFVTD	FGLMFVTD includes the LMF and the VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).	EULMF, EUVTD, EULADLEPREHEAT2
FGMACTYYYYY	The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 EUROADS&PKG-01

The following conditions apply to:
FGMELTSHOP

DESCRIPTION: The Melt Shop includes EUEAF, EULMF, EUVTD ladle preheaters (including EULADLEPREHEAT2), and other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop. .

Emission Units: EUEAF, EULMF, EUVTD, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT: DVBAGHOUSE-01, DVLMFBAGHOUSE

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. GHGs as CO2e	256,694 tpy	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.2	R 336.2803, R 336.2804, R 336.2810
2. Visible Emissions*	6%	6-minute average	EAF and Ladle Bay portions of the Melt Shop Building	EUEAF SC VI.7 & EULMF SC VI.2	40 CFR 60.272a(a)(3)
*Emission Limit and compliance method previously specified in EUEAF and EULMF					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Steel Output	130 tons liquid steel per heat	Every Heat in EUEAF	FGMELTSHOP	VI.2	R 336.2810; R 336.2908
2. Steel Output	900,000 tons liquid steel per year	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	VI.2	R 336.2810; R 336.2908

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate each of the emission units in FGMELTSHOP for more than 8,200 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

2. Within 180 days after official notice of completion of the modification (see SC IX.1), the permittee shall review and update the facility Energy Efficiency Management Plan (EEMP), as necessary. Either an updated Plan or notification that the plan does not need to be updated, shall be submitted to the AQD District Supervisor. Thereinafter, the permittee shall not operate equipment covered by this permit unless the EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2. At a minimum, the EEMP shall be updated to include the following:

a) Work practices to be followed to ensure optimal energy efficiency in the operation of all equipment necessary to operate the modified EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2 (in addition to the existing EUBILLETREHEATWB, and EUCASTER).
b) A maintenance plan to be followed to ensure optimal energy efficiency of all equipment necessary to operate the modified EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2 (in addition to the existing EUBILLETREHEATWB, and EUCASTER) in accordance with manufacturer's recommendations.

The permittee shall amend the EEMP within 180 days if any changes are deemed necessary, or upon request by the AQD District Supervisor. The permittee shall submit the EEMP and any amendments to the AQD District Supervisor for review and approval. **(R 336.2810)**

3. The permittee shall not operate an emission unit or process equipment included in this permit unless a maintenance and malfunction abatement plan (MAP) as described in Rule 911(2), for the emission unit or process equipment has been submitted to the AQD District Supervisor within 365 days of permit issuance and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The MAP shall address the following emission units and flexible groups:
   a) EUEAF for the CO and VOC reaction chamber, DEC, quench system, DVBAGHOUSE-01, and the oxy-fuel burners (in EUEAF)
   b) EULMF, EUVTD, and ladle bay roof monitor for DVLMFBAGHOUSE
   c) EUCASTER, defining good combustion practices for the oxy-fuel torches and requiring parameters for natural gas meter calibration.
   d) EUCASTERCOOLTWR for the drift eliminator.
   e) EUBILLETREHEATWB, for the Ultra-Low NO_x Burners.
   f) EUDUST-SILO for the silo vent fabric filter.

   If an emission unit or flexible group specified in this permit has not been installed or modified within 180 days of permit issuance, then the permittee shall revise the MAP within 90 days after completion of the initial operating period for the new or modified emission unit or flexible group. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.2803, R 336.2804)**

2. The permittee shall monitor and record the metal production rate per heat, per month, and per 12-month rolling time period for the electric arc furnace in a format approved by the AQD District Supervisor. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

3. The permittee shall monitor and record the hours of operation of each emission unit in FGMELTSHOP on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep records on file at the facility and make them available to the AQD District Supervisor upon request. **(R 336.1225, R 336.2810; R 336.2908)**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period CO_2e emission calculation records for FGMELTSHOP, as required by SC I.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1810)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall provide written notification, within 14 days, to the MDEQ-AQD upon completion of the modifications allowed under this permit to install (PTI 75-18). Completion of the modifications will be considered to occur following a 90-day period for startup and initial trial operation of the modified equipment. The notification shall be made to the AQD District Supervisor. **(R 336.2810; R 336.2908)**

2. The permittee shall provide 157.94 tons of NO_X offsets to the AQD prior to beginning construction of the changes approved under this permit (PTI: 75-18). **(R 336.2908)**

The following conditions apply to:
FGLMFVTD

DESCRIPTION: FGLMFVTD includes the LMF and the VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).

Emission Units: EULMF, EUVTD, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE equipped with a lime injection system used to control the LMF, the VTD and fugitive emissions that exit the Melt Shop via the East Ladle Bay roof monitor vent.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf	Hourly	FGLMFVTD	SC V.1	R 336.1331
2. PM	3.88 pph	Hourly	FGLMFVTD	SC V.1	R 336.1331, R 336.2803, R 336.2804
3. PM	15.92 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1331, R 336.2803, R 336.2804
4. PM10	8.95 pph	Hourly	FGLMFVTD	SC V.1	R 336.2803, R 336.2804, R 336.2810
5. PM10	33.47 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810
6. PM2.5	8.95 pph	Hourly	FGLMFVTD	SC V.1	R 336.1205, R 336.2803, R 336.2804
7. PM2.5	33.47 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1205, R 336.2803, R 336.2804
8. SO_2	13.05 pph	Hourly	FGLMFVTD	SC V.1	R 336.2803, R 336.2804, R 336.2810
9. SO_2	45.22 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810
10. CO	18.55 pph	Hourly	FGLMFVTD	SC V.1	R 336.2804, R 336.2810
11. CO	70.69 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2804, R 336.2810
12. NO_x	10.3 pph	Hourly	FGLMFVTD	SC V.1 SC V.2	R 336.2803, R 336.2804, R 336.2810, R 336.2908

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
13. NO_x	42.23 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810, R 336.2908
14. VOC	1.63 pph	Hourly	FGLMFVTD	SC V.1	R 336.1702(a)
15. VOC	6.08 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1702(a)
16. Lead	0.03 pph	Hourly	FGLMFVTD	SC V.1	R 336.2802(4)(d)
17. Lead	0.13 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2802(4)(d)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGLMFVTD unless DVLMFBAGHOUSE is installed and operating properly. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC IX.1), and once every five years thereafter, the permittee shall verify visible emissions, PM, PM10, PM2.5, CO, NO_x, SO_2, VOC, and Lead emission rates from FGLMFVTD by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810; R 336.2908, 40 CFR 60.272a)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.2803, R 336.2804)**

2. The permittee shall maintain a record of the emission rate of PM, PM10, PM2.5, CO, SO_2, NO_x, VOC and Lead on a monthly and 12-month rolling time period determined at the end of each calendar month. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stack listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

NA

The following conditions apply Source-Wide to:
FGMACT-YYYYY

DESCRIPTION: The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.
Emission Units: EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 EUROADS&PKG-01

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM**	0.0052 gr/dscf	Hourly	EAF control device	SC V.1	40 CFR 63.10686(b)(1)
2. Visible Emissions**	6%	6-minute average	EUEAF*	SC V.2	40 CFR 63.10686(b)(2)
* Emissions include only emissions from an EAF **These emission limits and associated compliance method were previously included in EUEAF					

II. MATERIAL LIMITS

1. For metallic scrap utilized in the EAF at the facility, the permittee must comply with the requirements in either paragraph (a)(1) or (2) of 40 CFR 63.10685. The permittee may have certain scrap at the facility subject to paragraph (a)(1) and other scrap subject to paragraph (a)(2) provided the scrap remains segregated until charge make-up. **(40 CFR 63.10685)**
   a) For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685 (a)(1) (*Pollution Prevention Plan*), the scrap utilized shall meet the following requirements:**(40 CFR 63.10685)**
      i) Scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace. **(40 CFR 63.10685(a)(1)(i))**
      ii) Scrap shall be depleted (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel. **(40 CFR 63.10685(a)(1)(ii)**
      iii) The requirements of 40 CFR 63.10685 (a)(1) do not apply to the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace. **(40 CFR 63.10685(a)(1)(iv)**
   b) For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685 (a)(2) (*Restricted metallic scrap*), the scrap utilized shall meet the following requirements:
      i) For the production of steel other than leaded steel, the permittee must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids (40 CFR 63.10685(a)(2).
      ii) For the production of leaded steel, the permittee must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of section 40 CFR 63.10685. **(40 CFR 63.10685(a)(2))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall implement and maintain an approved *Pollution Prevention Plan* by the applicable compliance date specified in 40 CFR 63.10680. The *Pollution Prevention Plan* shall be kept on site and include the following, as applicable:
   a) Control (to the extent practicable) of chlorinated plastics, lead, and free organic liquids (40 CFR 63.10685(a)(1)(i-iv) and/or restricted metallic scrap provisions of **40 CFR 63.10685(a)(2).**
   b) Provisions to meet the mercury requirements as specified in 40 CFR 63.10685(b).

   The permittee shall revise the plan within 60 days after a change occurs. The permittee shall submit the scrap pollution prevention plan to the permitting authority for approval. The permittee shall operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. The permittee may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permittee shall keep a copy of the plan onsite and must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties. **(40 CFR 63.10685)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any EAF at the steelmaking facility unless a capture and collection system is properly installed, maintained, and operated. Collection from an EAF must include charging, melting and tapping operations. **(40 CFR 63.10686(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after the applicable compliance date specified in 40 CFR 63.10681, the permittee shall conduct a performance test to demonstrate initial compliance with PM emission limits for each EAF. The permittee shall conduct the performance test as specified in §63.7 and 40 CFR 60.275a, and 40 CFR 63.10686(d)(1)(i)-(vi). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 63.10686(d)(1))**

2. The permittee shall conduct each opacity test for melt-shop fugitive emissions according to the requirements in §63.6(h) and Method 9 of Appendix A-4 of 40 CFR part 60. When emissions from an EAF vessel are combined with emissions from emission sources not subject to this subpart, compliance with the melt shop opacity limit shall be based on emissions from only the emission sources subject to this subpart. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 63.10686(d)(2))**

3. During any performance test, the permittee shall monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test. **(40 CFR 63.10686(d)(3)))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall keep records, on a monthly basis, as required by 40 CFR 63.10685(c), concerning the Pollution Prevention Plan, or records that the scrap does not contain motor vehicle scarp, as applicable. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 63.10685(c)(1)(i) & (2))**

2. The permittee shall comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 1 in 40 CFR Part 63 Subpart YYYYY. **(40 CFR 63.10690(a))**

3. The notification of compliance status required by §63.9(h) shall include each applicable certification of compliance, signed by a responsible official, according to §63.10690(b)(1)-(6). **(40 CFR 63.10690(b))**

VII. REPORTING

1. If the permittee is subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10685 (b)(1) the permittee shall submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports shall include a certification that the permittee has conducted inspections or taken other means of corroboration as required under 40 CFR 63.10685 (b)(1)(ii)(C). This information may be included in the semiannual compliance reports required under SC VII.2. **(40 CFR 63.10685(c)(1)(ii))**

2. The permittee shall submit semiannual compliance reports regarding the control of contaminants from scrap according to the requirements in §63.10(e). The report must clearly identify any deviation from the requirements in §63.10685 (a) and (b) and the corrective action taken. The permittee shall identify which compliance option in paragraph (b) applies to each scrap provider, contract, or shipment. **(40 CFR 63.10685(c)(3))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart YYYYY for Area Sources: Electric Arc Furnace Steel Making Facilities by the initial compliance date. **(40 CFR Part 63 Subparts A and YYYYY)**

APPENDIX A
Continuous Opacity Monitoring System (COMS) Requirements

For an existing COMS: If the permittee has satisfied the installation and performance specification requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required COMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the COMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.

7. The permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, “Performance Audits Procedures for Opacity Monitors”, or a procedure acceptable to AQD. The results of the annual audit shall be submitted to the AQD within 30 days after the end of the next calendar quarter in which the audit results are received.

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above limit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of COMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

   All monitoring data shall be kept on file for a period of five (5) years and made available to the AQD upon request.

APPENDIX B
CO and SO2 Monitoring
Continuous Emission Rate Monitoring System (CERMS)
Requirements

For an existing CERMS: If the permittee has satisfied the installation and testing requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after the commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CERMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CERMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CERMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
CO	4
SO2	2
CERMS	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 6 of Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CERMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in special conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CERMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) A report of any periods that the CERMS exceeds the instrument range.
   e) If no exceedances or CERMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of five years and make them available to the AQD upon request.

Startup, Shutdown, Malfunction Plan

Electric Arc Furnace

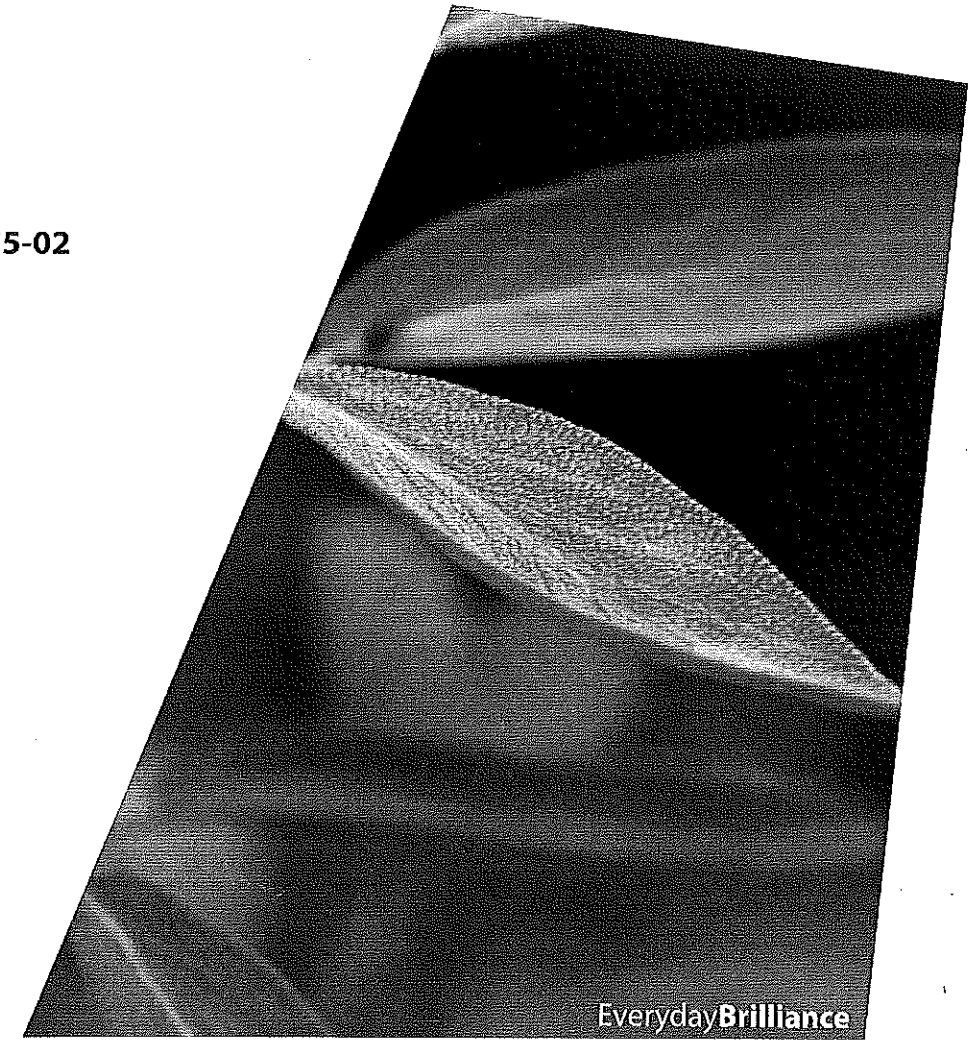
Steelmaking Facility at Gerdau MacSteel Monroe

Monroe, Michigan

Prpared by: NTH Consultants, Ltd.
608 S. Washington Avenue
Lansing, MI 48933

Prepared For:
Gerdau MacSteel
Monroe, Michigan

Project No. 73-080375-02
June 25, 2008



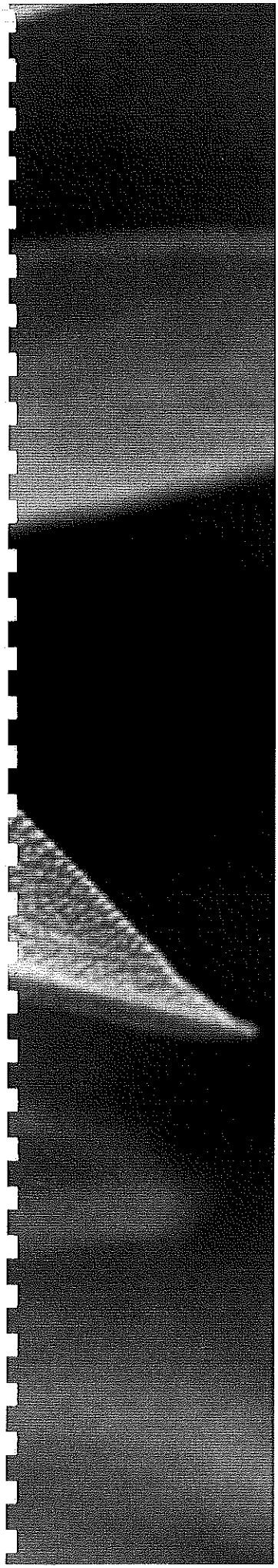


Table of Contents

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1.0 INTRODUCTION

Gerdau MacSteel Monroe is an electric arc furnace (EAF) steelmaking facility located in Monroe, Michigan producing engineered steel bars. The facility is an area source of hazardous air pollutants and is subject to 40 CFR Part 63 Subpart YYYYY – National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities (herein, "NESHAP").

Gerdau MacSteel Monroe is presenting this written plan as required by 40 CFR Part 63, Subparts A and YYYYY addressing the Startup, Shutdown and Malfunction (SSM) provisions. As described in 40 CFR 63.6(e)(3), this plan does not need to address any scenario that would not cause the EAF to exceed an applicable emission limitation in the relevant standard.

2.0 PROCESS AND POLLUTION CONTROL EQUIPMENT DESCRIPTION

The facility operates one EAF, installed in 1978, and modified in 1994. The emissions during melting and refining are captured through the Direct Evacuation Control (DEC) ductwork system. Gerdau MacSteel Monroe also uses a canopy hood to capture emissions that escape the DEC as well as emissions during charging and tapping. The emissions captured by the DEC and the canopy hood are directed to a positive pressure design baghouse rated at 637,500 actual cubic feet per minute ("acfm") installed in 1978, and modified in 1994.

2.1 PROCESS DESCRIPTION

The electric arc furnace has three alternating current (AC) graphite electrodes that supply the arc for melting the scrap. The EAF is refractory-lined, cylindrical vessel with a bowl shaped hearth and a dome-shaped movable roof. The electrodes are lowered and raised through openings in the roof. The electrodes and roof of the furnace are movable to allow for scrap and flux charging. The typical heat cycle at Gerdau MacSteel Monroe begins with scrap charging. After the charge, the roof is set in place and the electrodes are lowered. Power is supplied to the electrodes, an arc is formed, and the melt begins. An oxygen lance is used to provide additional energy for melting the scrap. When the scrap is completely melted, the electrodes are raised and the roof swings open to accept another charge along with the fluxing materials and carbon. The roof swings closed and the electrodes are lowered for the final melt. When the molten steel temperature and chemistry are correct, the tap begins. During the tap, the furnace is tilted to pour the molten steel is into a preheated ladle. The furnace returns to the upright position and is prepared for the next cycle. The molten steel removed from the EAF is transported in the ladle via overhead cranes for further refining at the LRS.

Emissions during scrap melting and refining are captured by the DEC and canopy hood and ducted to the baghouse. The roof canopy hood over the EAF captures emissions that may escape the EAF during melting, scrap charging, and the tapping of the molten steel.

2.1.1. Raw Materials

The raw materials used in the EAF are listed below:

- Scrap steel and iron
- Carbon (Coke)
- Oxygen
- Natural Gas
- Flux (Limestone)
- Alloys

2.2 POLLUTION CONTROL EQUIPMENT DESCRIPTION

The dust collector is a continuous automatic, positive pressure type baghouse manufactured by the Cadre Corporation. The baghouse consists of 13 compartments, each containing 184 bags, for a total of 2,392 bags. Three (3) main fans capable of moving a total of 212,000 acfm each, plus a fourth fan rated at 128,000 acfm for the DEC, provide the suction for capturing and moving the dust-laden gases through the fume control system. Gerdau MacSteel Monroe utilizes a Continuous Opacity Monitoring System (COMS) to ensure the baghouse is operating correctly. A summary of the design specifications for the baghouse is presented in the following table.

Table 1. BAGHOUSE DESIGN SPECIFICATIONS

Parameter	Specifications
Baghouse Design Volumetric Flowrate	637,500 acfm
Collectate	Iron Oxides, Lime, Zinc, and other metals
Cleaning Type	Reverse Air
Design Temperature	200 °F
Gas Temperature Range	Ambient to 275 °F
Pressure Drop Across Baghouse (Normal operating range)	3 - 8 "WG
Number of Compartments	13
Filter Bags per Compartment	184
Filter Cloth Area per Compartment	15,731 ft^2

The fumes from the DEC and canopy hoods enter an inlet plenum, then pass through the main fans and are forced through the positive pressure baghouse. The fumes move through the inlet plenum and enter the individual compartment inlets and flow through the filter bags where the particulate matter is collected on the inside of the bags. The clean, filtered gas is then discharged through the exhaust stack.

The baghouse has a reverse-air cleaning system. In reverse-air cleaning, gas flow to the bags is stopped in the compartment being cleaned and reverse (outside-in) airflow is directed through the bags. This reversal of gas flow gently collapses the bags toward their centerlines, which causes the cake to detach from the fabric surface. Shear forces developed between the dust and fabric as the fabric changes its shape cause the detachment. Metal caps to support the bag tops are an integral part of the bag as are several sewn-in rings that encircle the bags to prevent their complete collapse during cleaning. Without these rings, falling collected dust would choke the bag as the fabric collapses in on itself while cleaning.

The function of the cleaning cycle is to control the pressure drop across the filter bags. The cleaning cycle for the dust collector can be operated in either an automatic or manual mode.

In the automatic mode, differential pressure activates the cleaning cycle. Primary activation is by the differential pressure across the dust collector inlet and outlet. When the differential pressure reaches a pre-set value, the cycle starts and ceases when the differential pressure is reduced. When the cleaning cycle resumes, it continues where it left off.

In addition to the automatic mode there is a manual mode of cleaning available. The manual mode of cleaning should be used for troubleshooting a compartment or cleaning a compartment that was not adequately cleaned in the automatic mode.

The dislodged dust falls from the filter bags into the compartment's hopper where it is collected pneumatically conveyed to the storage silo.

3.0 STARTUP, SHUTDOWN, AND MALFUNCTION PROVISIONS

The EAF and the baghouse will be operated and maintained at all times in a manner consistent with good air pollution control practices for minimizing emissions. (40 CFR 63.6(e)(3)(i)(A))

During periods of startup, shutdown, or malfunction, the process will be operated and maintained in accordance with the procedures described above, and as specified in the Appendix. (40 CFR 63.6(e)(3)(i)(B) and 63.6(e)(3)(iii))

A start-up occurs when the DEC fan and at least two main baghouse fans are turned on and a shutdown is defined as when the DEC fan and baghouse main fans are shut down. On a normal weekly start-up, the baghouse main fan is turned on prior to scrap charging of the first heat. It remains online through the end of the tap on the final heat of the week. There are no excessive emissions associated with the start-up or shutdown of the EAF.

3.1 RESPONSE TO MALFUNCTIONS

Malfunctions of EAF operations or the baghouse control system will be corrected as soon as practicable. The malfunctions will be corrected in a manner consistent with the Startup, Shutdown, and Malfunction Table located in Appendix A. (40 CFR 63.6(e)(1)(ii))

Generally one (1) maintenance employee is assigned to the baghouse on the day shift from Monday through Friday. Gerdau MacSteel Monroe routinely inspects the baghouse control system and performs periodic maintenance to ensure the control equipment is working properly. The routine inspections may include the following:

- Visual inspection for hose leaks
- Door seal leaks
- Hopper leaks
- Baffle plate wear
- Cleaning mechanism wear and leaks
- Bag condition
- Fan leaks
- Valve leaks
- Duct leakage
- Magnahelic gages (found in each baghouse compartment)

4.0 RECORDKEEPING

General (40 CFR 63.10(b)(1))

The following records will be maintained for a period of five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record:

1. Documentation of the occurrence and duration of each startup or shutdown, of an EAF or baghouse that causes an exceedance of any applicable emission limit. (40 CFR 63.10(b)(2)(i)
2. Documentation of a malfunction of an EAF operation or baghouse. (40 CFR 63.10(b)(2)(ii))
3. All maintenance performed on the baghouse. (40 CFR 63.10(b)(2)(iii))
4. Documentation of the actions during periods of startup or shutdown in which the source exceeded applicable emission limits and when actions are inconsistent with the plan of their pollution control and monitoring equipment. (40 CFR 63.10(b)(2)(iv)(A))
5. Documentation of the actions taken during malfunctions, including corrective actions to restore a malfunctioning EAF or baghouse to its normal operation, when the actions taken are different from the procedures specified in the SSM plan. (40 CFR 63.10(b)(2)(iv)(B))
6. All information necessary to demonstrate compliance with the provisions of the SSM plan when all actions taken during the startup, shutdown, or malfunction are consistent with the provisions of the plan. (40 CFR 63.10(b)(2)(v))
7. Documentation of each period during which a Continuous Monitoring System (CMS) is malfunctioning or inoperative. (40 CFR 63.10(b)(2)(vi))

8. All required measurements needed to demonstrate compliance with a relevant standard (including 15-minute averages of CMS data, raw performance testing and evaluations measurements, that support data that the source is required to report). (40 CFR 63.10(b)(2)(vii))
9. All performance test results, CMS performance evaluations, and opacity and visible emission observations. (40 CFR 63.10(b)(2)(viii))
10. All measurements that may be necessary to determine the conditions of performance tests and evaluations. (40 CFR 63.10(b)(2)(ix))
11. All calibration checks, adjustments, and maintenance associated with CMS calibration checks. (40 CFR 63.10(b)(2)(x) and (xi))
12. Any information demonstrating the compliance status with any applicable requirements associated with a waiver of recordkeeping or reporting requirements. (40 CFR 63.10(b)(2)(xii))
13. Emission level relative to the criterion for obtaining permission to use an alternative to the relative accuracy test. (40 CFR 63.10(b)(2)(xiii))
14. All documentation supporting compliance with initial notification and other notification requirements. (40 CFR 63.10(b)(2)(xiv))

Additional Recordkeeping Requirements for the CMS (40 CFR 63.10(c))
In addition to complying with the requirements specified above, additional records and information are required for the CMS:

1. All required CMS measurements (including data recorded from unavoidable breakdowns and out-of -control periods). (40 CFR 63.10(c)(1))
2. The dates and times during each period where the CMS was inoperative. (40 CFR 63.10(c)(5))
3. The dates and times during each period where the CMS was out of control. (40 CFR 63.10(c)(6))
4. The specific identification (i.e., the date and time of commencement and completion) of each period of exceeding emissions and parameter monitoring that occurs during startups, shutdowns, and malfunctions. (40 CFR 63.10(c)(7))
5. The specific identification (i.e., the date and time of commencement and completion) of each period of exceeding emissions and parameter monitoring that occurs during periods other than startups, shutdowns, and malfunctions. (40 CFR 63.10(c)(8))
6. The nature and cause of any malfunctions (if known). (40 CFR 63.10(c)(10))

7. The corrective action taken or any adopted preventive measures. (63.10(c)(11))
8. The nature of the repairs and/or adjustments to the CMS during inoperative or out of control periods. (40 CFR 63.10(c)(12))
9. The total process operating time during the reporting period. (40 CFR 63.10(c)(13))
10. All procedures that are part of the quality control program. (40 CFR 63.10(c)(14))

Response Actions Consistent with Startup, Shutdown and Malfunction Plan

Records demonstrating compliance with the requirements of the SSM Plan will be kept when actions taken in response to a startup or shutdown, in which the startup or shutdown causes the source to exceed an emission limit, or malfunction, comply with the requirements of the plan. (40 CFR 63.6(e)(3)(iii) and 63.10(d)(5)(i))

The record will include the following:

- Confirmation that a startup, shutdown or malfunction occurred.
- The number, duration, and a brief description for each type of malfunction which caused or may have caused any applicable emission to be exceeded.
- Confirmation that actions in response to the startup, shutdown or malfunction conformed to the applicable requirements of the SSM Plan.

Response Actions Inconsistent with Startup, Shutdown and Malfunction Plan

Records of the actions taken during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) that are inconsistent with the SSM plan, when an emission limit is exceeded, will be maintained. These records must be reported within 2 working days after commencing the actions that are inconsistent with the SSM plan, followed by a letter within 7 working days after the end of the event. (40 CFR 63.6(e)(3)(iv))

5.0 REPORTING REQUIREMENTS

Each report will include the following information:

1. Company name and address
2. Responsible official name and title
3. Statement by a responsible official certifying the truth, accuracy, and completeness of the content of the report.

4. Signature of responsible official
5. Date of report
6. Beginning and ending dates of the reporting period
7. Responses and actions consistent with SSM Plan (63.10(d)(5)(i)). Each response to a process or control system startup, shutdown, or malfunction that complies with the provisions of the plan will be included in Semiannual Startup, Shutdown, and Malfunction Reports to the Administrator. The reports will be postmarked by the 30th day following the end of each calendar half (or as established otherwise by the permitting authority in the source's title V permit). The reports to the Administrator will also confirm that the response actions taken during the reporting period conformed to the applicable requirements of the Startup, Shutdown and Malfunction Plan and will include:
    a. Identification of the startup, shutdown, where the startup or shutdown created an exceedance of an emission limit, or malfunction event(s)
    b. A statement that the provisions of the plan were implemented during the startup, shutdown, or malfunction.
8. If there were no deviations from the emission limitations or operation and maintenance requirements, include a statement that there were no deviations during the reporting period.
9. If there were no periods during which a CMS was out of control, include a statement that there were no periods during which a CMS was out of control during the reporting period.
10. For each deviation from an emission limit where the CMS is not being used, the compliance report must also contain the following information, including periods of startup, shutdown, and malfunction:
    a. The total operating time of each affected source during the reporting period.
    b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable and the corrective action taken.
11. For each deviation from an emission limitation where you are using a CMS to comply with the emission limitation, you must also include the following information, including periods of startup, shutdown, and malfunction:
    a. The date and time that each malfunction started and stopped.
    b. The date and time that each continuous monitoring was inoperative, except for zero (low-level) and high-level checks.

c. The date, time, and duration that each continuous monitoring system was out-of-control as specified in 40 CFR 63.8(c)(7), including the information in 40 CFR 63.8(c)(8).
d. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.
e. A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.
f. A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
g. A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.
h. A brief description of the process units.
i. A brief description of the continuous monitoring system (CMS).
j. The date of the latest continuous monitoring system certification or audit.
k. A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

Response Actions Inconsistent with Startup, Shutdown and Malfunction Plan (40 CFR 63.10(d)(5)(i))
Response actions to startups, shutdowns, or malfunctions that are inconsistent with the requirements of the Startup, Shutdown, or Malfunction Plan will be reported to the Administrator by telephone or facsimile within two working days of beginning the response actions. Follow-up notification will be provided to the Administrator by letter within seven days of completing the response actions. The letter will include the following information:

1. Name of owner
2. Title of owner
3. Signature of responsible official
4. An explanation of the startup, shutdown or malfunction
5. An explanation of the reasons for not following the applicable provisions of the plan
6. An explanation of whether excess emissions may have occurred.
7. An explanation of whether parameter monitoring exceedances may have occurred.

Additional Reporting Requirements for the CMS (40 CFR 63.10(e))
In addition to complying with the requirements specified above, additional records and information are required for the CMS:

1. Report the results of all CMS performance evaluations simultaneously with the results of the performance test. (40 CFR 63.10(e)(2)
2. Submit a semiannual report of the excess emissions and continuous monitoring system performance report and/or a summary report. (To determine which reports are needed, see item numbers 3 and 4)
    a. Semiannual report. All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.
    b. Summary report. One summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report—Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall also contain the following information:
        i. The company name and address
        ii. An identification of each HAP monitored facility;
        iii. Beginning and ending dates of the reporting period
        iv. A brief description of the process units
        v. The emission and operating parameter limitations specified in the relevant standard(s)
        vi. The monitoring equipment manufacturer(s) and model number(s);
        vii. The date of the latest CMS certification or audit
        viii. The total operating time of the affected source during the reporting period;
        ix. An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess

emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;

x. ACMS performance summary, including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;

xi. A description of any changes in the CMS, processes, or controls since the last reporting period;

xii. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and

xiii. The date of the report.

3. If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and CMS performance report need not be submitted unless required by the Administrator.
4. If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, both the summary report and the excess emissions and CMS performance report shall be submitted.

6.0 PLAN REVISION

The plan will be revised to address reasonable revision requests required by the Administrator due to a determination by the Administrator that any of the following apply to the plan:

1. A startup, shutdown, or malfunction event that is not addressed in the plan has occurred.
2. The plan does not require operation of the control system during startup, shutdown, or malfunction events using good air pollution control practices.
3. The provisions for correcting malfunctioning process or emission control equipment are inadequate.
4. The plan includes an event that does not meet the definition of startup, shutdown or malfunction (40 CFR 63.6(e)(3)(vii))

The plan will be revised to address a malfunction event that occurs and is not addressed or that is inadequately addressed by the plan within 45 days of the occurrence of the event. (40 CFR 63.6(e)(3)(viii))

Copies of the Written Plan

A current copy of the plan shall be kept onsite for the life the EAF and be available for inspection upon request. Any previous versions will be kept on file and available for inspection for five years from the date of revision. (40 CFR 63.6(e)(3)(v))

Date Issued	Revision #	Revised by	Summary of Changes
6-25-08	0	Not Applicable	Original Version

Appendix
Gerdau MACSTEEL Monroe
Startup, Shutdown, Malfunction Plan

Condition	Possible Cause	Means of Detection	Remedial Action
Elevated Baghouse Opacity	Improperly installed bags	Opacity Monitor Alarm and/or Visible stack emissions	Check bag snap bands to ensure proper tension and full expansion into tubesheet.
	Torn or punctured bags		Inspect filter bags for tears or punctures caused by mechanical damage. Abrasion, thermal or chemical attack can also cause failures. Check for wear at top or bottom of bags, which may be a sign of improper tensioning. Isolate the chamber until damaged bags are replaced. Note: One small hole in one bag may cause abrasion to adjacent bags, potentially leading to damage throughout an entire chamber. Immediate action is required!
	Dirt in clean air plenum		After bag failure or during routine bag change-outs, dust will accumulate in dead air zones. Clean tubesheet when dust accumulation is present.
High Differential Pressure (Over 14" WG)	Baghouse dampers not closing properly during cleaning cycle	High differential pressure reading on the manometer and/or the control panel	Check damper cylinders and solenoids. Repair damper cylinder or solenoid as needed.
	Reverse air cleaning cycle not functioning properly		Check to determine which chamber(s) have high differential pressure during operation by checking differential pressure gauge. Does differential pressure drop after cleaning the chamber?
	Air horns used during the cleaning cycle not functioning properly		Check air horns for proper operation. Repair as necessary.
	Bags not properly tensioned		If bags are hung too loosely, the reverse air system cannot be effective in removing the dust, the dust can be restricted from dropping out of the bottom of the filter bags and could fill up the bag with dust. If the bags are hung too tightly, the bags could pop off. Check bag tension.
	Malfunctioning cleaning system control		Check to see if baghouse is going through cleaning cycle. If not, contact Maintenance.
	Dust build-up in hopper and/or dust re-entrainment		Dust disposal system plugged or jammed - clean and check disposal system including vibrators, rotary valve and pneumatic conveyor.
	Bag Blinding		Check system for condensation or free moisture present on bags. Check for water seepage into unit, or source of moisture and correct.
Opacity Outside the Shop	Fan problem	Vibration alarm, high temperature alarm, and/or fan amp alarm	Check fan drive, fan motor, fan wheel and blades. Repair as required. If problem is expected to last more than 8 hours, see malfunction response for fan failure at bottom of table.
	DEC or canopy hood problem	Operator observation	If minor problem, fix immediately. If problem is expected to last more than 8 hours, see malfunction response for capture hood failure at bottom of table.
	Bag blinding	High Differential Pressure Reading on the Magnahelic	Inspect bags for possible blinding. Blinded bags usually result in high pressure drop. Check reverse air cleaning cycle operation and bag tensioning. Clean bags with fan at low speeds until differential pressure drops into acceptable range.
	System air inleakage	Audible noise of air leaking into ductwork or hopper	Check all ducting and flanges to and from collector for leaks. Repair as required. Check hopper dust disposal equipment for leaking seals. Adjust or replace as required.

Appendix
Gerdau MACSTEEL Monroe
Startup, Shutdown, Malfunction Plan

Condition	Possible Cause	Means of Detection	Remedial Action
Low differential Pressure at Baghouse (Less than 2" WG)	Fan dampers closed	Low Differential Pressure Reading on the manometer during operation and poor capture at hood	Check for stuck louvers.
	Fan RPM too low		Check fan speed and adjust as necessary.
	System resistance static too high		Check ductwork for material build-up or blockages. Clear if necessary.
Dust Build-up in Hoppers	No dust in the dust silo.	Check dust silo when emptying.	Check for bridging in the baghouse hoppers, check pneumatic system. Repair as necessary
	Dust bridging over in the hoppers.	Hopper full - no dust discharged	Check rotary valves, vibrators/air horns. Repair as required. Vibrate the side of the hopper, or remove build-up manually.
Fan Failure	Fan motor or drive failure	Visual, Audible	Service the motor or fan drive. In the event of a major malfunction of the Gerdau MACSTEEL Monroe baghouse, i.e. in which more than one of the baghouse fans malfunction, the melt shop will cease operations until repairs are made. If only one of the three main baghouse fans fail, the melt shop may continue operations until repairs are made, and daily visible emissions (VE) readings of the melt shop roofline will be conducted daily to determine if the melt shop can continue to operate or if it should be shut down prior to the weekend maintenance outage in order to make necessary repairs. **For this type of emergency, immediately contact the general manager and and environmental engineer.**
	Baghouse electrical power outage		Work to restore power. **For this type of emergency, immediately contact the general manager and environmental engineer.**
Fan Failure	Fan bearing failure		Replace and repack bearings.
	Fan wheel/blade failure	Operator would note emissions not captured.	Replace or repair fan.
Emission System Failure	Damage to DEC elbow	Operator would notice.	Repair DEC as soon as practical. Possibly increase canopy hood draft during melting.
	Damage to canopy hoods		Repair canopy hoods during next outage.
COMS Malfunction	Electrical Malfunction	Operator would notice.	Contact Maintenance to assess and repair. Also, report the issue to the environmental engineer.
	Calibration Error		
	Dirty Window	Dirty Window Alarm	
Catastrophic Baghouse Failure	Fire caused by sparks and/or high temperature	Visible stack emissions	Isolate chambers with damaged bags. Replace filters bags and repair damage to baghouse. If two or fewer chambers need to be shut down, the baghouse and furnace may still operate. **For this type of emergency, immediately contact the plant manager and environmental engineer, who will decide if the plant should be shut down.**
	PLC failure		Dampers will be closed to seal off air flow to the baghouse. Repair or replace PLC, **For this type of emergency, immediately contact the plant manager and environmental engineer, who will decide if the plant should be shut down.**

GERDAU MONROE MILL

ENERGY EFFICIENCY MANAGEMENT PLAN

March 7, 2016

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TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

1.0 INTRODUCTION

This document has been prepared to meet the requirement of Gerdau Monroe's air permit for the facility to develop and implement an "Energy Efficiency Management Plan" (EEMP). The requirement for the EEMP appears in the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) Air Use Permit to Install No. 102-12A.

At a minimum, the EEMP shall specify the following:

> *a) Work practices to be followed to ensure optimal energy efficiency in the operation of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEATWB, and EUCASTER.*
> *b) A maintenance plan to be followed to ensure optimal energy efficiency of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEATWB, and EUCASTER in accordance with manufacturer's recommendations."*

This EEMP is presented in the following sections:

1. Process Description – providing a brief description of the major equipment areas/processes and some ancillary equipment
2. Energy Efficiency Improvements
3. Process Equipment Work Practices
4. Maintenance Plan Discussion
5. Implementation Discussion

Appendix A also provides a listing of information on some work practice procedures that pertain to the management of energy efficiency at the Gerdau Monroe facility.

2.0 PROCESS DESCRIPTION

The following sections will describe the processes that occur at the Gerdau Macsteel Monroe facility that are the major components of the EEMP.

2.1 Electric Arc Furnace – EAF

The Gerdau Monroe facility melts scrap steel by use of an Electric Arc Furnace (EAF). Different types and quantities of scrap per a predetermined recipe are used to create a batch of steel. Scrap is added to the EAF via a scrap bucket while the EAF roof is open. After the scrap is charged into the furnace the water cooled roof swings back over the furnace and lowers down until it rests on the top of the furnace shell. The three electrodes are lowered through the openings in the roof. As the electrodes come into close proximity with the scrap, electrical arcing begins the melting process.

The energy input to the furnace is augmented by oxy-fuel burners that are mounted in the water cooled furnace sidewalls at different locations. These burners assist in the melting of scrap steel, similar to how an oxy/fuel cutting torch operates. As the electrodes bore into the center of the charge, the burners help melt scrap in the cooler, outer section of the furnace, until all of the scrap is melted uniformly.

Off-gases are captured through a water cooled "Direct Evacuation Control" or DEC capture system duct and routed to the EAF emissions baghouse, while any fugitive emissions are captured via a roof canopy hood that is also routed to the baghouse.

After the steel has been tested for temperature and oxygen content and has met the desired specifications, the heat of steel is tapped from the bottom of the furnace shell, into an empty preheated ladle. During the tapping process, additives may be added to the ladle to remove excess oxygen from the steel and slag.

After the heat of steel has been tapped into the ladle, a molten steel heel of 5-10 tons is left in the furnace to facilitate the melting of the next heat. The furnace roof is the raised and swung out to enable the EAF sidewalls and bottom to be inspected prior to charging for the next heat.

The EAF is split into an upper and a lower shell. The lower shell is constructed from formed steel plate and lined with ceramic refractory. A safety lining is usually completely covered by a fusible self-locking granular refractory. The sidewalls are covered with a magnesium/carbon brick that can withstand exposure to the corrosive molten slag. The upper shell is constructed from a steel frame with removable water cooled panels. These panels are constructed by piping that is welded to a steel backing plate. The EAF roof is similarly constructed, with a structural and pipe frame and removable water cooled panels. The initial portion of the DEC exhaust

ductwork is also water cooled, later transitioning to non-cooled ductwork that leads to the DEC baghouse fan, and onto the baghouse.

2.2 Ladle Metallurgy Facility – LMF

The Ladle Metallurgy Facility (LMF) is used to refine the molten steel to the necessary customer specifications. Trim alloys including manganese, silicon, vanadium, niobium/columbium, chrome, and/or nickel (depending on grade) may be added to achieve the desired specification.

Energy is added using three electrodes – similar but smaller electrodes than those used on the EAF. The electrode holders hydraulically descend through a portal in the roof and create an electric arc into the molten steel bath of the ladle.

During this reheat process, the steel is stirred using argon gas bubbled up through two porous plugs in the bottom of the ladle. The forced convection induced by the bubbling argon allows the ladle to achieve homogenous mixing of additives and temperature. Once achieving the required specification for the heat, the ladle is then taken off of the transfer car and shipped to the Vacuum Tank Degasser (VTD) or directly to the Caster.

2.3 Vacuum Tank Degasser – VTD

The Vacuum Tank Degasser (VTD) is used for the removal of gases dissolved in the molten steel, including hydrogen and nitrogen. For certain grades, dissolved hydrogen and nitrogen can make the steel more brittle than desired.

At the VTD, the ladle is lowered into one of two degassing tanks. A roof transfer car, located on the main operating floor can move from one tank to the other and lower the lid over the active degassing station. Argon is bubbled up through porous plugs in the ladle bottom to properly stir the steel during processing. Trim alloys (aluminum, calcium/silicon, sulfur, carbon, boron, titanium, etc.) in the form of solid or encased wire, are added using wire feeders, if necessary for any final chemistry adjustments.

While the ladle of steel is inside one of the degassing tanks with the roof lowered and secured, the vacuum pumps are activated to remove air from the system and to bring the pressure inside the tank down to approximately 0.5 torr (0.5 mm of Hg) from normal atmospheric pressure of 740-760 torr (depending on ambient atmospheric pressure). This vacuum level is maintained for a specified amount of time, depending upon the hydrogen content of the molten steel prior to processing.

After the vacuum has been released, the cover is removed by the transfer car and the ladle of molten steel is lifted up and taken to the Caster.

2.4 Continuous Caster

The Continuous Caster (Caster) has four strands. When a full ladle of steel is brought to the Caster, it is set on one of the two sets of ladle support arms of the rotating ladle turret. The ladle slide gate cylinder is connected to the slide gate hydraulic system with two hoses. When the Caster sequence is started, or a new ladle is brought into a sequence, the turret rotates the loaded ladle to the operating position. The ladle arms are hydraulically raised while a preheated ceramic tube (shroud) is attached to the lower nozzle on the ladle slide gate with the use of a hydraulically assisted manipulator.

When the ladle shroud has been applied to the nozzle, the ladle slidegate is hydraulically opened to allow steel to drain from the bottom of the ladle, through the shroud and into the tundish. The tundish is a holding trough just under the ladle that has the capacity to hold molten steel to continue casting while ladles are exchanged on the turret. Each strand is fed separately from the tundish using a stopper rod mechanism to control flow through the submerged entry nozzle (SEN) that is attached to the bottom of the tundish (in four places). The SEN extends from the bottom of the tundish into the oscillating mold for each strand.

The mold for each strand is held by a hydraulically actuated oscillator that moves the mold up and down at a frequency directly proportional to casting speed (in feet/min). As the steel leaves the bottom of the mold, it is still molten in the center, surrounded by a ¾" – 1" thick solid shell (depending on cast billet dimensions). The steel proceeds through a spray chamber, as it is bent through the design radius of the machine. Contact water is sprayed onto all four sides of the steel billet, further chilling the shell and increasing its thickness. As the steel descends through the machine and enters the straightener roll stands, it is nearly solid.

As the steel cast exits the straightener stands, it is cut to length by an oxy-fuel torch cutter that is activated when the strand has travelled a predetermined distance. The torch machine grips the steel and travels with it while it cuts the billet loose from the continuously cast strand. The cut billets travel to the cooling bed where they are uniformly cooled. Once the billets are cooled, they are stored outside in the billet yard or inside before being charged into the Reheat Furnace of the Rolling Mill.

2.5 Walking Beam Reheat Furnace (at the Rolling Mill)

The new reheat furnace (walking beam style) is used to heat cast billets that have been stored and allowed to partially or fully cool down to ambient levels, back up to a hot rolling temperature of approximately 2200 °F. Billets are charged into the furnace after being loaded

by crane onto the charging table. The billets are moved through the different heating zones of the furnace using a walking-beam style hearth.

The furnace has several heating zones that increase the temperature of the steel as it passes through. Natural gas is burned with outside air that is blown through headers and into the burners by a combustion air fan. The amount of energy used in the furnace depends on the temperature of the charged billets and the air/fuel volume at the burners.

2.6 Cooling Water System

The cooling water systems used in the main plant (excluding bar finishing) that are covered by this plan are split into three different systems.

2.6.1 Non-Contact Water

This water system is used to cool process equipment without coming into direct contact with product.

2.6.1.1 The EAF shell, roof, electric current handling equipment, and hydraulic systems
2.6.1.2 EAF DEC Water Cooled Ductwork
2.6.1.3 The LMF roof, bus bars, transformer, and hydraulic systems
2.6.1.4 VTD heat shield cooling, gas cooler, vacuum pumps, and hydraulic systems
2.6.1.5 Caster machine frame cooling, mold water heat exchangers, and hydraulic systems
2.6.1.6 Reheat Furnace shell and hearth
2.6.1.7 Rolling Mill – various water cooled equipment
2.6.1.8 Heat treatment – protective equipment cooling

2.6.2 Caster Contact Water System

This is a system for use only at the caster to cool down the steel as it exits the mold while in the spray chamber. This water runs down the machine and into the flume that runs underneath the runout table. This water flows to a hydrocyclone where the heavier mill scale settles out (and is removed by a clam bucket system). The contact water then flows through sand filters before flowing to the cooling towers and into the cold well. The blowdown from this system is sent to the process settling pond when the sand filters are backwashed.

2.6.3 Caster Mold Water System

This is a closed loop, softened, and deionized water system used exclusively for the cooling of the casting molds. Potable water, supplied by the city of Monroe is deionized to make up for any losses. Heat is removed from the water using plate heat exchangers that are cross-flowed with non-contact cooling water.

2.7 Compressed Air System

The plant-wide compressed air system is used primarily for the actuation of pneumatic cylinders, operation of control valves, and for use in blowing off water or cooling equipment in hot locations (cameras, mill-scale areas, etc.). There is a central compressor room located in the Main Pumphouse that distributes compressed air throughout the melt shop, Caster, VTD, and Rolling Mill. There are separate compressors for the bar finishing buildings. Cross-over piping does exist to supplement finishing from the main plant system, but in most conditions this valve is closed.

The compressed air system is used in higher volumes for:

- Water treatment plant filter press (purge and compression)
- EAF – carbon injection system transport medium
- LMF – carbon addition system transport medium
- EAF Baghouse – Poppet Valve control for chamber isolation/cleaning
- LMF Baghouse – pulse jet cleaning operation, and isolating poppet valves.

3.0 ENERGY EFFICIENCY IMPROVEMENTS

As a direct result of the projects allowed under Permit to Install (PTI) No. 102-12A, Gerdau Monroe has undertaken many upgrades to equipment that will have major benefits in terms of reducing energy consumption throughout the facility. These improvements, which have already been implemented, are discussed in the following subsections.

3.1 Oxy-Fuel Burners at EAF

Gerdau Monroe installed oxy-fuel burners, which are computer controlled and assist in efficient melting of scrap in furnace. According the U.S. EPA, the use of an oxy-fuel burner has several beneficial effects: it increases heat transfer, reduces heat losses, reduces electrode consumption, and reduces tap-to-tap time. By having the burners in the sides of the furnace instead of having a torch going into the furnace through an open door, the furnace can be closed off better, thus retaining more heat. When a liquid bath is formed, the burners change over to a mode in which they act as oxygen lances. Electricity savings may range from 88 to 155 kWh/ft3 oxygen injected. Natural gas injection is typically 10 standard cubic feet per kilowatt hour, with energy savings ranging from 18 to 36 kWh/ton of steel.

3.2 Foamy Slag at EAF

Gerdau Monroe is using foamy slag to cover the arc and melt surface to reduce radiant heat losses. Foamy slag is obtained by injecting carbon (granular coal) and oxygen through the sidewall burners. Slag foaming increases the electric power efficiency of the EAF electrodes by at least 20 percent (according to U.S. EPA) in spite of a higher arc voltage. The net energy savings (accounting for energy use for oxygen production) are estimated at 5 to 7 kWh/ton steel. Foamy slag practice may also increase productivity through reduced tap-to-tap times.

3.3 Eccentric Bottom Tapping at EAF

Eccentric bottom tapping of the EAF leads to slag-free tapping, shorter tap-to-tap times, reduced refractory and electrode consumption, and improved ladle life. Energy savings have been estimated by U.S. EPA to be 13.6 kWh/ton.

3.4 New Walking Beam Reheat Furnace

A walking beam furnace represents state-of-the-art efficiency for reheating furnaces. In a walking beam furnace, the stock is placed on stationary ridges and a revolving beam walks the product along through the furnace until the exit where the beam returns to the furnace entrance. The U.S. EPA notes that WCI Steel has a walking beam furnace that also employs state-of-the-

art combustion control. The use of this furnace at WCI Steel resulted in a reduction in electricity usage by 25 percent per ton produced and a reduction in overall fuel consumption by 37.5 percent per ton produced when compared to a pusher-type furnace. Gerdau Monroe's new Walking Beam Reheat Furnace, which has a heat recuperator system, replaced a pusher-type furnace, and so far energy efficiency is excellent, using approximately half the energy as the previous furnace.

3.5 "Real Time Process Optimization" (RTPO) system on EAF

As part of the EAF upgrades, a SMART ARC system was added that aids in the optimization of electrode performance at the furnace. In addition, a Quad Mill Operation System (QMOS) program has been implemented to aid the Melt Shop with tracking production. Prior to these, there were no programs monitoring performance at the Melt Shop of the Monroe facility.

3.6 Shutdown of LRS Boiler at the LMF

Gerdau Monroe installed mechanical vacuum pumps to draw a vacuum at their new twin Vacuum Tank Degasser (VTD). These pumps replaced the multi-stage steam driven venture ejectors that were used at the previous degas operations at the LRS (now the LMF). As a result, steam is no longer required and the LRS Boiler that provided the steam was shut down, which should provide energy savings because the boiler was always running, regardless of whether a heat was being made in the degasser. Even when the plant was shut down, the LRS Boiler was run in standby mode so the water would not cool down.

4.0 WORK PRACTICES RELATED TO ENERGY EFFICIENCY

Energy efficiency is an important metric of any industrial process and energy costs are often a significant part of the cost model for manufacturing. Implementing work practices that are mindful of energy conservation can prevent wasted cost and unnecessary evolution of greenhouse gas and other air pollutants. The following are a summary of the work practices being implemented by Gerdau Monroe to ensure energy efficiency at the EAF, LMF, VTD, Caster, and Reheat Furnace.

4.1 ELECTRIC ARC FURNACE (EAF)

EAF operators strive to minimize ambient air infiltration into the EAF vessel during processing of steel heats. Air infiltration can lead to longer tap-to-tap times, increased electrode consumption, increased off-gas system requirements, and increases in heat/energy losses. Openings between the furnace shell and roof, electrodes, and slag door, will be minimized for each heat in order to reduce air infiltration. The ability to restrict excess air ingress has mainly to do with preventing scrap from accumulating on the top of the furnace shell ring, so the roof can set down with minimal gaps. The furnace door and door burner will be used properly to reduce excess air gaps.

Oxy-fuel burners are utilized above the molten steel bath to help reduce the melting time of scrap, which in turn reduces electrode usage and damage.

In addition, the recent furnace improvements aid with the introduction of "injection carbon" into the furnace which is used in the formation of "foamy slag" on the surface of the molten steel bath. Foamy slag produces a thick layer, which in part covers the electric arc ensuring that more energy is transferred into the melting steel versus being allowed to vent in the off-gases. This feature protects the furnace, promotes heat transfer from the electric arc into the molten bath, and suppresses the formation of some pollutants.

Gerdau Monroe has also installed a state of the art computer modeling program that utilizes Real Time Process Optimization (RTPO) to help optimize furnace performance in terms of efficiency, productivity, and energy demand. By utilizing this system, Gerdau can monitor the DEC temperature, off-gas flow rate and composition in order to make adjustments to the furnace operation that increase efficiency and lower energy demand.

4.1.1 EAF Work Practices/Operating Procedures – Energy Efficiency Implications

Gerdau Monroe has several operating procedures in place that have either direct or indirect energy efficiency benefits. A summary listing of these procedures are included in Appendix A

of this document. For the EAF, the following Work Practices/Procedures are of the most importance:

Response to System Alarms: when the EAF either gets too hot or too cold during a heat, this could be due to a malfunctioning water circulation system which may be caused by a pump that is not functioning correctly or a control valve issue. Reacting to an alarm indicating a system malfunction, or a water line break, will potentially save both water and electricity consumption. Another example would be an electrode alarm, indicating that an electrode is not operating properly or efficiently and needs to be inspected. These are two examples where responding to alarms could provide a direct benefit to maintain energy efficiency.

In addition, responding to other types of alarms might indicate that there is an issue in the furnace that may cause, or be the result of, a chemistry issue. These alarms would be important because if something can be addressed in the EAF, it may prevent "off-spec" steel from being produced. Whenever steel is made that does not meet quality (customer) specifications, the rejected steel product has to be re-melted and reprocessed, which requires consumption of additional energy and thereby causes the EAF to be less efficient. In addition, off-spec product may cause production delays in downstream equipment (such as the LMF, VTD, or Caster) as chemistry issues are corrected. Production delays and quality issues are minimized in order to maintain optimal energy efficiency as often as possible in this dynamic operation.

Operating the Furnace Regulator: Proper use of the "SMART-ARC" regulator control at the EAF will help prevent excessive electrical consumption and electrode damage, which directly impacts energy efficiency.

Cojet Burner Replacement and Cleaning: Ensuring work practices are followed to properly install Cojet burners is critical to proper burner operation and preventing damage to water panels. In addition, proper cleaning of burners is imperative to reduce down time and limit improper burner operation that may result in more electrode usage for melting. These practices, which are written as "Routine Procedures" or "RP"s and/or "Job Aids" or "JA"s, have both direct and indirect benefits to maintaining energy efficiency.

Overall Melt Procedure in the EAF: This procedure comprehensively describes proper operation of the EAF, including use of the Cojet burners and proper flux steps, proper levels of scrap that allow the roof to fully close, and other steps that will aid in reducing electrode energy consumption and allow accurate steel grades to be made (and minimize "off-spec" production). Following the process steps in this procedure will help maintain energy efficiency at the EAF.

Carbon Additions: Carbon is added to furnace for energy efficiency reasons (to reduce electrode usage by forming slag and also to provide energy as fuel for melting scrap). This carbon is typically added in with the scrap charge.

Alloy Additions: Procedures for adding alloys related to product chemistry aid in maintaining energy efficiency indirectly. By providing a higher yield of product for quality, shorter processing times occur in subsequent operations, and also saves energy by producing acceptable steel product, minimizing the need to re-melt off-spec product.

Slag Former Additions at Tap: Depending on desired chemistry and type of grade, slag forming additives are added to the ladle during tapping of the steel; this is critical to proper chemistry, which results in less re-melt of off-spec product and also aids in temperature retention, which means less energy input required at the LMF.

Slag Former Additions at Charge: Depending on desired chemistry and type of grade, slag forming additives are added the EAF vessel during charging; critical to proper chemistry - results in less re-melt of off-spec product and slag aids in temperature retention, which helps maintain efficient electrical energy input (at both EAF and LMF)

Note that there are several other Work Practices that relate to ensuring product quality is high when molten steel leaves the EAF. Again, any practices that help increase product yield/quality, means that more steel makes it to the customer on the first try, which indirectly helps to maintain overall energy efficiency. Some additional work practices are listed in Appendix A.

4.1.2 EAF Startup Operation

EAF operators will optimize the startup of the EAF by not starting up equipment until it is needed. The following are some specific Work Practices that are followed related to EAF startup:

Cojet Startup on a Cold Furnace: This procedure outlines the steps for properly starting up the furnace using the Cojet burners, including checking for proper activation of all burners. This is designed to minimize electrode usage/power "on" time.

Draining the EAF: There are some procedures during the furnace shutdown process that have energy efficiency benefits when restarting the furnace. Critical steps for removing steel and slag from the EAF in the event that the EAF is being shut down for maintenance. Proper alloying of final heat, limiting heel height, limiting pitted steel, clearing tap hole, etc. are all

necessary considerations for the final heat to ensure proper and smooth startup when production is resumed.

Emergency Draining the EAF: Steps are outlined in this procedure to aid in an emergency shutdown of the EAF in order to minimize/prevent excessive damage to equipment that would result in additional downtime and that would require more energy to restart.

4.1.3 EAF Process Shutdown

EAF operators will optimize the shutdown of the EAF by shutting down operations that are not necessary to operate during a down-day or extended operational delays. This includes shutdown of process fans and other equipment when there is a possibility to safely do so. It should also be noted that many of the work practices listed in Section 4.1.1 have slightly altered procedures when considering a planned shutdown. In addition, the following are specific shutdown work practices that Gerdau Monroe utilizes:

Power Curtailment: Sequencing of events that should take place to properly curtail energy use should this become necessary (dictated by utility provider) so that restarting of equipment is smooth (with least amount of energy).

Draining the EAF: In addition to being mentioned in the Startup section, obviously shutting down the furnace properly and getting a good final heat will result in less energy use. This procedure outlines steps for removing steel and slag from the EAF in the event that the EAF is being shut down for maintenance or for extended periods. Proper alloying of the final heat will ensure the product is within specification.

Also note that many of the Maintenance Procedures, which are covered in Section 5, are performed when the Melt Shop is in a downday or extended shutdown situation.

4.2 LADLE METALLURGY FACILITY (LMF)

The following are the work practices that help maintain energy efficiency at the Gerdau Monroe Ladle Metallurgy Facility (LMF) operation.

4.2.1 LMF Work Practices/Operating Procedures – Energy Efficiency Implications

Gerdau Monroe has several operating procedures in place for the LMF that have either direct or indirect energy efficiency benefits. Appendix A provides a summary listing of these procedures.

For the LMF, the following Work Practices/Procedures are of the most importance:

Electrode Add Procedure: By following the procedure for properly replacing the electrodes, it will prevent damage to electrodes and avoid delay time, which would otherwise require reheating the steel for a longer period of time, resulting in using more electricity.

LMF Set Up & Ladle Preparation: Steps are discussed for proper set up of LMF equipment and ladles, including use of ladle lids, LMF roof, ensuring electrode placement, stirring of the ladle to prevent plugging of the tap nozzle and gain temperature uniformity which will maintain energy efficiency.

Operation of the LRS (LMF) Wire Feeder: This includes instructions for proper wire selection and addition, for proper chemistry results and preventing off chemistry product which could require re-melting.

Alloying at LMF: Following proper alloy calculations and stirring practices, along with proper batching practices, helps assure product quality and proper chemistry of molten steel, which helps avoid off-spec product potentially requiring scraping and re-melting.

Cleaning Electrode Clamp Heads: Procedure includes instruction for proper cleaning of parts associated with LMF electrodes; failure to execute properly could result in damaged electrodes and cause delays, requiring energy to reheat the steel.

4.2.2 LMF Startup Operation

LMF operators will maintain the energy efficiency during the startup of the LMF by following instructions for proper heating. If these procedures were not followed, it could result in excessive electrical consumption.

4.2.3 LMF Process Shutdown

LMF operators optimize the shutdown of the LMF by turning off or idling the baghouse fans on a case by case basis, depending on the length of the shutdown and work being performed in the baghouse.

4.3 VACUUM TANK DEGASSER (VTD)

The new dual-tank degasser system at the Monroe facility is now separated from the LMF operations. The following is a discussion of the Work Practices followed at the facility for the Vacuum Tank Degasser.

4.3.1 VTD Work Practices/Operating Procedures – Energy Efficiency Implications

Gerdau Monroe has several operating procedures in place for the VTD that help maintain the facility's energy efficiency, either directly or indirectly. Appendix A provides a summary listing of these procedures. The following work practices/procedures are of the most importance for the VTD:

Degassing a Heat: This procedure comprehensively describes proper operation of the VTD; including use of the mechanical vacuum pumps, avoiding fouling with slag that can damage equipment/cause delays, proper vacuum and bubbling, and post-heat cleaning. Described steps will also aid in accurate steel grades being made, thereby minimizing "off-spec" production. Following the process steps in this procedure will help maintain energy efficiency at the VTD, both directly and indirectly.

VTD Deoxidizing Procedures: There are work practice procedures for deoxidizing the heats at the VTD. Steps included in this procedure assure that the ladles are hooked up correctly and that the heats are processed properly. Described steps aid in production of accurate steel grades, minimizing "off-spec" production. Following the process steps in this procedure will help in maintaining indirect energy efficiency.

AutoSampling for Chemistry and Temperature: Proper temperature is critical for proper Caster processing. Improper temperature of arriving molten steel at the Caster can cause serious equipment damage/downtime/poor quality, all which increase indirect energy consumption. In addition, proper chemistry is necessary for product quality.

VTD Gas Stirring Operation: The procedure for gas stirring is critical to proper degassing operations and for product quality. This procedure outlines the proper use of gases to maintain product quality and consequently, indirect energy efficiency. And if proper stirring cannot be achieved, molten steel may have to be reladled into a ladle that will stir correctly, causing delay times and lowering direct and indirect energy efficiencies.

Troubleshooting Poor Torr Level during Degas: Troubleshooting is conducted when adequate vacuum cannot be reached at the VTD; poor vacuum can indicate improper mechanical pump operation (inefficient energy use) or poor sealing of the tank lid, which can result in product quality issues (potentially requiring more energy indirectly for off-spec/remelt).

Other work practice procedures listed in Appendix A help maintain energy efficiency in an indirect manner at the VTD through assuring steps are taken to provide as high a yield of quality product as possible in this dynamic operation.

4.3.2 VTD Startup Operation

VTD operators will optimize the startup of the VTD by following described steps in the procedure for *Degassing a Heat* that pertain to process startup. In addition, the new VTD uses the main EAF Baghouse draft system to draft emissions when using wire feeding, instead of using the vacuum pumps. Vacuum pumps on the new system are only in use when the degassing process is occurring in one of the two tanks.

Testing of Degas System: Procedure for making sure that the VTD is ready following any maintenance on the VTD system. The procedure identifies potential areas where VTD process equipment may not function properly, prior to an actual degas heat being brought in. This helps to maintain energy efficiency, both direct and indirect when heats are degassed by assuring proper functionality of equipment.

4.3.3 VTD Process Shutdown

VTD operators will optimize the shutdown of the VTD by following described steps in the procedure for *Degassing a Heat* that pertain to stopping/ending the degas process.

Since the degas operation is generally a true "batch" process, most of the associated equipment is only running while molten steel is being processed in the operation. In this sense, the VTD is designed to maintain energy efficiency while not in operation.

4.4 LADLES

Ladles that are used to move molten steel between the various processing locations (EAF, LMF, VTD, Caster) are kept covered as much as possible to avoid heat loss, thereby directly maintaining energy efficiency.

After a heat of molten steel is tapped into a ladle at the EAF and moved out to the Ladle Bay via transfer car, a lid is placed on the ladle to help retain heat. Once the ladle is moved to the LMF for refining the lid is removed until the heat is completed. The lid will be replaced on the ladle after processing is completed at the LMF and as the ladle of molten steel is then transferred to the VTD for degassing or goes directly to the Caster. If the ladle goes to the VTD, the lid will be removed after the ladle is placed in a degassing tank. When the heat is done degassing, the lid will be replaced and the heat will go to the Caster. After the ladle is positioned on the Caster turret, the lid is removed to help reduce the vacuum when the steel is pouring into the tundish.

4.5 CASTER

The Caster is where molten steel is solidified into billets. The operators run the caster to maintain efficient power usage. Delays in the caster could result in a turnaround and require the LMF and VTD to keep reheating the steel (using electrical energy) until it comes back online.

4.5.1 Caster Work Practices/Operating Procedures – Energy Efficiency Implications

Gerdau Monroe has several operating procedures in place for the Caster that have either direct or indirect benefits toward maintaining energy efficiency. Appendix A provides a summary listing of these procedures. For the Caster, the following work practices/procedures are the most relevant:

Use of Artificial Slag for Tundish Cover: This procedure contains instructions to avoid production delays and/or non-conforming product, which could require additional energy to reheat steel at the LMF or VTD, or result in nonconforming material, which would require re-melting.

Tundish & Submerged Entry Nozzle Preheating: Preheating is critical for Caster operation and in order conserve energy, programs of specific duration are run for preheat control. Improper preheating can result in strands "freezing off" and not casting molten steel, which results in indirect energy losses.

Mold Level Calibration Before Startup: Calibration is required in order to have stable mold levels, which are needed for product quality; energy efficiency is maintained indirectly by assuring proper product quality and avoiding need to re-melt the steel.

Changing a Mold: Several steps are taken to ensure proper changing of a mold without causing production delays. In addition, mold water pumps are turned off if more than one mold is changed – maintaining energy efficiency directly.

Tundish Submerged Entry Nozzle Washout: Procedure when emergency situation (washout) occurs; attempts to minimize loss of steel and energy by saving if greater than 85 tons remain in ladle.

Spray Chamber Exhaust Fan Vents: Proper vent positions are critical to correct operation of the spray chamber; may affect direct energy consumption (fans) and impact quality of cast steel (if steam is not vented properly).

Decision Point to Interrupt Casting: The procedure provides guidelines to follow when steel being cast might need to be interrupted. Depending on situation, it may result in stopping cast, reladling, etc. that might lead to higher energy consumption (indirect).

4.6 REHEAT FURNACE – WALKING BEAM

4.6.1 Work Practices/Operating Procedures – Energy Efficiency Implications

The sole purpose of the Reheat Furnace is to efficiently transfer heat uniformly to the steel billets so they can be formed into intermediary and final products for sale to costumers. Consequently, the same keys to proper operation of the furnace also inherently involves maintaining energy efficiency.

As the furnace has been updated to be largely automated, the energy efficiency of the new furnace compared to the old furnace has improved substantially. Video feeds in the pulpit area view the doors of the furnace and monitor the opening and closing, providing immediate feedback as to whether doors are functioning properly. In addition, the air/fuel ratios and profiles in the various burner zones are monitored continuously through a computer control system. If a burner goes bad, operators see an alarm and notify Maintenance that a replacement burner needs to be ordered with the vendor.

The following work practice summarizes the most critical efforts in furnace operation:

Maintaining Proper Reheat Temperature: This is of paramount importance to the quality of the steel billet/products and also to reduce maintenance on the furnace equipment. This procedure outlines such things as: communication regarding "mill pace"; adjusting temperatures as needed to maintain proper heating of steel billets inside the furnace; reacting to temperature alarms. Maintaining direct and indirect energy use is inherent in proper furnace operation and product quality.

4.6.2 Reheat Furnace Startup Operation

The Reheat Furnace startup procedure is summarized as follows:

Furnace Light-up Procedure: Procedure for step by step process of starting up the reheat furnace. This includes when to initiate air and water supplies, active rollers, and begin the sequence of starting burners. Startup is critical to maintaining energy efficiency both directly and indirectly. Proper heating up of the furnace is required to get the furnace up to temperature as quickly as possible in a manner that is conducive to starting to reheat billets.

4.6.3 Reheat Furnace Shutdown

The Reheat Furnace shutdown procedure is summarized as follows:

Furnace Shutdown: Procedure for the step by step process of shutting down the furnace. Includes shutting off gas to zones and proper stoppage of combustion air fan and water supplies once temperatures fall to a level where it is safe to do so. Shutdown is done in a manner that maintains energy efficiency directly and indirectly.

4.7 COOLING WATER SYSTEM

The cooling water systems are operated as an integral part of each operation. For instance, operational procedures exist for the EAF to check for cooling water leaks. The impact of a leak would not only require more energy to pump extra water, but may also require additional electrical and/or chemical energy to evaporate the water if it enters the furnace.

Some, but not all of the pumps in the water system may be turned off on down days, in order to maintain energy efficiency.

4.8 COMPRESSED AIR SYSTEM

The compressed air system is operated to maintain an acceptable pressure for various uses within the plant. If leaks are discovered, they are reported to maintenance for repair.

5.0 MAINTENANCE PLAN RELATED TO ENERGY EFFICIENCY

Maintenance of equipment is another important aspect of managing energy efficiency of an industrial process. Implementing practices in terms of equipment maintenance that are mindful of energy conservation can also help avoid wasted expense and unnecessary evolution of greenhouse gas and other air pollutants. Much of the "maintenance" aspect of energy efficiency takes on the form of routine inspections, which help to catch equipment issues either before they occur or as quickly as possible after they occur.

The following is a summary of the inspection and maintenance activities being implemented by Gerdau Monroe to ensure energy efficiency at the EAF, LMF, VTD, Caster, and Reheat Furnace. Maintenance procedures have predominantly indirect efficiency implications, however keeping equipment well-maintained can also lead to avoiding direct energy consumption, with resulting direct energy conservation.

5.1 GENERAL PLANT MAINTENANCE

Prior to looking at any maintenance activities specific to the EAF, LMF, VTD, Caster, and Reheat Furnace, this section will first examine some general maintenance and inspection procedures that affect general plant areas that are common to these areas. The facility also implements a preventative and predictive maintenance program for some of the plant equipment.

5.1.1 Substation Inspections

There are several electrical substations throughout the facility that are inspected. The electrical power is closely observed and tracked at the facility, as completely losing electrical power can have extremely adverse consequences on the facility as a whole. By conducting routine inspections, issues that may cause inefficient energy transfer or power outages can potentially be caught prior to any major consequence. These can have direct and indirect effects on electrical energy efficiency at the facility.

5.1.2 Pumphouse Inspection

The Main Pumphouse at the Gerdau Monroe facility controls pumping of mill scale and clean water throughout the plant. This inspection covers 14 water pumps, 5 air compressors, cooling towers, 3 lift pumps, an emergency diesel-fired generator, and 4 scale pit pumps. Items such as amps, pressure, bearing temperatures and vibration are observed for all pumps. Other equipment is observed for signs of poor or unusual operation. Any important issues are noted. There are many aspects pertaining to electricity and water consumption involved with this equipment that can affect energy efficiency, and issues are addressed when they are observed.

5.1.3 Electrical Shift Inspection

The Electrical Shift Inspection covers the Melt Shop electrical components and some other Mill/Processing areas. This inspection checks for any signs of electrical equipment that is not functioning properly and/or may be exhibiting signs of wear and needed maintenance. Electrical ground issues are checked as well. Grounds are always a potential cause of inefficient energy use/transfer and can also lead to power loss and equipment shutdowns.

5.1.4 Crane Inspections

The Gerdau Monroe facility has two large cranes (West Ladle & Charge Crane and the Maintenance Crane) that are used to move heavy equipment, ladles of molten steel, and perform other tasks. In order to keep the facility producing efficiently, these cranes must be kept in working condition. The cranes require energy (direct) and are paramount to efficient operations in the Melt Shop (indirect), therefore they have multiple effects on energy efficiency.

Crane inspections are conducted routinely and cover items such as: hoist brake operation, hoist limits, cable conditions, wheel condition/movement, electrical, and bridge and trolley, along with couplings and gear boxes.

5.1.5 Equipment Calibrations

Various equipment calibrations, including load cell systems/weigh scales and flowmeters, are performed to ensure that the readings are within tolerance. Incorrect readings could have an indirect energy impact, potentially leading to off-spec chemistry and the need to re-melt the steel.

5.1.6 Calibrations on Pressure Transmitters

Calibrations or verification checks are performed on pressure transmitters to ensure that the readings are within tolerance. For example, incorrect readings could have a direct energy impact if additional energy were required to provide a higher degree of vacuum at the VTD than necessary, due to faulty readings.

5.1.4 Calibration Checks on Thermocouples

Calibration checks are performed by the maintenance department on thermocouples at the EAF, LMF and Caster to ensure that the readings are within tolerance. Incorrect readings could have both a direct (use more energy to heat up the steel if thermocouple is reading low) and an indirect energy impact (problem at caster causing delay).

5.2 EAF MAINTENANCE

For the EAF, the following maintenance activities are the most important:

5.2.1 High Voltage Yard

The High Voltage Yard is a critical area to maintain, because this supplies all the power to the furnace electrodes and other electrical components, including the Baghouse. There are four transformers that are inspected and maintained on a regular basis, and every effort is made to prevent any electrical system downtime. The following are inspected on a routine basis:

1) Ferranti Transformer
2) National Transformer
3) East GE Transformer
4) West GE Transformer

When issues are noted with any of the transformers (i.e. inspection covers oil temperature, winding temperature, oil level, system pressures, and voltage readings), appropriate actions are taken to rectify the issues before a more serious situation occurs.

5.2.2 EAF Transformer

The EAF Furnace Transformer inspection is performed every shift, along with checking for evidence that all equipment powered by this transformer is operating (fans, pumps, water). In addition, the inspector will check to make sure that there are no signs of water or evolved gases, and that proper nitrogen pressure is available.

The EAF Furnace Transformer also has the following routine/periodic maintenance:

1) Phase shunt cable replacement
2) Bus-work cleaning
3) Diverter change out

Similar to the other transformers, when issues are noted with the EAF transformer, appropriate actions are taken to rectify the issues before they result in a more serious situation occurs, such as a loss of power to the EAF during a heat.

5.2.3 EAF Baghouse Fans

There are three types of fans associated with the EAF Baghouse – the DEC ductwork fan that directly exhausts the EAF from the 4th Hole; the Main ID fans on the baghouse; and reverse air fans that clean the baghouse.

The following routine/periodic maintenance is done:

DEC Fan

1) Fan rotor balancing
2) Fan motor MCE testing (see end for explanation) for winding integrity

Main FD Fans

1) Fan rotor balancing
2) Motor MCE testing for winding integrity

Reverse Air Fans

1) Fan rotor balancing
2) Motor MCE testing for winding integrity

5.2.4 EAF Baghouse Shift Inspection

The EAF baghouse is inspected once per shift for signs of abnormal function. In the event that something is happening that would adversely affect direct or indirect energy efficiency related to the baghouse, it would potentially be noticed during this inspection. The inspection covers the following critical items:

1) Cleaning cycle performance
2) Fan functioning of Main, DEC and Reverse Air fans (bearing temperatures, vibration, noise, damper positions)
3) Screw conveyors and slide gates
4) Compartment differential pressures

Note that proper functioning of the baghouse is critical in terms of indirect energy consumption because improper baghouse equipment may lead to environmental issues that would cause the entire Melt Shop to have to shut down, which could lead to product quality issues and additional energy input when operations resume.

If the baghouse differential pressure is too high, it would require more direct energy from the baghouse fan motors to remove the same amount of air from the furnace and canopies.

5.2.5 Millwright EBT (EAF) Shift Inspection

This inspection covers many aspects of the EAF, including most of the critical equipment functions. This covers inspections for leaking hoses (water, oxygen, air, carbon), hydraulic leaks, alloy and transfer car functionality, water pumps, valves, and for other various mechanical defects. In addition, inspection of the Morė lance/burner system is conducted. Any issues that are noted need to be repaired as quickly as possible.

Leaking water, oxygen, air, or hydraulic lines or hoses would require more energy input for associated pumps or compressors.

5.2.6 Maintenance CO Checklist Inspection

In the event of elevated carbon monoxide at the EAF baghouse stack, this inspection is performed to determine if the cause can be tracked down to anything related to control system functioning. This is inspection requires checking out fans, dampers, leaks in ductwork, etc., which are all items that have direct or indirect energy consumption implications.

5.2.7 EAF Sidewall Burner System

On the EAF sidewall burner system, the shroud gas ports are cleaned after burner replacement.

5.3 LMF MAINTENANCE

The following maintenance is known to occur on the LMF:

LMF Transformer: The transformers in the plant are checked by maintenance on a regular basis to determine if there is excessive heat which would indicate inefficiency and require more power. In addition, the following are done on a routine/periodic basis:

1) Phase Shunt Cable Replacement
2) Bus-work cleaning and delta enclosure inspection

LMF Baghouse: The LMF baghouse is maintained to keep the differential pressure within an acceptable range and maintain efficiency. In addition, the following are done on routine basis:

1) Fan rotor balancing
2) Fan motor MCE testing

5.4 VTD MAINTENANCE

There are a number of routine inspections performed on various equipment around the area of the new Vacuum Tank Degasser system. When inspections find equipment or situations that are in need of maintenance or need to be addressed, maintenance is conducted as soon as possible.

The various VTD inspections include checking the following:

- VTD Vacuum system – including pumps, heat exchanger and filter
- VTD Vacuum system ductwork for signs of wear or improper seals
- VTD Off-Gas filter baghouse and chain conveyor/dust system
- VTD Exhaust Fan/Blower (including recommended motor maintenance)

- VTD Hydraulic system for signs of weak or leakage that could lead to malfunction
- VTD Pneumatic system for air leakage
- VTD Wire-feed system for problems that could cause a malfunction

VTD maintenance and inspections ensure that the equipment and process run while maintaining energy efficiency, for both direct and indirect energy efficiency.

5.5 CASTER MAINTENANCE

For the Caster, there is a detailed checklist for downday and pre-startup which covers several items that are important to maintain optimal energy efficiency:

- Shutting off Caster pumps (for mold water, spray water & hydraulic units, depending on season)
- Shutting off oxygen line
- Turn off compressed air on the ladle turret
- Cover top of opening between splash shield and tundish
- Check for leaks in spray header and spray nozzles
- Check torches for leaks
- Inspect lances for leaks
- Check for hydraulic leaks from dummy bar trays

Caster Combustion Sources

The tundish preheaters are periodically tuned for proper combustion. In addition, the refractory area tundish dryer is periodically tuned for proper combustion.

5.6 WALKING BEAM REHEAT FURNACE MAINTENANCE

The "state of the art" Walking Beam Reheat Furnace at the Monroe facility is a fully automated furnace, relying on computer system feedback to detect issues with items that may require maintenance, such as burners, rollers and furnace structure. Operators notify the Maintenance department if alarms indicate that there is an issue within the Reheat Furnace. Qualified personnel are contacted to address any maintenance and/or burner problems.

Camera systems are utilized to observe the furnace as well, so that operators can easily detect if something is not functioning correctly (i.e. if doors do not open/close properly).

In addition, the following maintenance is done on the furnace on a regular basis:

- Verification of the thermocouple operation in all heating zones
- Verification of the natural gas and combustion air flow transmitters
- Verification of the oxygen analyzer

5.7 LADLES MAINTENANCE

Ladles are preheated and kept warm using ladle preheaters with a refractory cover to hold in the heat. To maintain energy efficiency, the ladle preheaters are tuned for proper combustion. In addition, ladles are periodically inspected for refractory integrity and maintained as necessary.

5.8 COOLING WATER SYSTEM MAINTENANCE

The Millwright shift inspection report for the EAF includes checking water feed hoses for leaks. Catching and repairing leaks early maintains energy efficiency, because otherwise, more energy would be required to pump additional water to account for the leaks.

The main pump house and pond shift checklist includes checking pump packing, water pressure and amperage (measurement of power usage). By monitoring and acting on this information, the energy efficiency of the water pumps can be maintained.

5.9 COMPRESSED AIR SYSTEM MAINTENANCE

The Millwright shift inspection report for the EAF includes checking for air leaks at the DEC slidegate. The main pump house and pond shift checklist includes checking the pressure of the air compressors and checking the air dryer for leaks. The VTD wire feeding system and switch system 180 degree elbow inspection reports include checking for air leaks.

The VTD Blower & Pneumatic Conveyor Inspection report checks for leaks in the system as well as checking the filter element.

By checking for air leaks and repairing them, the plant can maintain energy efficiency by not using more energy to compress additional air that is wasted as it leaks.

5.10 OTHER MAINTENANCE PROCEDURES

MCE Testing (Motor Circuit Evaluator): This testing is a comprehensive static motor test is performed to determine trends that can alert maintenance technicians to schedule a replacement before a catastrophic failure. This is performed on critical motors throughout the facility.

Shunt Cables: These are the water cooled copper cables that connect the transformer secondary bus-work (at the delta enclosure) in the transformer vault to the power conducting arms (EAF), and the clamp heads (LMF). During each inspection, one of the three phases has all of its cables changed out. The removed cables are sent out for inspection and the copper end lugs saved and attached to new cable if damaged.

Fan Rotors: The baghouse fans at the EAF (Main and DEC) are in contact with the gas stream before the baghouse, and are exposed to the abrasive nature of the captured dust. The erosion of the fan blades necessitates the inspection (and repair, if necessary) of these fans on down-days to maintain their integrity. Each time weld material is applied to the fan rotor, a static balancing procedure (single plane) is necessary. A dynamic balance (multi-plane) may be necessary on the main fans to determine the rotor condition and the extent of damage or determine the remaining life of the rotor.

6.0 IMPLEMENTATION

6.1 Approval through MDEQ

6.2 Training

Training on the plan will be conducted after MDEQ acceptance of the plan.

6.3 Implementation

The plan will be implemented after training has been completed. However, many of the practices and maintenance procedures are already being followed.

7.0 REVISION TABLE

Table 7.1 - Revision Table

Date Issued	Revision #	Revised by	Summary of Changes
03/07/2016	0	SGI - Original	Original

APPENDIX A

Listing of Work Practices with Energy Efficiency Implications

APPENDIX A - Gerdau Monroe
Operating Procedures and Job Aids

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
Melt Shop - General						
Visual Inspection of Stacks and Roof	May detect abnormal activities related to energy/processes	110	All		X	X
Verification/Inspection of Deliveries	May detect incorrect materials or damaged materials that may lead to offspec production or improper equipment functioning	110	All			X
Hot Lance Usage	Discusses limiting the use of hot lancing whenever possible	110	All			X
Acceptable Grades for Draining EAF, Tapping into Green Ladles and Scheduling	Provides guidance on grade considerations when running final heats on the EAF prior to shutdown, when tapping into a "green" ladle, and when scheduling a sequence. All of these situations can help to maintain energy efficiency (direct/indirect) when handled properly	110	All	Yes	X	X
Chemistry Ranges	Specifications for Aluminum, sulfur, and carbon can affect "castability" of molten steel and therefore must be considered at the onset of heat production. Can affect both direct energy and indirect energy efficiency.	110	All		X	X
EAF						
Alarm Response for the EAF	Paramount to avoiding production delays, equipment damage, environmental harm	113	Pumps, fans, motors		X	X
Operating Furnace Hydraulic System	Failure to operate pumps correctly can result in inability to operate furnace and/or electrodes properly	113	Pumps		X	X
Operating Water Cooled Furnace Components	Proper operation of pumps is necessary for preventing equipment damage; includes watching for signs of pumps/cooling system not operating correctly, avoiding over-cooling, and avoiding undesirable removal of heat from the EAF	113	Pumps, Electrodes		X	X
Turning Power On/Off to EAF	Prevent catastrophic electric losses, explosions, equipment damage, extended down time	113	Electrodes		X	X
Water in the Furnace	Detect water in furnace/leaks of water cooled equipment; direct energy efficiency related to use of water; indirect energy efficiency related to potential damage to equipment and product quality issues	113	All		X	X
Operating the Furnace Regulator	Use "SMART-ARC" regulator control in order to prevent excessive electrical consumption and electrode damage	113	Electrodes		X	
Torque Station Operations	Important to proper installation of electrodes to prevent failure and damage to electrodes	113	Electrodes		X	X
Cojet Replacement	Proper installation of Cojet burners is critical in order to ensure proper burner operation and prevent damage to water panels	113	Cojet burners		X	X

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
EAF (continued)						
Cojet Startup on a Cold Furnace	Procedure for properly starting up the furnace with Cojet burners including checking for proper activation of burners so as to prevent unnecessarily long electrode usage/power "on"	113	Cojet burners, Electrodes	Yes	X	
Cleaning Cojet Burners	Proper cleaning of burners is imperative to limiting down time and improper burner operation that may result in more electrode usage for melting	113	Cojet burners		X	
Draining the EAF	Critical steps to removing steel and slag from the EAF in the event that the EAF is being shut down for maintenance. Proper alloying of final heat, limiting heel height, limiting pitted steel, clearing tap hole, etc. are all necessary to ensure proper production startup	113	All EAF equipment	Yes	X	X
Emergency Draining the EAF	Steps are outlined to aid in an emergency shutdown of the EAF in order to minimize excessive damage to equipment that would result in additional downtime and that would require more energy to restart	113	All EAF equipment	Yes	X	X
Melt Procedure in the EAF	Procedure is described for proper operation of furnace, including use of Cojets and proper flux steps, proper levels of scrap that allow roof to fully close, and other steps that will aid in reducing electrode energy consumption and allow accurate steel grades to be made (and minimize "off-spec" production).	113	All EAF equipment		X	X
Batching Alloys for Addition to EAF	Maintain indirect energy efficiency by assuring product quality (don't need to process longer or re-melt)	113				X
Tapping the EAF	Ensure proper temperature so that LMF can properly process heat and not cause delays or downstream issues; properly ladle the heat so no wasted steel or re-melting results and perform ladle additions correctly	113	ALL		X	X
Power Curtailment	Sequencing of events that should take place to properly curtail energy use should this become necessary (dictated by utility provider) so that restarting of equipment is smooth (with least amount of energy)	113	ALL	Yes	X	X
Carbon Addition to Furnace	Carbon is added to furnace for energy efficiency reasons (to reduce electrode usage by forming slag and also provide energy as fuel)	113	EAF Electrodes		X	
Slag Former Additions at Tap	Depending on desired chemistry and type of grade, slag forming additives are added to the ladle during tapping steel; critical to proper chemistry - results in less re-melt of off-spec product and also aids in temperature retention, which helps maintain energy input efficiency at the LMF	113	EAF; Electrodes; Ladles		X	X

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
EAF (continued)						
Slag Former Additions in Charge	Depending on desired chemistry and type of grade, slag forming additives are added the EAF vessel during charging; critical to proper chemistry - results in less re-melt of off-spec product and slag aids in temperature retention, which helps maintain energy input efficiency (at both EAF and LMF)	113	EAF; Electrodes		X	X
Ladle Additions at Tap	Depending on desired chemistry/grade of product, additives are added the ladle during tapping from the EAF vessel; critical to proper chemistry - results in less re-melt of off-spec product	113				X
LMF						
Operational Electrical Lockout & Turning Power On/Off to the LRS (LMF)	Instructions for proper heating - if not followed, could result in excessive electrical consumption, equipment damage; includes proper regulation of electrodes	112	LMF Electrodes		X	X
Electrode Add Procedure	Procedure for proper replacement of electrodes, to avoid potential damage to electrodes and possible delay time	112	LMF Electrodes		X	X
LMF Set Up & Ladle Preparation	Steps are discussed for proper set up of LMF equipment and ladles, including use of ladle lids, LMF roof, ensuring electrode placement, stirring of the ladle to prevent plugging of the tap nozzle and gain temperature uniformity	112	LMF; Ladles; Electrodes	Yes	X	X
Operation of the LRS (LMF) Wire Feeder	Instructions for proper wire selection and addition, for proper chemistry results and preventing delays or lost product	112	LMF			X
Alloy Calculation at LMF	Maintain indirect energy efficiency by assuring product quality (don't need to process longer or re-melt); proper stirring to allow tapping at Caster	112				X
Powder Injection at the LRS (LMF)	Maintain indirect energy efficiency by assuring product quality (don't need to process longer or re-melt)	112				X
Batching Alloys at the LRS (LMF)	Maintain indirect energy efficiency by assuring product quality (don't need to process longer or re-melt)	112				X
Cleaning Electrode Clamp Heads	Instruction for proper cleaning of parts associated with LMF electrodes; failure to execute properly could result in damaged electrodes and cause delays	112	LMF Electrodes			X
Power Curtailment	Sequencing of events that should take place to properly curtail energy use should this become necessary (dictated by utility provider) so that restarting of equipment is smooth (with least amount of energy)	112	LMF All	Yes	X	X

APPENDIX A - Gerdau Monroe
Operating Procedures and Job Aids

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
VTD						
Degassing a Heat	Instructions for proper operation of the VTD; including mechanical pumps, avoiding fouling with slag that can damage equipment/cause delays, proper vacuum and bubbling, post-heat cleaning	118	VTD All		X	X
Aluminum Deoxidized VTD Procedure	Procedure to properly produce VTD heat; Maintain indirect energy efficiency by assuring proper processing of VTD heats	118				X
Silicon Deoxidized VTD Procedure	Procedure to properly produce VTD heat; Maintain indirect energy efficiency by assuring proper processing of VTD heats	118				X
HMI Operation of VTD Wire Feeder	Maintain indirect energy efficiency by assuring product quality (don't need to process longer or re-melt)	118				X
AutoSampling for Chemistry & Temp at VTD	Proper temperature is critical for proper Caster processing - can cause serious equipment damage/downtime/poor quality, all which increase indirect energy consumption; proper chemistry also necessary for product quality	118	VTD All		X	X
Hydrogen Sampling at the VTD	Needed to ensure proper casting and product quality; Maintain indirect energy efficiency by assuring proper product	118				X
VTD Gas Stir Operation	Proper stirring of VTD heats is critical to product quality; issues with gas stirring can cause or be result of other issues that relate to direct or indirect energy consumption	118	VTD; Ladles		X	X
Testing of Degas System	Procedure for making sure that the VTD is ready following any maintenance on the VTD system. Will identify any areas where process equipment may not function properly prior to an actual degas heat being brought in. Helps to maintain energy efficiency, both direct and indirect when heats are degassed.	118	Pumps, fans, other VTD equipment	Yes	X	X
Wire Addition Order, Timing, Speed	Procedure to properly produce VTD heat; Maintain indirect energy efficiency by assuring proper processing of VTD heats	118				X
Requested LMF Release Superheats	In order for steel to be released to Caster with correct temperature after VTD processing, LMF must provide additional heating; reduce indirect energy by assuring proper caster operation and so damage (breakouts, etc) to Caster does occur	118				X
Aluminum and CaSi Wire Trim at VTD	Trim wire is added for various purposes after degassing; Maintain indirect energy efficiency by assuring proper chemistry and caster operation	118				X

APPENDIX A - Gerdau Monroe
Operating Procedures and Job Aids

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
VTD (continued)						
Sulfur Wire Trim	Sulfur trim wire is added for customer chemistry; Maintain indirect energy efficiency by assuring proper chemistry and caster operation	118				X
VTD Alloy Recovery	Alloys are added for customer chemistry; Maintain indirect energy efficiency by assuring proper chemistry and avoiding re-melt/off-spec	118				X
Troubleshooting Poor Torr Level During Degas	Troubleshooting is done when adequate vacuum cannot be reached; poor vacuum can indicate improper mechanical pump operation (which may be wasting energy) and can also result in product quality issues (indirect energy for offspec/remelt)	118	VTD pumps, tanks		X	X
VTD Replacement Gaskets	Replacing worn out gaskets with proper gaskets is critical to being able to pull the correct vacuum. Can affect product quality and direct energy of pumps.	118	VTD pumps, tanks		X	X
Timing of Heat Movement from LMF to VTD	Specific timing is detailed for proper movement of heats given where the Caster is in a sequence of heats; this is critical to maintaining proper temperatures of molten steel given the pacing of the Melt Shop; direct and indirect energy is potentially affected along with product quality and equipment considerations	118	VTD All		X	X
Caster						
Heat on the Turret	Several steps are taken to properly place and remove ladles from the turret with care to avoid damaging equipment and get the molten steel cast in the Caster.	111	Turret; Ladles			X
Tundish & Submerged Entry Nozzle Preheating	Preheating is critical for Caster operation and in order conserve energy, programs of specific duration are run for preheat control. Improper preheating can result in strands "freezing off" and not casting molten steel. Helps maintain energy efficiency - both direct and indirect	111	Caster		X	X
Mold Level Calibration Before Startup	Precise calibrations are required in order to have stable mold levels, which are needed for product quality; maintain indirect energy efficiency by assuring proper product quality	111	Caster	Yes		X
Changing a Mold	Several steps are taken to ensure proper changing of a mold without causing production delays. In addition, Mold Water Pumps are turned off if more than one mold is changed - direct energy efficiency	111	Caster Molds		X	X
Tundish Submerged Entry Nozzle Washout	Procedure when emergency situation (washout) occurs; attempts to Prevent/limit loss of steel and energy by saving if greater than 85 tons remain in ladle	111	Caster; Nozzles			X

Operating Procedures/Checklists

Procedure Name	Description	Area Code	Equipment Affected	Startup/ Shtdown	Energy Relation Direct	Energy Relation Indirect
Caster (continued)						
Spray Chamber Exhaust Fan Vents	Proper vent positions are critical to correct operation of the spray chamber; may affect direct energy efficiency (fans) and impact quality of cast steel (if steam is not vented properly)	111	Caster; Fans, pumps		X	X
Decision Point to Interrupt Casting	Outlines potential reasons when steel being cast might need to be interrupted. Depending on situation, may result in stopping cast, reladling, etc. that might lead to lower energy efficiency (direct and indirect)	111	Caster All		X	X
Walking Beam Reheat Furnace						
Furnace Light-up Procedure	Procedure for step by step process of starting up the reheat furnace, including initiating air and water supplies, activating rollers, and beginning the sequence of starting burners. Startup is critical to maintaining efficiency both directly and indirectly	144	All	Yes	X	X
Furnace Shutdown	Procedure for step by step process of shutting down furnace. Includes shutting off gas to zones and proper (safe) stoppage of combustion air fan and water supply. Shutdown is done in a manner that maintains energy efficiency directly and indirectly	144	All	Yes	X	X
Maintaining Proper Reheat Temperature	This is of paramount importance to the quality of the steel billet/products and also to reduce maintenance on the furnace equipment. Procedure outlines communication regarding "mill pace" and adjusting temperatures as needed to maintain proper heating of steel billets inside the furnace. Maintaining direct and indirect energy use is inherent in proper furnace operation and product quality	144	Burners, rollers		X	X

COMPLIANCE ASSURANCE MONITORING PLAN
FOR
EAF BAGHOUSE (DVBAGHOUSE-01)
AT
GERDAU MACSTEEL MONROE MILL

MAY 20, 2021

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COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

FOR
EAF BAGHOUSE (DVBAGHOUSE-01)
Post CAPEX Project

This CAM Plan covers the EAF Baghouse (DVBAGHOUSE-01) used for Particulate Matter Control at Gerdau Macsteel Monroe Mill (Gerdau Monroe). Gerdau Monroe manufactures Special Bar Quality (SBQ) steel using an electric arc furnace. The facility is a major source for PM, SO2, NOx and CO. The SO2, NOx, CO and VOC emissions from FGMELTSHOP are uncontrolled. EUEAF is subject to CAM because pre-control emissions of particulate matter are over the major source threshold.

I. BACKGROUND

A. Emission Unit

Description: An Electric Arc Furnace with Direct Evacuation Control (DEC) system at the EAF and a canopy hood for the Melt Shop directed to the reverse air, positive pressure baghouse (DVBAGHOUSE-01) for particulate emission control.

Identification: EUEAF
FGMELTSHOP

Facility: Gerdau Macsteel Monroe Mill
3000 East Front Street
Monroe, Michigan 48161

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: MI-ROP-B7061, PTI 75-18

Emission Limits:

Particulate Matter: 0.0052 grains per dry standard cubic foot of exhaust gas, Rule 331(1)(c), 40 CFR 63.10686(b)(1), 40 CFR 60.272a(a)(1)
0.0018 grains per dry standard cubic foot of exhaust gas, Rule 331(1)(c)
7.84 pounds per hour, Rule 331(1)(c), Rule 1803, Rule 1804
32.15 tons per year, Rule 331(1)(c), Rule 1803, Rule 1804

PM-10: 12.91 pounds per hour, Rule 1803, Rule 1804, Rule 1810
49.7 tons per year, Rule 331(1)(c), Rule 1803, Rule 1804, Rule 1810

PM-2.5: 12.91 pounds per hour, Rule 1803, Rule 1804, Rule 1810
49.7 tons per year, Rule 331(1)(c), Rule 1803, Rule 1804, Rule 1810

Opacity: 3% on a 6-minute average from SVBH-01-STACK1 and SVBH-01-STACK2 Rule 301(1)(c), 60.272a(a)(2), Rule 362(1), Rule 1810

Monitoring Requirements: COMS on SVBH-01-STACK1, COMS on SVBH-01-STACK2, baghouse pressure drop, baghouse inspection

Potential Pre-Control Emissions: 11,729 tons of particulate per year once the CAPEX project is completed.

C. Control Technology

The reverse air baghouse was designed and supplied by Cadre Corporation. The baghouse operates under positive pressure and is capable of filtering approximately 585,000 actual cubic feet/min of air. Potential pre-control emissions of PM are more than 100 tons annually. Baghouse efficiency rated at 99.8%.

II. MONITORING APPROACH

	Visible Emissions	**Pressure Drop**	**Baghouse Inspection**
Indicator ID	1	2	3
A. Indicator	COMS on SVBH-01-STACK1 COMS on SVBH-01-STACK2	Pressure drop across the baghouse is measured with a differential pressure gauge. It is continuously monitored and recorded.	Baghouse fan operation.
B. Indicator Range	COMS reading of 3% opacity. If visible emissions are noted during non-certified VE observation checks, a Method 9 observation is performed for at least 6 minutes. An excursion for PM shall be two consecutive 1-hour block average opacity values greater than 3%. Excursions trigger an investigation and corrective action.	An excursion is defined as a pressure drop greater than 14-inch water column (wc) or less than 3-inch wc for more than 15 minutes. Excursions trigger an inspection.	Confirmation that at least two of the three baghouse fans are working. An excursion is defined as less than two baghouse fans operating. If only one baghouse fan is operating, production at the EAF will be suspended.
C. QIP Threshold	None selected.	None selected	None selected

III. PERFORMANCE CRITERIA

	Visible Emissions	Pressure Drop	Baghouse Inspection
A. Data Representativeness	COMS measurements are made in each of the two baghouse stacks.	Pressure taps are located at the inlet plenum and outlet plenum. The gauge has a minimum accuracy of 0.5-inch wc.	At least two baghouse fans operating simultaneously indicates sufficient draft for EAF operation.
B. Verification of Operational Status	NA	NA	Baghouse fan operating/not operating.
C. QA/QC Practices and Criteria	COMS are audited quarterly.	Pressure gauge is checked daily to confirm it is functioning.	Inspection performed by personnel familiar with baghouse operation.
D. Monitoring Frequency	Opacity from both stacks is monitored continuously.	Pressure drop is monitored continuously.	Once daily, when operating.
E. Data Collection Procedure	Opacity from both stacks is continuously monitored and recorded.	Pressure drop is continuously monitored and recorded.	Inspection documented on inspection form
F. Averaging Period	NA	NA	NA

IV. Justification

A. Rationale for Selection of Performance Indicators

Indicator 1 – Visible Emissions

Visible emissions from the baghouse stack are indicative of whether the baghouse is being operated and maintained well. When the baghouse is operating properly, visible emissions from the exhaust will not average above 3% opacity on a six-minute average. Any increase in visible emissions indicates reduced performance of a particulate control device, therefore, the presence of visible emissions is used as a performance indicator.

Indicator 2 – Pressure Drop

In general, baghouses are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming inefficient, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

Indicator 3 – Baghouse Inspection

Baghouse fans induce draft pulling emissions from the process unit to the baghouse control. Emissions are not pulled from the processes adequately unless at least two of the three baghouse fans are operating.

B. Rationale for Selection of Indicator Ranges

Indicator 1 – Visible Emissions

The selected indicator range is the presence of visible emissions in excess of 3% opacity as measured by COMS. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented. An indicator range of the presence of visible emissions in excess of 3% opacity on a six-minute average is based on visible emissions limitations established in 60.272a(a)(2).

Indicator 2 – Pressure Drop

The indicator range chosen for the baghouse pressure drop is between 3 and 14 inches wc. If the measured pressure drop is outside that range for more than 15 minutes it would be considered an excursion. An excursion triggers an inspection and corrective action. The pressure drop is monitored continuously and recorded daily.

Indicator 3 – Baghouse Inspection

The indicator range for the baghouse inspection is whether the baghouse fans are operating or not during process operations. An excursion is less than two baghouse fans operating during process operation. If less than two baghouse fans are operating, melting is suspended until at least two baghouse fans are operating.

C. Performance Test

In February 2016, performance testing of the EAF Baghouse was performed. The filterable PM emissions were determined to be 0.00050 grains of particulate per DSCF of exhaust gases. The test result was well within the permitted limit.

During the performance test, Method 9 visible emissions observations and the pressure drop across the EAF Baghouse were recorded. This testing confirmed that the chosen indicator range for the pressure drop correlates with compliance with the particulate limit. No visible emissions were observed from the EAF Baghouse.

The facility is in the process of completing modifications to the Melt Shop as approved under PTI 75-18. The modifications include enhancements to the steel melting capacity of the EAF, realignment of the exhaust ductwork for the VTD operation from the EAF Baghouse to the LMF Baghouse, and addition of a second stack on the EAF Baghouse. These modifications will not adversely affect dust capture by the EAF Baghouse since the performance test was conducted.

COMPLIANCE ASSURANCE MONITORING PLAN
FOR
LMF BAGHOUSE (DVLMFBAGHOUSE)
AT
GERDAU MACSTEEL MONROE MILL

MAY 20, 2021

Prepared by:
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COMPLIANCE ASSURANCE MONITORING (CAM) PLAN

FOR
LMF BAGHOUSE (DVLMFBAGHOUSE)
Post CAPEX Project

This CAM Plan covers the LMF Baghouse (DVLMFBAGHOUSE) used for Particulate Matter Control at Gerdau Macsteel Monroe Mill (Gerdau Monroe). Gerdau Monroe manufactures Special Bar Quality (SBQ) steel using an electric arc furnace. The chemistry of the liquid steel is refined at a Ladle Metallurgy Facility (LMF) and gases trapped in the liquid steel are removed at the Vacuum Degassing operation (VTD). The LMF and VTD operations are served by a common baghouse (DVLMFBAGHOUSE) and are grouped together as FGLMFVTD. The facility is a major source for PM, SO2, NOx and CO. SO2, NOx, CO and VOC emissions from FGLMFVTD are uncontrolled. FGLMFVTD is subject to CAM because pre-control emissions of particulate matter are over the major source threshold.

I. BACKGROUND

A. Emission Unit

Description: A Ladle Metallurgy Facility (LMF) operation and Vacuum Degassing operation (VTD) with local draft hoods at the LMF and VTD and capture hooding at the easternmost Ladle Bay Roof Monitor vent directed to the induced draft baghouse (DVLMFBAGHOUSE) for particulate emission control.

Identification: EULMF
EUVTD
EULADLEPREHEAT2
FGLMFVTD

Facility: Gerdau Macsteel Monroe Mill
3000 East Front Street
Monroe, Michigan 48161

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: MI-ROP-B7061, PTI 75-18

Emission Limits:

Particulate Matter: 0.0018 grains per dry standard cubic foot of exhaust gas,
Rule 331(1)(c)
3.88 pounds per hour,
Rule 331(1)(c), Rule 1803, Rule 1804
15.92 tons per year,
Rule 331(1)(c), Rule 1803, Rule 1804

PM-10: 8.95 pounds per hour,
Rule 1803, Rule 1804, Rule 1810
33.47 tons per year,
Rule 1803, Rule 1804, Rule 1810

PM-2.5: 8.95 pounds per hour,
Rule 1803, Rule 1804, Rule 1810
33.47 tons per year,
Rule 1803, Rule 1804, Rule 1810

Opacity: 6% on a 6-minute average from SVBHLMF-STACK, Rule 1810

Monitoring Requirements: Baghouse pressure drop, baghouse inspection

Potential Pre-Control Emissions: 307 tons of particulate per year once the CAPEX project is completed.

C. Control Technology

The baghouse was designed and supplied by Dustex. The baghouse operates under induced draft and is capable of filtering approximately 285,000 actual cubic feet/min of air. Potential pre-control emissions of PM are more than 100 tons annually. Baghouse efficiency rated at 99%.

II. MONITORING APPROACH

	Visible Emissions	**Pressure Drop**	**Baghouse Inspection**
Indicator ID	1	2	3
A. Indicator	A non-certified VE observation check is performed weekly during daylight hours.	Pressure drop across the baghouse is measured with a differential pressure gauge. It is recorded daily.	Baghouse fan operation.
B. Indicator Range	If visible emissions are noted during weekly non-certified VE observation checks, a Method 9 observation is performed for at least 6 minutes. An excursion for PM shall be a six-minute average exceeding 5%. Excursions trigger an investigation and corrective action.	An excursion is defined as a pressure drop greater than 10-inch water column (wc) or less than 3-inch wc for more than 15 minutes. Excursions trigger an inspection.	Confirmation that at least one of the two baghouse fans are working. An excursion is defined as no baghouse fans operating. If no baghouse fans are operating, production at the LMF and VTD will be suspended.
C. QIP Threshold	None selected.	None selected	None selected

III. PERFORMANCE CRITERIA

	Visible Emissions	Pressure Drop	Baghouse Inspection
A. Data Representativeness	Measurements are made at the baghouse exhaust.	Pressure taps are located at the inlet plenum and outlet plenum. The gauge has a minimum accuracy of 0.5-inch wc.	At least one baghouse fan operating.
B. Verification of Operational Status	NA	NA	Baghouse fan operating/not operating.
C. QA/QC Practices and Criteria	The observer will be familiar with baghouse operations and visible emissions.	Pressure gauge is checked daily to confirm it is functioning.	Inspection performed by personnel familiar with baghouse operation.
D. Monitoring Frequency	A VE observation check is performed weekly.	Pressure drop is monitored continuously.	Once daily, when operating.
E. Data Collection Procedure	Visible emission records are maintained when visible emissions are observed using Method 9.	Pressure drop is continuously monitored and recorded.	Inspection documented on inspection form.
F. Averaging Period	NA	NA	NA

IV. Justification

A. Rationale for Selection of Performance Indicators

Indicator 1 – Visible Emissions

Visible emissions from the baghouse stack are indicative of whether the baghouse is being operated and maintained well. When the baghouse is operating properly, there will not be visible emissions from the exhaust. Visible emissions indicate reduced performance of a particulate control device, therefore, the presence of visible emissions is used as a performance indicator.

Indicator 2 – Pressure Drop

In general, baghouses are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming inefficient, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

Indicator 3 – Baghouse Inspection

Baghouse fans induce draft pulling emissions from process units to baghouse control. Emissions are not pulled from the processes unless at least one of the two baghouse fans are operating.

B. Rationale for Selection of Indicator Ranges

Indicator 1 – Visible Emissions

The selected indicator range is the presence or absence of visible emissions. An excursion for PM is a six-minute average exceeding 5% opacity. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented. An indicator range of the presence or absence of visible emissions was selected because: (1) an increase in visible emissions is potentially indicative of an increase in particulate emissions; and (2) a monitoring technique which does not require a Method 9 certified observer is desired.

Indicator 2 – Pressure Drop

The indicator range chosen for the baghouse pressure drop is between 3 and 10 inches wc for more than 15 minutes. An excursion triggers an inspection and corrective action. The pressure drop is monitored continuously and recorded daily.

Indicator 3 – Baghouse Inspection

The indicator range for the baghouse inspection is whether the baghouse fans are operating or not during process operations. An excursion is no baghouse fans operating during process operation. If neither baghouse fan is operating, the LMF and VTD operations are suspended until at least one baghouse fan is operating.

C. Performance Test

In February 2016, performance testing of the LMF Baghouse was performed. The filterable PM emissions were determined to be 0.00032 grains of particulate per DSCF of exhaust gases. The test results are within the permitted limit.

During the performance test, Method 9 visible emissions observations and the pressure drop across the LMF Baghouse were recorded. This testing confirmed that the chosen indicator range for the pressure drop correlates with compliance with the particulate limit. No visible emissions were observed from the LMF Baghouse.

The facility is in the process of completing modifications to the Melt Shop as approved under PTI 75-18. The modifications include enhancements to the steel melting capacity of the EAF, and realignment of the exhaust ductwork for the VTD operation from the EAF Baghouse to the LMF Baghouse. These modifications will not adversely affect dust capture by the LMF Baghouse since the performance test was conducted.

MALFUNCTION ABATEMENT PLAN

Gerdau Macsteel Monroe Mill

Electric Arc Furnace
Vacuum Tank Degasser
Ladle Metallurgy Furnace
Continuous Caster
Rolling Mill Reheat Furnace

Revision VII
June 15, 2018

Revision Dates:

May 20, 1994
May 1, 1997
February 21, 2001
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Table of Contents

Attachments

1.0 ELECTRIC ARC FURNACE (EAF) and VACUUM TANK DEGASSER (VTD)

1.1 EAF/VTD Process and Emission Control System Description

The Electric Arc Furnace (EAF) and Vacuum Tank Degasser (VTD) employs a positive pressure type baghouse for its emission control. This baghouse has a reverse air cleaning system with dust handling by means of hopper screw conveyors to a pneumatic conveying system that loads the dust into a storage silo. The dust is loaded into haul vehicles within a full building enclosure. The building is designed to control fugitive dust emissions during the loading of the truck.

The EAF has two main emission capture points. Most of the emissions are captured directly from the EAF while melting with a Direct Evacuation Control (DEC) ductwork system, emissions not caught by the DEC are captured overhead by a canopy hood system. Emissions from the VTD are routed through a booster fan and ductwork to the canopy hood system.

The EAF exhaust system includes a CO/VOC reaction chamber that allows the exhaust to reside longer in the exhaust system to facilitate combustion of CO and VOCs. The exhaust system also includes a quench system that introduces atomized water into the DEC gas stream to cool the gases prior to entering the baghouse to avoid damaging the filter bags.

The EAF/VTD emission control system consists of a positive pressure baghouse (DVBaghouse-01) with thirteen (13) compartments, three (3) main fans, and one (1) DEC fan. The baghouse exhausts through a single stack positioned above the center of the baghouse. Each baghouse compartment contains 184 bags. Dust captured by the baghouse is screw conveyed across the baghouse and pneumatically loaded into a storage silo. The dust silo holds EAF Baghouse dust (KO61) until it is shipped offsite for disposal/recycling.

The EAF is equipped with Oxy-fuel burners to facilitate melting inside the shell.

1.2 EAF/VTD Emission Control Preventative Maintenance

Generally, one (1) maintenance employee is assigned to the baghouse on the day shift Monday through Friday. Maintenance and repairs are performed on the baghouse equipment on the other shifts as needed. Maintenance Department supervisory personnel are responsible for overseeing the inspection, maintenance, and repair of the air pollution control systems for both the Electric Arc Furnace (EAF), Vacuum Tank Degasser (VTD) and the Ladle Metallurgy Furnace (LMF) equipment. The Maintenance Department personnel are also responsible for overseeing the inspection, maintenance and repair of the EAF Oxy-fuel burners. The Oxy-fuel burners are inspected each downday for proper operation by the Maintenance personnel. There is also a daily inspection check list (typically filled out once per day when the baghouse is operating).

The frequencies in the tables below are subject to change as the plant gains more experience with the equipment and modifies the SOPs. The frequencies in the tables are typical, but due to scheduling issues, not every inspection may be performed at the stated frequency.

EAF/VTD Exhaust System Preventive Maintenance Table 1.2-1

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
EAF DEC Duct	Check wheels on duct for proper tracking	Monthly
EAF DEC Duct	Inspect DEC Piping for leaking hoses	Monthly
EAF DEC Duct	Check DEC elbow for leaks, hoses for wear or cracks	Monthly
EAF Roof Frame Pressure Indicator	Inspect valves for leaks and inspect furnace pressure hose and replace if needed	Weekly
Peak Shaver	Inspect peak shaver nozzle assemblies and heads and replace if necessary	2X/month
Baghouse Main Fans	Test motors	2X/year
DEC Fan	Test motors	2X/year
Baghouse Reverse Air Fans	Test motors	2X/year
Baghouse Main Fans	Vibration analysis	4X/year
DEC Fan	Vibration analysis	4X/year
Baghouse Reverse Air Fans	Vibration analysis	4X/year
DEC Fan & Motor	Check base bolts, coupling and fan wheel for wear & lube.	Monthly
	Make any necessary repair to fan housing and build-up worn areas on fan wheel with weld as necessary	

EAF/VTD DVBaghouse-01 Preventive Maintenance Table 1.2-2

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
Baghouse Compartments	Inspect hoppers, fans, ducts & door seals for leaks	Monthly
	Inspect baffle plates for wear	
	Inspect & clean bag cleaning air horns	
	Inspect bag retaining ring to ensure they're properly secured	
	Inspect bag compartment magnehelic gages	
	Inspect inlet and reverse air damper actuators	
	Inspect baghouse bags	
Baghouse Hoppers	Inspect hopper slide gates	Monthly
	Inspect hoppers for dust bridging	
Baghouse Super Sucker	Check bags & pulsators	2X/year
	Check/change Rotolock unit	
Baghouse Loadout Station	Inspect truck loading slide gate	Monthly
	Inspect truck roll-out door	

EAF/VTD Dust Silo Bin Vent Filter Preventive Maintenance Table 1.2-3

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
Baghouse Silo Bin Vent	Check bags & pulsators. Change bags as needed.	2X/year

Each of the thirteen (13) DVBaghouse-01 compartments is equipped with a magnehelic gage. The magnehelic gages are visually inspected by Maintenance each day. If the magnehelic gage readings are too high, Maintenance makes sure that the valves are operating properly for cleaning. If the pressure is too low, Maintenance checks the opacity, fan amperage and visually inspects the bags for damage. Bags requiring replacement are noted on a log sheet and replaced during the next available maintenance down day.

The baghouse bags are inspected at least once per month, or more frequently, for compartments which have been isolated for downturn repairs due to opacity alarms being triggered. Maintenance employees inspect for dust at the base of the bags, as an indicator of damage. The bag or bags near the dust piles are then thoroughly inspected for damage. Bags that have major damage are replaced or tied off immediately. If the bags are temporarily tied off, then the bag is scheduled to be replaced as soon as practicable.

1.3 DVBaghouse-01 Spare Parts

The Maintenance Department maintains a minimum of 25 spare bags for the baghouse. In the unlikely event of a "run" on spare bags, the Maintenance Department supervisor will submit a reorder of bags within two (2) working days (Monday through Friday).

A list of major replacement parts that are maintained in inventory for the baghouse is presented in Attachment A.

1.4 Process and Air Cleaning Device Operating Variables

A programmable logic controller (PLC) continually monitors critical baghouse operations. Once a nonconformance is noted, the PLC triggers an alarm to the EAF pulpit, at which time the pulpit personnel notify maintenance. Maintenance arrives, views the PLC screen, which indicates the exact location and malfunction problem. Repair activities are initiated; when the repair is complete, the alarm is cleared.

Operating Variable or Permit Limit	Monitoring Method	Normal Range
Baghouse Differential Pressure	Magnehelic	3 – 14" WG
Baghouse Temperature	Thermocouple to PLC	$< 400^0$F
Baghouse Opacity	Opacity Monitor	Less than 3%
Furnace static pressure	Pressure gage	Per stack test[1]
Fan Motor Amps or Flowrate	Ammeter	Per stack test[2]

Footnote 1: Furnace DEC hood static pressure set during most recent EAF Baghouse compliance stack test and will change after each test.

Footnote 2: +/- 15 % of the EAF Baghouse fan amperage set during most recent EAF Baghouse compliance stack test and will change after each test.

1.5 Variables Monitored to Detect Malfunctions

The EAF operating pulpit is equipped with a baghouse opacity alarm system. In the event of an opacity alarm, the operating personnel contact the Maintenance Department, who in turn corrects the problem or isolates the baghouse chamber that triggered the alarm. All non-conformances are noted in the quarterly Melt Shop Opacity Reports provided to the Michigan Department of Environmental Quality (MDEQ). The opacity monitoring equipment is auto-calibrated daily. The opacity monitor is audited on an annual basis.

Also, within the EAF operating pulpit, is an alarm panel which will sound instantaneously when equipment malfunctions occur. This alarm panel is triggered by the baghouse PLC, and other field signals around the EAF. When the alarm sounds, the furnace operator contacts Maintenance; it is then the responsibility of the shift's Maintenance employees to respond and initiate repairs.

The EAF Baghouse PLC monitors incoming baghouse temperatures. At 375°F, an alarm is triggered. At 400°F, the PLC shuts down the baghouse. This is to protect the baghouse bags, which have a maximum temperature rating of 500°F. The Baghouse PLC also monitors a wide variety of other baghouse field conditions.

1.6 Corrective Procedures or Operational Changes

In the event of a major malfunction of DVBaghouse-01 (i.e. more than one of the baghouse fans malfunction), the Melt Shop will cease operations until repairs have been made. If only one of the three main baghouse fans fails, daily visible emissions (VE) readings of the Melt Shop roofline will be conducted to determine if the Melt Shop can continue to run, or if it should be shut down to facilitate the necessary repairs. If opacity from the Melt Shop roofline exceeds 6%, the Melt Shop will cease operation until necessary repairs can be made. Minor malfunctions in the baghouse (i.e., a dropped bag causing 3% opacity or more to be emitted from the baghouse stack) will require immediate attention for repairs or require a baghouse chamber to be isolated, and/or baghouse and EAF shutdown until repairs can be safely made. Proper notification will be made to the MDEQ via the quarterly Melt Shop Opacity Report.

See Appendix B for the "Corrective Procedures in Event of a Malfunction – EAF" table.

2.0 LADLE METALLURGY FURNACE (LMF)

2.1 LMF Emission Control System Description

A ladle metallurgy furnace has the ability to reheat and add "trim" alloys into the liquid steel that was melted in the EAF. The LMF affords the ability to provide temperature and alloy control to the steel making process.

The LMF employs a pulse jet baghouse (DVLMFBaghouse) to control off gases from the ladle. The steel processing off gases are captured in the LMF ladle hood and travel through the LMF Baghouse ductwork to DVLMFBaghouse. DVLMFBaghouse captures emissions from the LMF and the East Melt Shop Roof Monitor. Particulate from the off gas is removed as it passes through the filter bags in the baghouse compartments. After passing through the baghouse bags, the exhaust gas is emitted through an exhaust stack. The dust collected in the baghouse is transported off site for recycling.

The LMF emissions control system consists of a ten-module pulse jet dust collector, two operating 150,000 cfm fans (North & South ID Fans), one 70,000 cfm Booster Fan, ductwork, and process controls. Draft control is accomplished with variable position dampers.

The ten-module pulse jet dust collector is divided into two groups of five. Each group of five modules discharges dust into its own screw conveyor. Every dust collector module can be isolated from the inlet plenum via a manually operated inlet butterfly damper. Every module may be isolated from the outlet plenum via a pneumatically operated outlet butterfly valve. Each hopper has a rotary valve and vibrator. The modules are cleaned on an automatically sequenced basis, which can be triggered by time or by differential pressure. The cleaning can also be manually activated.

For proper air pollution control, the system requires that eight of the ten modules be in operation when the LMF is operating. When fewer than eight modules are noted to be in operation, the LMF will be shut down.

2.2 DVLMFBaghouse Preventative Maintenance

Generally, one (1) maintenance employee is assigned to the LMF operation on the day shift Monday through Friday. Maintenance is performed on the LMF equipment on other shifts as needed. Maintenance Department supervisory personnel are responsible for overseeing the inspection, maintenance, and repair of the air pollution control systems for both the DVBaghouse-01 and DVLMFBaghouse.

A list of major replacement parts that are maintained in inventory for the LMF operation and emission control system is also provided in Attachment A.

The facility's Maintenance personnel perform the following maintenance activities on DVLMFBaghouse in accordance with department procedures and specified frequencies. The frequencies in the tables below are subject to change as the plant gains more experience with the equipment and modifies the SOPs. The frequencies in the tables are typical, but due to scheduling issues, not every inspection may be performed at the stated frequency.

DVLMFBaghouse Preventive Maintenance Table 2.2

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
Baghouse Rotary Valves and Screw Conveyors	Check oil level in rotary valve and screw conveyor gearboxes and add oil if needed	Monthly
	Check rotary valve and screw conveyor gearbox chains for wear. Tighten or replace if necessary.	
Baghouse – Dust Hoppers	Check for dust build-up & clean out if blocked	Monthly
	Inspect bottom side of bags	
Booster Fan Ductwork	Inspect for dust build-up and contact Hydro Tech	Monthly
Baghouse Diaphragm Valves	Inspect diaphragm valves for leaks and replace as necessary	Monthly

There is also a daily inspection check list (typically filled out one per day when the baghouse is operating)

2.3 Source and Air Cleaning Device Operating Variables

A PLC continually monitors critical baghouse operations. Once a nonconformance is noted, the PLC triggers an alarm to the LMF pulpit, at which time the LMF operator notifies Maintenance. Maintenance arrives, views the PLC screen, which indicates the location and malfunction problem. Repair activities are initiated; when the repair is complete, the alarm is cleared.

Operating Variable	Monitoring Method	Normal Range
Baghouse Differential Pressure	Magnehelic	3 – 12" WG
Baghouse Temperature	Thermocouple to PLC	$< 300^0$F
Baghouse Particle Detection	Triboelectric to PLC	Below alarm level

2.4 Corrective Procedures or Operational Changes

In the event of a major malfunction of the LMF (i.e., the baghouse ceasing operations), the entire LMF system is not operational until the malfunction has been corrected. Other minor malfunctions are picked up either by a preventative maintenance inspection or through the LMF PLC alarm system. Once a malfunction is noted, the root cause of the malfunction is determined, and the appropriate corrective actions implemented.

See Appendix B for the "Corrective Procedures in Event of a Malfunction – LMF" table.

3.0 CONTINUOUS CASTER (Caster)

3.1 Caster Equipment and Process Description

The Caster is designed to tap the Ladle from the bottom to transfer the molten steel into a covered tundish. This design minimizes particulate emissions which would occur from tip and pour casting. The caster consists of four strands and can process steel in all four strands simultaneously. Each strand is equipped with an oxy-fuel cutting torch to cut the steel into billets for ease of storage and further handling. Oxy-fuel cutting is a process that uses fuel gases and oxygen to cut the hot cast strands into billets. Pure oxygen, rather than air (20% oxygen/80% nitrogen), is used to increase the flame temperature to allow localized melting of the metal in a room environment. The oxy-fuel cutting torches provide cleaner cuts and make quality testing easier. Neither the tapping of the Ladle nor the oxy-fuel cutting torch operations are equipped with localized hooding or emission control equipment.

3.2 Oxy-Fuel Cutting Torch Preventative Maintenance

Maintenance Department supervisory personnel are responsible for overseeing the inspection, maintenance, and repair of the oxy-fuel cutting torches.

Continuous Caster Oxy-Fuel Cutting Torches Preventive Maintenance Table 3.2

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
Caster Oxy-Fuel Cutting Torches	Check condition of torches	Quarterly
	Calibrate oxygen and fuel meters and adjust oxy-fuel ratio	Annually

The frequencies in the table above are subject to change as the plant gains more experience with the equipment and modifies the SOPs. The frequencies in the tables are typical, but due to scheduling issues, not every inspection may be performed at the stated frequency.

3.3 Process Operating Variables / Parameters

Emissions from the caster operation are minimized by implementing the following operating parameters:

- Ladles are covered during delivery to and processing at the Caster.
- Steel is tapped from the bottom of the Ladle.
- The tundish will remain enclosed while processing steel.
- Fuel use by the oxy-fuel cutting torches is limited to pipeline quality natural gas.

The Maintenance Department periodically inspects the cutting torches and the oxy-fuel delivery system to determine whether the torches and/or delivery system are operating as designed. The Roll Mill monitors and records the amount of natural gas used by the oxy-fuel cutting torches on a monthly basis.

3.4 Corrective Procedures

In the event the oxy-fuel cutting torches and/or the oxy-fuel delivery system are found to be operating out of conformance with the design parameters, the applicable equipment will be repaired or replaced consistent with the manufacturer's recommendations.

4.0 CASTER COOLING TOWER

4.1 Caster Cooling Tower Equipment and Process Description

EUCASTERCOOLTWR employs Mist or Drift Eliminators to minimize water mist generated during the process water cooling process. Noncontact process water is used to condense the steam produced from the Continuous Caster. EUCASTERCOOLTWR cools process water used to condense steam from the Continuous Caster.

4.2 Caster Cooling Tower Drift Eliminator Preventative Maintenance

Caster Cooling Tower Drift Eliminator Preventive Maintenance Table 4.2

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
Caster Cooling Tower Drift Eliminator	Verify that drift eliminator is securely in place	1X/year

The frequency in the table above is subject to change as the plant gains more experience with the equipment and modifies the SOPs. The frequency in the tables is typical, but due to scheduling issues, the inspection may not be performed at the stated frequency.

4.3 Process Operating Variable / Parameter

Emissions from the caster cooling tower operation are minimized by implementing the following operating parameter:

- Keeping drift eliminators are in place

The Maintenance Department periodically inspects the cooling tower drift eliminators to determine whether the eliminators are in place and operating as designed.

4.4 Corrective Procedures

In the event the drift eliminators are found to be operating out of conformance with the design parameters, the it will be repaired or replaced consistent with the manufacturer's recommendations.

5.0 Rolling Mill

5.1 Rolling Mill Reheat Furnace Equipment and Process Description

The Rolling Mill Billet Reheat Furnace (BRF) is a natural gas-fired furnace designed to reheat billets from ambient temperatures to temperatures suitable for rolling. The furnace is heated by 38 burners, each powered by a combination of natural gas and combustion air. Temperatures in the furnace can reach up to 2250 °F. Burners come equipped with the capability to run on a flameless heating mode to reduce NO_x emissions.

5.2 Billet Reheat Furnace Ultra-Low NOx Burners Preventative Maintenance

Rolling Mill Walking Beam Billet Reheat Furnace Preventive Maintenance Table 5.2

Equipment Name/ Description	Preventive Maintenance Task	Approx. Frequency
BRF Burners Zones	Verify that each burner is firing correctly	4X/year
	Verify that each burner's gas & air valves open & close freely.	
	Inspect each burner for possible leaks	
	Listen to each burner & note any unusual sounds	

The frequencies in the table above are subject to change as the plant gains more experience with the equipment and modifies the SOPs. The frequencies in the tables are typical, but due to scheduling issues, not every inspection may be performed at the stated frequency.

5.3 Process Operating Variables / Parameters

Emissions from the reheat furnace operation are minimized by implementing the following operating parameters:

- Level I and II automation continually monitor critical systems operations in the reheat furnace.
- Operating non-conformances trigger alarms in the operating pulpit.
- All alarms and alerts are logged and stored in an electronic archive.

The Rolling Mill continually monitors natural gas consumption. Any unexplained fluctuation in gas usage may signify a malfunction and will be investigated. The performance of the natural gas burners will also be monitored. Visible emissions readings will be performed upon lighting of the furnace.

5.4 Corrective Procedures

Preventative maintenance will be performed on applicable equipment. In the event the natural gas delivery system and/or the burners are found to be operating out of conformance with the design parameters, the applicable equipment will be repaired or replaced consistent with the manufacturer's recommendations.

6.0 REPORTING OF MALFUNCTIONS

If the Gerdau Monroe exceeds any applicable emissions limit as a direct result of a breakdown of control equipment continuing for more than two (2) hours (One (1) hour for EAF roof or stack emissions), the Gerdau Monroe shall do both of the following:

1. Notify the Air Quality Division of the MDEQ (Jackson office) at telephone number (517) 780-7844 or by e-mail or text as soon as is reasonably possible, but not later than 9:00 a.m. of the next working day.
2. Submit to the MDEQ (MDEQ, Jackson District Office, 301 E. Louis Glick Highway, Jackson, Michigan, 49201) in writing, within 10 days, a detailed report, including identification of the emission source that experienced the malfunction, the time and date, probable causes, duration of violation or abnormal condition, remedial action taken, and what steps are being undertaken to prevent a recurrence. These preventative steps shall become part of the Malfunction Abatement Plan.

Attachment A

Spare Parts

Spare Parts Listing – Malfunction Abatement Plan

EAF Emission Control System

- Valve Controller for the EAF Sonic Spray System
- D1 Retractable Duct
- EAF Elbow
- Baghouse Bags
- DEC Fan
- DEC Impeller
- Main Exhaust Fan
- Main Exhaust Impeller
- Rotary Blower Solenoid
- Vibration Sensor

Billet Reheat Furnace

- Fan Motor
- Combustion Air Fan
- Gas Valves

LMF Emission Control System

- Baghouse Bags
- Broken Bag Detector - TRIBO U3400-H-11-I-15-42"Q
- Main Fan Impeller
- Main Fan Motor
- Booster Fan Motor
- Booster Fan Soft Starter
- Main Fan Soft Starter
- Screw Conveyor & Rotary Valve zero speed switches
- Vibration Transmitter - Metrix ST5484E-121-101-00
- Bearings
- Pillow Blocks
- Gearbox – Rotolock
- AMETEK NCC Pulse cleaning board

Attachment B

Corrective Procedures in Event of a Malfunction

Gerdau Monroe
Corrective Procedures in Event of a Malfunction - EAF

Condition	Possible Cause	Means of Detection	Remedial Action
Elevated Baghouse Opacity	Improperly installed bags	Opacity Monitor Alarm and/or Visible stack emissions	Check bag snap bands to ensure proper tension and full expansion into tubesheet.
	Torn or punctured bags		Inspect filter bags for tears or punctures caused by mechanical damage or sparks. Check for wear at top or bottom of bags, which may be a sign of improper tensioning. Isolate the chamber until damaged bags are replaced. Note: One small hole in one bag may cause abrasion to adjacent bags, potentially leading to damage throughout an entire chamber. Immediate action is required!
	Dirt in clean air plenum		After bag failure or during routine bag change-outs, dust will accumulate in dead air zones. Clean tubesheet when dust accumulation is present.
High Differential Pressure (Over 14" WG)	Baghouse dampers not closing properly during cleaning cycle	High differential pressure reading on the manometer and/or the control panel	Check damper cylinders and solenoids. Repair damper cylinder or solenoid as needed.
	Air horns used during cleaning not functioning properly		Check air horns for proper operation. Repair as necessary.
	Bags not properly tensioned		If bags are hung too loosely, the reverse air system cannot be effective in removing the dust, the dust can be restricted from dropping out of the bottom of the filter bags and could fill up the bag with dust. If the bags are hung too tightly, the bags could pop off. Check bag tension and readjust.
	Malfunctioning cleaning system control		Check to see if baghouse is going through cleaning cycle. If not, contact Maintenance.
	Dust build-up in hopper and/or dust re-entrainment		Dust disposal system plugged or jammed - clean and check disposal system including vibrators, rotary valve and pneumatic conveyor.
	Bag Blinding		Check system for condensation or free moisture present on bags. Check for water seepage into unit, or source of moisture and correct.
Opacity Outside the Shop	Fan problem	Vibration alarm, high temperature alarm, and/or fan amp alarm	Check fan drive, fan motor, fan wheel and blades. Repair as required. If problem is expected to last more than 8 hours, see malfunction response for fan failure at bottom of table.
	DEC or canopy hood problem	Operator observation	If minor problem, fix immediately. If problem is expected to last more than 8 hours, see malfunction response for capture hood failure at bottom of table.
	Bag blinding	High Differential Pressure Reading on the Magnahelic	Inspect bags for possible blinding. Blinded bags usually result in high pressure drop. Check reverse air cleaning cycle operation and bag tensioning. Clean bags with fan at low speeds until differential pressure drops into acceptable range.
	System air inleakage	Audible noise of air leaking into ductwork or hopper	Check all ducting and flanges to and from collector for leaks. Repair as required. Check hopper dust disposal equipment for leaking seals. Adjust or replace as required.

Gerdau Monroe
Corrective Procedures in Event of a Malfunction - EAF

Condition	Possible Cause	Means of Detection	Remedial Action
Low differential Pressure at Baghouse (Less than 2" WG)	Fan dampers closed	Low Differential Pressure Reading on the manometer during operation and poor capture at hood	Check for stuck louvers.
	Fan RPM too low		Check fan speed and adjust as necessary.
	System resistance static too high		Check ductwork for material build-up or blockages. Clear if necessary.
Dust Build-up in Hoppers	No dust in the dust silo.	Check dust silo when emptying.	Check for bridging in the baghouse hoppers, check pneumatic system. Repair as necessary.
	Dust bridging over in the hoppers.	Hopper full - no dust discharged	Check rotary valves, vibrators/air horns. Repair as required. Vibrate the side of the hopper, or remove build-up manually.
Fan Failure	Fan motor or drive failure	Visual, Audible Alarm	Service the motor or fan drive. In the event of a major malfunction of the Gerdau Monroe baghouse, i.e. in which more than one of the baghouse fans malfunction, the melt shop will cease operations until repairs are made. If only one of the three main baghouse fans fail, the melt shop may continue operations until repairs are made, and daily visible emissions (VE) readings of the melt shop roofline will be conducted to determine if the melt shop can continue to operate or if it should be shut down prior to the next maintenance outage in order to make necessary repairs. **For this type of emergency, immediately contact the General Manager and and Environmental Manager.**
	Baghouse electrical power outage		Work to restore power. **For this type of emergency, immediately contact the General Manager and and Environmental Manager.**
	Fan bearing failure		Replace and repack bearings.
	Fan wheel/blade failure	Operator would note emissions not captured.	Replace or repair fan.
Emission Capture System Failure	Damage to DEC elbow	Operator would notice.	Repair DEC as soon as practical. Possibly increase canopy hood draft during melting.
	Damage to canopy hoods		Repair canopy hoods during next outage.
COMS Malfunction	Electrical malfunction	Operator would notice.	Contact Maintenance to assess and repair. Also, report the issue to the Environmental Manager.
	Calibration Error		
	Dirty Window	Dirty Window Alarm	
Catastrophic Baghouse Failure	Fire caused by sparks and/or high temperature	Visible stack emissions and alarm	Isolate chambers with damaged bags. Replace filters bags and repair damage to baghouse. If two or fewer chambers need to be shut down, the baghouse and furnace may still operate. **For this type of emergency, immediately contact the General Manager and and Environmental Manager, who will decide if the plant should be shut down.**
	PLC failure		Dampers will be closed to seal off air flow to the baghouse. Repair or replace PLC, **For this type of emergency, immediately contact the General Manager and and Environmental Manager, who will decide if the plant should be shut down.**

Gerdau Monroe

Corrective Procedures in the Event of a Malfunction - LMF

Condition	Possible Cause	Means of Detection	Remedial Action
Elevated Baghouse Opacity	Improperly installed bags	Bag Leak Detector Alarm and/or Visible stack emissions	Check bag snap bands to ensure full expansion into tubesheet.
	Torn or punctured bags		Isolate chamber with the elevated bag leak detector reading and perform a confined space entry. Check for dust on tubesheet. May need to use fluorescent powder and a black light to note where leaks are occurring. Isolate the chamber until damaged bags are replaced or capped off.
	Dirt in clean air plenum		After bag failure or during routine bag change-outs, dust will accumulate in dead air zones. Clean tubesheet when dust accumulation is present.
High Differential Pressure (Over 12" WG)	Malfunctioning cleaning system control	High differential pressure reading on the manometers and PLC/HMI screen	Check to see if baghouse is going through cleaning cycle on either differential pressure or timer. If not, contact Maintenance.
	Insufficient compressed air pressure.		Check compressed air system for leaks and/or compressor problems and correct.
	Dust build-up in hopper and/or dust re- entrainment		Dust disposal system plugged or jammed - clean and check disposal system including rotary valves and screw conveyors.
	Bag Blinding		Check system for condensation or moisture present on bags. Check for water seepage into unit and correct.
Low differential Pressure at Baghouse (Less than 2" WG)	Fan dampers closed	Low Differential Pressure Reading on the manometer / PLC during operation and poor capture at hoods	Check for stuck louvers.
	Canopy hood and/or LMF capture hood damper closed		Open dampers
Dust Build-up in Hoppers	Dust bridging over in the hoppers.	Hopper full - no dust discharged	Check rotary valvesand screw conveyors. Repair as required. Vibrate the side of the hopper, or remove build-up manually.
Fan Failure	Fan motor or bearing failure	System will alarm in pulpit	Service the motor or bearing.
	Baghouse electrical power outage		Work to restore power.
Capture Emission System Failure	Damage to LMF or canopy hoods	Operator would note emissions capture issue.	Repair LMF or canopy hoods during next outage.
Catastrophic Baghouse Failure	Fire caused by sparks and/or high temperature	Visible stack emissions	Isolate chambers with damaged bags. Replace filters bags and repair damage to baghouse. If two or fewer chambers need to be shut down, the baghouse and LMF may still operate. I**mmediately contact the General Manager & Environmental Manager, who will decide if the plant should be shut down.**
	PLC failure		Dampers will be closed to seal off air flow to the baghouse. Repair or replace PLC, **For this type of emergency, immediately contact the General Manager & Environmental Manager, who will decide if the plant should be shut down.**

Gerdau Macsteel Monroe

Pollution Prevention Plan for the Control of Contaminants in Scrap

Revision:
June 23, 2008
October 15, 2008
October 23, 2009

Pollution Prevention Plan for the Control of Contaminants in Scrap Under the Area Source Rule for Electric Arc Furnace (EAF) Steelmaking Facilities

Contaminants such as chlorinated plastics, free organic liquids, lead (except for leaded steel) and mercury are not appropriate or desired for the production of steel in EAF facilities. However, these contaminants are found in the scrap metal that is the basic feedstock for the production of new steel.

EPA has identified EAF facilities as potential sources of HAP emissions and, on December 28, 2007, promulgated final regulations (codified at 40 CFR Part YYYYY) intended to control or minimize such emissions.

The regulations require EAF facilities, *inter alia*, to restrict the use of certain scrap or follow a pollution prevention plan (PPP) for scrap purchased as production feedstock to minimize the amount of specified contaminants in such scrap.

Gerdau Macsteel Monroe is committed to complying with the requirements of the EAF Area Source Rule and to the goal of minimizing to the extent practicable the presence of these contaminants in scrap that may result in the emission of hazardous air pollutants (HAP).

Accordingly, Gerdau Macsteel Monroe has adopted and will comply with the provisions of this PPP designed to control the presence of such contaminants in scrap that is consumed in the EAF by adopting the following:

1. a specification for scrap that addresses contaminants identified by EPA
2. procedures for verifying compliance with the specification
3. procedures for taking corrective action against vendors who do not comply with the specification
4. program policies, implementation elements, and training and outreach materials sufficient to demonstrate how Gerdau Macsteel Monroe will appropriately implement its responsibilities under the EPA-approved National vehicle Switch Recovery Program (NVMSRP) or other EPA-approved program.

The terms used in this Pollution Prevention Plan and in the outreach materials attached and incorporating to the PPP, shall have the same definitions as those enumerated in EPA's Final Area Source Rule found at 40 CFR Part 63 Subpart YYYYY. As outlined in the final rule, the term "mercury switch" denotes only mercury switches that are part of a convenience light switch mechanism installed in a vehicle.

I. General Scrap Specifications:

The following restrictions apply to all scrap steel purchased or used by Gerdau Macsteel Monroe in its EAF steelmaking process:

A. Scrap materials must be depleted to the extent practicable of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.

B. Lead-containing components of scrap, such as batteries, battery cables, and wheel weights, must be removed, to the extent practicable, prior to charging in the furnace unless the scrap is used to produce leaded steel.

C. Motor vehicle scrap must be depleted, to the extent practicable, of mercury-containing convenience light switches.

II. Verification of Compliance with Specifications

A. Free Organic Liquids, Chlorinated Plastics, Lead and Lead-Containing Components:

1. Visual Inspection: The Gerdau Macsteel Monroe facility conducts a visual inspection of all incoming shredded scrap loads to ensure that the scrap meets existing quality and/or purchase order specifications for grade, type, density, and content. The inspection takes place at the truck scale. Scrap inspection will be required also to determine whether there is an obvious presence of free organic liquids, chlorinated plastics, or lead-containing components. Records of scrap inspections will be maintained on site for five (5) years. Scrap inspection records shall include the identity of the scrap provider for any load that fails visual inspection. Foreign materials will be removed to the extent practicable prior to charging to the furnace, and the scrap supplier will be subject to corrective action.

2. Inspection for Free Organic Liquids: Turnings, borings, and other forms of scrap that were generated as a result of the processing of metal with use of cutting, lubricating or cooling fluids will be visually inspected prior to charging to the furnace to ensure that such scrap does not contain free organic liquids.

3. Depletion of lead and Chlorinated Plastics from Shredded Scrap: Purchased scrap that has been processed through a shredder that utilizes magnetic or density separation techniques to separate ferrous and non ferrous materials will be presumed to be depleted scrap of chlorinated plastics and lead to the extent practicable.

4. Inspections: Gerdau Macsteel Monroe shall identify any scrap provider whose scrap (except as described in Paragraph 5 below) is not subject to

inspection pursuant to this plan. Gerdau Macsteel Monroe shall audit or inspect the facilities from which such uninspected scrap is provided on a periodic basis at a rate of not less than 10-25% of such facilities each year.

5. Unrestricted Scrap. Certain types of scrap, including "factory bundles," "demolition debris," "home scrap," "return scrap", "rail," and "flashings," as defined by common industry practice, as well as similar uncontaminated scrap, are not expected to contain free organic liquids, chlorinated plastics, or lead and will be presumed to be free of these contaminants. This scrap is not subject to the inspection and verification requirements of this plan.

6. Baghouse Bags, Internal Process, Maintenance Materials, and Miscellaneous Materials. Baghouse bags and baghouse maintenance materials that are routinely recycled by charging to the electric arc furnace, including personnel protective equipment (PPE) and baghouse dust, are exempt from this PPP and not subject to the inspection and verification requirements of this plan. Also Gerdau Macsteel Monroe, periodically burns miscellaneous materials including but not limited to guns and drugs for the State of Michigan. These are also exempt from inspection and verification.

B. Mercury

1. Gerdau Macsteel Monroe shall ensure that scrap providers are participating in the NVMSRP by conducting a review of the End of Life Vehicle Solutions (ELVS) database to confirm that the scrap provider is enlisted as a participating member. Gerdau Macsteel Monroe will conduct a semi-annual review of the ELVS database to determine whether the scrap provider remains identified as an NVMSRP participant;

   a. Gerdau Macsteel Monroe may not be able to confirm that some scrap providers such as Brokers are enlisted as a participating member in the NVMSRP through the ELVS database. In these cases Gerdau Macsteel Monroe will confirm that the scrap provider is participating in the NVMSRP or another EPA-approved program by obtaining from the broker written assurance that any scrap provided by such broker to Gerdau Macsteel Monroe was procured from other suppliers who are signed up for and are participating in the NVMSRP or another EPA-approved program;

   b. Gerdau Macsteel Monroe will require scrap brokers to confirm such written assurance on a semi-annual basis.

2. Gerdau Macsteel Monroe will conduct a semi-annual review the ELVS database to corroborate that the participant is implementing appropriate steps to minimize the presence of mercury in the scrap from end-of-life vehicles by turning in mercury switches.

a. Some Scrap providers participating in the NVMSRP or another EPA-approved program may not be able to demonstrate their participation in NVMSRP or another EPA-approved program to minimize the presence of mercury in the scrap from end-of-life vehicles by turning in mercury switches because they refuse to accept scrap that contains mercury switches. Examples would be a broker who purchases scrap from program participants, or a shredder that accepts only flattened vehicles from which the mercury switches already have been removed to the extent practicable prior to delivery to the shredder. For these scrap providers, Gerdau Macsteel Monroe will obtain written assurances from the Scrap provider or obtain other means of corroboration to verify that the participant is implementing appropriate steps to minimize the presence of mercury in the scrap from end-of-life vehicles. Written assurance will be confirmed on a semi-annual basis.

3. >If a scrap provider does not participate in or demonstrate through written assurance that it purchases scrap through NVMSRP or another EPA-approved program for the removal of mercury switches, Gerdau Macsteel Monroe shall only purchase scrap from such provider pursuant to an EPA-approved facility-specific program for the removal of mercury switches, except for the following two facilities in which a site specific plan is in place.

   a. >Site Specific Plan for Whitby Recycling in Whitby, Ontario. The scrap from the Whitby facility shall be free of Mercury to the extent practicable. ***The goal for the Whitby facility is to have 80% of all mercury switches removed prior to shipment.*** To achieve this, the Whitby facility is shredding vehicles with the mercury switches already removed. ***The facility and suppliers will be reviewed semi-annually to assure compliance with this section. To accomplish the review, the Triple M facility shall send to Gerdau Macsteel the number of switches removed and the basis for the calculation, number of vehicle bodies processed, estimate of removal, and certificate or records of disposal. Also Whitby Recycling will submit to Gerdau Macsteel a certification that all of their car bodies have had the mercury switches removed prior to coming on site. An audit of the recycling facility will be conducted on an annual basis unless it is determined otherwise. Gerdau Macsteel will review the Clean Air Foundation website (Canadian version of ELVS website) to determine if mercury switches were removed. Gerdau Macsteel will submit a semi-annual progress report on Whitby Recycling's compliance to the plan. Any deviations will result in a corrective action for the issue.***

b. >Site Specific Plan for Triple M Recycling in Hamilton, Ontario. The scrap from Triple M Recycling shall be free of Mercury to the extent practicable. ***The goal for the Whitby facility is to have 80% of all mercury switches removed prior to shipment.*** To achieve this, Triple M facility is shredding vehicles with the mercury switches already removed. ***The facility and suppliers will be reviewed semi-annually to assure compliance with this section. To accomplish the review, the Triple M facility shall send to Gerdau Macsteel the number of switches removed and the basis for the calculation, number of vehicle bodies processed, estimate of removal, and certificate or records of disposal. Also Triple M will submit to Gerdau Macsteel a certification that all of their car bodies have had the mercury switches removed prior to coming on site. An audit of the recycling facility will be conducted on an annual basis unless it is determined otherwise. Gerdau Macsteel will review the Clean Air Foundation website (Canadian version of ELVS website) to determine if mercury switches were removed. Gerdau Macsteel will submit a semi-annual progress report on Triple M's compliance to the plan. Any deviations will result in a corrective action for the issue.***

III. Corrective Action

A. Lead, Chlorinated Plastics, Free Organic Liquids

1. If, during inspection of scrap pursuant to Part II(A) above, Gerdau Macsteel Monroe determines that the scrap provider has not met the specifications in part I, the scrap provider will be subject to corrective action.

    a. A nonconforming scrap load will be rejected unless contaminants causing the failure can be removed or segregated to the extent practicable.

    b. After a failure to meet the scrap specifications in Part I, the scrap provider must sign a statement acknowledging the requirements of the scrap specifications and provide either certification or another comparable form of reasonable assurance that the scrap specifications will be met in the future.

    c. If the vendor continues to fail to meet the scrap specifications, Gerdau Macsteel Monroe will consult with the scrap provider on the cause or reasons why the scrap loads are nonconforming and will inform the scrap provider that it may be suspended for a period of **7 days** or more if the problem is not resolved.

    d. A vendor who fails to meet the scrap specifications multiple times in a period of one year may be suspended until it has demonstrated

that it has cured the defect that caused the failure to meet the specifications. The vendor may ship Unrestricted Scrap so long as it adheres to the provisions outlined in Part II(a)(5).

B. Mercury

1. If, Gerdau Macsteel Monroe reasonably believes, either as a result of inspection, site visits to a scrap yard, or review of the ELVS database or by other means, that a scrap supplier is not taking appropriate steps to minimize the presence of mercury switches in scrap from end-of-life vehicles, the facility shall:

   a. Issue a letter to the scrap provider reiterating the requirements of the NVMSRP or another EPA-approved program and threatening suspension if the scrap provider fails to fulfill its responsibilities under the NVMSRP or another EPA-approved program.

   b. Suspend the scrap provider if, within six months of receipt of the letter described above, the scrap provider again fails to show that it is aware of the need for and is implementing appropriate steps to minimize the presence of mercury switches in auto shred to the extent practicable. The suspension shall only apply to the shipment of motor vehicle scrap by the scrap provider to Gerdau Macsteel Monroe. The scrap provider will then have to re-qualify by demonstrating that it has cured the defect that caused the failure to meet the scrap specification.

   c. For purposes of Section III A and B, if the nonconforming scrap is purchased through a broker, Gerdau Macsteel Monroe will require the broker to provide written assurances that corrective actions listed in Section III of this plan were carried out by the broker on the scrap supplier from whom the nonconforming scrap was purchased.

IV. Recordkeeping

1. All records involved with this plan will be maintained for a period of 5 years. All records will be made available to the regulating authority upon request.

V. Program Policies, Implementation Elements, and Outreach Materials

A. This section incorporates the outreach documents attached to this Pollution Prevention Plan.
Attachments:

1. Gerdau MacSteel Monroe 2008 statement of support for the NVMSRP
2. Gerdau MacSteel 2008 Mercury Corporate Policy
3. Gerdau MacSteel Monroe 2008 NVMSRP Scrap Supplier letter
4. Gerdau MacSteel Monroe Raw Materials Terms and Conditions (Scrap Specs)

Attachment 1

Gerdau MacSteel Monroe 2008 Statement of Support for the NVMSRP

GERDAU MACSTEEL
STATEMENT IN SUPPORT OF
THE NATIONAL VEHICLE MERCURY SWITCH RECOVERY PROGRAM

Gerdau MacSteel is pleased to announce its participation in and strong support of the National Vehicle Mercury Switch Recovery Program ("NVMSRP"). With a goal of removing mercury-containing switches from end-of-life vehicles before they enter the scrap supply, the NVMSRP is a national partnership among steelmakers, scrap suppliers, vehicle manufacturers, environmental groups, the Environmental Council of States, and the U.S. Environmental Protection Agency.

Gerdau MacSteel along with other Gerdau owned mills is one of the largest recyclers in North America. Each year, the EAF steel industry recycles more material by weight than the total of all other recyclable materials combined. Gerdau MacSteel recycles millions of tons of scrap metal annually to manufacture new steel products. The scrap metal feedstock is, in large part, comprised pre and post consumer scrap including of end-of-life vehicles. While an excellent source of recyclable metals, scrap vehicles also sometimes contain undesirable materials, such as mercury, which typically is contained in automotive hoods and trunk light convenience switches. When a vehicle is crushed and shredded, it becomes impossible to locate and remove mercury switches from the vehicle, which may result in the release of mercury to the environment during recycling.

Pollution prevention in the form of mercury switch recovery from end-of-life vehicles is the most effective option to avoid these potential emissions. The NVMSRP is designed to maximize mercury switch recovery at a point where the switches are still intact, contained, and readily accessible. Accordingly, Gerdau MacSteel is pleased to participate in this voluntary program.

By participating in the NVMSRP, Gerdau MacSteel commits to establishing practices to reduce the amount of mercury in it's feedstock by: (1) adopting corporate policies that embrace this goal; (2) developing and implementing a plan to achieve mercury minimization; (3) communicating these requirements to scrap suppliers, including through educational outreach and purchasing policies; and (4) strongly encouraging scrap suppliers to participate in the NVMSRP.

The NVMSRP cannot succeed without the active support and participation of all parties in the scrap supply chain, from those that collect and dismantle end-of-life vehicles to crushers and shredders to scrap dealers and the steel manufacturers that ultimately recycle the vehicle scrap. Therefore, Gerdau MacSteel encourages all vehicle scrap suppliers and recyclers to participate in this important voluntary program.

Gerdau MacSteel is proud to be a participant in the NVMSRP and is committed to its success.

Attachment 2

Gerdau MacSteel 2008 Mercury Corporate Policy

Gerdau MacSteel Policy on Minimizing
Mercury-Containing Vehicle Switches from Scrap Feed Stock

Gerdau MacSteel is committed to participating in the National Vehicle Mercury Switch Removal Program ("NVMSRP") as the most effective means of reducing the number of mercury-containing switches in the vehicle scrap stream, and thereby minimizing potential emissions of mercury to the environment. As part of that commitment, Gerdau MacSteel has contributed to the NVMSRP Implementation Fund and is requiring its facilities to adopt a program with the goal of minimizing the presence of mercury-containing switches in the scrap feedstock.

Until 2002, mercury was used by vehicle manufacturers in switches for automotive hood- and trunk-lighting, as well as anti-lock braking systems. When these vehicles reach the end of their useful life, over 95 percent are dismantled or otherwise recycled. Until the establishment of the NVMSRP, there was no national system to retrieve and collect the mercury-containing switches prior to the crushing or shredding of the vehicle. As such, it was possible for the mercury in these switches to be released to the environment during the recycling process, including when the vehicle scrap is melted to manufacture new steel products. Because it is impossible to identify and remove mercury-containing switches after a vehicle has been dismantled, shredded or crushed, Gerdau MacSteel is committed to reducing its mercury emissions by taking steps to identify and remove these switches prior to processing scrap metal from vehicles for recycling.

All Gerdau MacSteel facilities are required to participate in the NVMSRP. In doing so, Gerdau MacSteel facilities must develop and implement a plan to promote mercury minimization in the scrap supply. That plan must include provisions to:

(1) Provide all scrap suppliers with written notice of Gerdau MacSteel's participation in the NVMSRP and strongly encourage those suppliers also to participate and to encourage their suppliers to participate as well.

(2) Amend purchasing specifications to require the removal of mercury-containing switches from all scrap derived from end-of-life vehicles;

(3) Request documentation from all suppliers of vehicle scrap regarding their participation in the NVMSRP or implementation of similar mercury switch removal program;

(4) Verify scrap supplier compliance with mercury switch removal requirements, including possible scrap supplier site visits, spot checks of scrap loads, and/or

requests for documentation as often as is deemed necessary to protect the integrity of the incoming scrap feedstock;

(5) Request and strongly encourage direct scrap suppliers to communicate these requirements to each upstream supplier, dismantler, vehicle crusher, shredder, and scrap processing facility;

(6) Maintain a list of suppliers and upstream processors that participate in the NVMSRP or otherwise have effective mercury switch management programs. Where there is uncertainty about a supplier's mercury switch removal program, purchasing agents should make specific inquiry into the program before completing a purchase; and

(7) Ensure that appropriate personnel, including scrap purchasers and environmental staff, are adequately trained in the requirements of the mercury minimization plan.

John Fisher – VP of Operations
Gerdau MacSteel Inc.

Craig Metzger – Environmental Engineer
Gerdau MacSteel Monroe

Warren Taff – Senior Project Engineer - Environmental
Gerdau MacSteel Fort Smith

Michael Dorman – Environmental Engineer
Gerdau MacSteel Jackson

Issuance Date: 6/13/08

Attachment 3

Gerdau MacSteel Monroe 2008 NVMSRP Scrap Supplier letter

Dear Scrap Supplier:

This letter is to inform you that all Gerdau MacSteel Steel Mills ("Gerdau MacSteel") are participating in the National Vehicle Mercury Switch Recovery Program ("NVMSRP" or "Program").

WHAT IS THE NVMSRP?

The NVMSRP is a national partnership of steel producers, scrap recyclers, vehicle manufacturers, State agencies, environmental organizations, and the U.S. Environmental Protection Agency ("EPA"). The goal of the NVMSRP is to reduce the presence of mercury in the scrap supply by facilitating the removal of mercury-containing switches from end-of-life vehicles before they are flattened, shredded, and melted to make new steel.

HOW DOES THE NVMSRP PROCESS WORK?

The NVMSRP is coordinated by the End of Life Vehicles Solutions Corporation ("ELVS"). As a participant in NVMSRP, generally you are expected to remove mercury switches and properly dispose of switches. As a participant of NVMSRP, at no cost to you, ELVS can supply you (or your suppliers) with: (1) a mercury switch collection bucket; (2) a list of vehicles that potentially contain mercury switches; (3) a mercury switch removal brochure; (4) an instructional DVD on mercury switch removal procedures; and (5) detailed shipping instructions to send the switches to an appropriate facility that will accept the mercury switches. ELVS also will cover all of the shipping and disposal costs for the switches collected by your company.

WHO PARTICIPATES IN THE NVMSRP PROCESS?

Participation in the NVMSRP is open to all parties in the scrap supply chain, with the ultimate goal of removing mercury-containing switches before end-of-life vehicles are crushed and shredded. If your company or facility receives vehicle scrap that already is crushed and/or shredded, your participation in the program would require you to encourage participation in the NVMSRP by your suppliers.

WHERE TO FIND OUT MORE INFORMATION OR JOIN THE PROGRAM

If you would like to participate in the NVMSRP or find out more information about what scrap suppliers and dismantlers are required to do to be considered a participant, you should contact ELVS at www.elvsolutions.org

End of Life Vehicle Solutions
PO Box 3282
info@elvsolutions.org
Farmington Hills, MI 48333-3282

Phone: 877.225.ELVS
248.788.6656

Contact Terry Lancaster
email:

GERDAU MACSTEEL'S EXPECTATIONS OF SUPPLIERS

Gerdau MacSteel strongly encourages all scrap suppliers to participate in the NVMSRP. Also, if you decide not to participate in the NVMSRP, we believe that in the future it is very likely you will be required to participate in some type of mercury minimization plan, in order for you to continue to supply vehicle scrap to Gerdau MacSteel or any U.S. Electric Arc Furnace steelmaker.

As a participant in the NVMSRP, Gerdau MacSteel will request documentation of your efforts and your supplier's efforts to remove mercury switches from vehicles before the scrap is sent to our facility, and we will contact ELVS to ascertain your participation in the NVMSRP program. Your documentation may include proof of your registration in NVMSRP and copies of your communications to upstream scrap suppliers encouraging them to participate in the NVMSRP. Additionally, so that we may ensure that our incoming scrap supply is as free as practicable from mercury-containing switches, we may contact you in the future to arrange for a visit or perform unannounced spot checks or site visits to verify your efforts to ensure that mercury switches have been removed from the vehicle scrap that is purchased by our facility.

NEXT STEPS FOR ALL SCRAP SUPPLIERS

Because Gerdau MacSteel has committed to participate in the NVMSRP, we are requesting that you document you and your suppliers' efforts to remove mercury switches from vehicles before the scrap is sent to our facility, regardless of whether you choose to participate in NVMSRP. Specifically, we request you:

(a) register your facility's participation in NVMSRP at www.elvsolutions.org;

AND

(b) document your communications to upstream scrap suppliers concerning the benefits of participation in NVMSRP (e.g. reduces the recordkeeping, training, and disposal activities associated with accessible mercury switch removal and simplifies eligibility for monetary compensation for switch recovery, etc.), by submitting to Gerdau MacSteel copies of letters, emails, brochures, etc. that you have sent to your suppliers.

Gerdau MacSteel appreciates your cooperation in preventing mercury-containing switches in vehicles from entering our scrap feedstock and again we encourage you to participate in this voluntary program. Gerdau MacSteel also recognizes that, oftentimes, the removal of mercury switches from vehicles before crushing or shredding is most appropriately handled by your upstream suppliers. As such, please pass along this letter information to your suppliers and encourage them to participate in the NVMSRP.

If you have any questions regarding this letter, please contact me at 734-384-6544.

Sincerely,

Craig Metzger
Environmental Engineer
Gerdau MacSteel Monroe

Attachment 4

Gerdau MacSteel Monroe Raw Materials Terms and Conditions (Scrap Specs)

GERDAU MACSTEEL MONROE
MELT SHOP
SCRAP SPECIFICATION MANUAL

TITLE **#1 FRAG**

Aim Chemistry Specification

Copper	.12% max
Chromium	.10% max
Nickel	.10% max
Moly	.02% max
Tin	.01% max
Sulfur	.03% max
Phosphorus	.03% max
Oil and grease	.5% max by wt.

Sizing: N/A

Density: 85 lbs. per cu. ft. min

>General Specifications: All grades of scrap must be free of radioactive material or radiation sources, cutting fluids, tanks, cylinders or sealed units, non-ferrous materials, lead or lead base paint. Material received must meet product specifications of material ordered. All accompanying paperwork must agree with purchase order issued. Any deviations from ordered product specification will have to have prior approval from Gerdau MACSTEEL Management before delivery.

>The facility air permit states that Gerdau MACSTEEL shall not charge any refuse, hazardous materials, aluminum, beryllium, copper, lead, *lead containing components, chlorinated plastics, free organic liquids* magnesium, or medical waste into the electric arc furnace at any time. Refuse materials include, but is not limited to wooden pallets, paper bags, plastic containers, empty containers used for coating materials, garbage, or any other materials not intended to adjust the chemistry of the steel to that which is intended to be sold as a product to any industry.

Rev. No./Date:		Nature of Change:
1	06/28/01	Added cutting fluids
2	06/17/03	Added 'air permit' paragraph, revised approvals
3	12/18/04	Revised to MACSTEEL
4	02/20/06	Changed density from 60 lbs. to 85 lbs.
5	07/16/08	Changed all to Gerdau, added *lead containing components, chlorinated plastics, free organic liquids.*

Approvals:

Department Superintendent/date

Environmental Engineer/Date

EGLE

INVENTORY YEAR:
1. 2020

Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division
Michigan Air Emissions Reporting System (MAERS)

SV-101 STACK

Authorized under 1994 PA 451, as amended. Completion of information is required. Civil and/or criminal penalties possible for providing false information.

GENERAL INSTRUCTIONS: Refer to last year's MAERS forms or summary report for information previously submitted and complete this form with additions or corrections as necessary. For more detailed instructions refer to the MAERS Paper Forms and Instructions Booklet. This MAERS form is used to report stacks for a **specific inventory year**. Enter the **specific inventory year** in field 1.

FORM REFERENCE

2. Form Type **SV-101**	3. AQD Source ID (SRN)
	B7061

STACK IDENTIFICATION

☐ Change ☒ Add

4. AQD Stack ID	5. Stack ID	6. Remove from MAERS	7. Dismantle Date (MM/DD/YYYY)
	SV BH-01-STACK2	☐ Yes ☒ No	

8. Stack Description: EAF Baghouse East Stack

9. Actual Stack Height Above Ground	10. Inside Stack Diameter
120 feet	136 inches
11. Exit Gas Temperature	**12. Actual Exit Gas Flow Rate**
213 degrees Fahrenheit	238,200 cubic feet per minute

13. Stack Orientation: ☒ Vertical ☐ Vertical with No Loss Sleeve ☐ Vertical with Conical Cap ☐ Horizontal ☐ Goose Neck Downward

14. Latitude	15. Longitude	16. Horizontal Collection Method
41.892387 Decimal Degrees	-83.357042 Decimal Degrees	030

17. Source Map Scale Number	18. Horizontal Accuracy Measure
200	25 Meters
19. Horizontal Reference Datum Code	**20. Reference Point Code**
002	106

21A. Bypass Stack Only ☐ Yes ☒ No — 21B. If yes, operator ID of main stack

STACK IDENTIFICATION

☐ Change ☐ Add

4. AQD Stack ID	5. Stack ID	6. Remove from MAERS	7. Dismantle Date (MM/DD/YYYY)
	SV	☐ Yes ☐ No	

8. Operator's Stack Description

9. Actual Stack Height Above Ground	10. Inside Stack Diameter
feet	inches
11. Exit Gas Temperature	**12. Actual Exit Gas Flow Rate**
degrees Fahrenheit	cubic feet per minute

13. Stack Orientation: ☐ Vertical ☐ Vertical with No Loss Sleeve ☐ Vertical with Conical Cap ☐ Horizontal ☐ Goose Neck Downward

14. Latitude	15. Longitude	16. Horizontal Collection Method
___ . ______ Decimal Degrees	___ . ______ Decimal Degrees	

17. Source Map Scale Number	18. Horizontal Accuracy Measure
	Meters
19. Horizontal Reference Datum Code	**20. Reference Point Code**

21A. Bypass Stack Only ☐ Yes ☐ No — 21B. If yes, operator ID of main stack

Frank Dello Buono
Environmental Engineer

May 27, 2021

Michigan Department of Environment, Great Lakes, and Energy (EGLE)
Air Quality Division
Jackson District – State Office Building, 4th Floor
301 East Louis Glick Highway
Jackson, Michigan 49201-1535
Attn: AQD District Supervisor

Re: Renewable Operating Permit Renewal
TMS International, LLC at Gerdau, Monroe (MI-ROP-B7061-2016, Section 2)
3000 East Front Street, Monroe, MI 48161
Monroe County

Dear AQD District Supervisor:

Please accept the enclosed original and two copies of the Renewable Operating Permit (ROP) renewal application for the TMS International, LLC (TMS) site located at the Gerdau, Monroe facility. The enclosed renewal application is submitted in accordance with General Condition 35 of MI-ROP-B7061-2016, Section 2. Three copies of the following documents are enclosed:

- ROP Renewal Application Form
- ROP Mark-up (Microsoft Word Version)
- Supplemental Data – Copy of PTI Application for Proposed EUSLAGPLANT Revision, including HAP PTE Calculations
- Supplemental Data – Scrap Cutting Best Management Practices (BMP), Revised April 9, 2019

If you have any questions regarding this information, please feel free to contact me at telephone number (215) 360-9723.

Sincerely,

Frank Dello Buono

Cc: Christopher Hessler (Gerdau)
Jerimi Yost (TMS)
Joe Jasinski (TMS)

TMS International, LLC
1155 Business Center Drive, Horsham, PA 19044
P: 215.360.9723 F: 215.956.5432
fbuono@tmsinternational.com
www.tmsinternational.com

EGLE

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
B7061	7389	562920	MI-ROP-B7061-2016	2

Source Name: TMS International, LLC

Street Address: 3000 East Front Street

City	State	ZIP Code	County
Monroe	MI	48161	Monroe

Section/Town/Range (If address not available)

Source Description: TMS International, LLC's operations include metal recovery, slag processing, and material handling services provided for the Gerdau mill.

☒ Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.

OWNER INFORMATION

Owner Name	Section Number (if applicable)
TMS International, LLC	2

Mailing address (☐ check if same as source address)
1155 Business Center Drive, Suite 200

(1)

City	State	ZIP Code	County	Country
Horsham	PA	19044-3454	Montgomery	USA

☐ Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: B7061	Section Number (if applicable): 2

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name			Title	
Frank Dello Buono			Environmental Engineer	
Company Name & Mailing address (☐ check if same as source address)				
TMS International, LLC 1155 Business Center Drive, Suite 200				
City	State	ZIP Code	County	Country
Horsham	PA	19044-3454	Montgomery	USA
Phone number		E-mail address		
215-360-9723		fbuono@tmsinternational.com		

Contact 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Jerimi Yost			Director Global HSE	
Company Name & Mailing address (☐ check if same as source address)				
TMS International, LLC 1155 Business Center Drive, Suite 200				
City	State	ZIP Code	County	Country
Horsham	PA	19044-3454	Montgomery	USA
Phone number		E-mail address		
215-956-5444		jyost@tmsinternational.com		

Responsible Official 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

☐ Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

SRN: B7061	Section Number (if applicable): 2

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.

☒ Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP using official version from the AQD website (required)	☐ Stack information
☒ Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☒ Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	☐ Cross-State Air Pollution Rule (CSAPR) Information
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	☒ Paper copy of all documentation provided (required)
☐ Compliance Assurance Monitoring (CAM) Plan	☐ Electronic documents provided (optional)
☒ Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	☐ Other, explain:

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	☒ Yes ☐ No

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

Jerimi Yost, Director Global HSE

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Signature of Responsible Official	Date
	5/27/2021

SRN: B7061	Section Number (if applicable): 2

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from **all** emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☐ Yes ☒ No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	☐ Yes ☒ No ☐ Yes ☒ No
C4.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO_2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.	☒ Yes ☐ No
C5.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.	☒ Yes ☐ No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	☐ Yes ☒ No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	☐ Yes ☒ No ☐ Yes ☒ No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	☐ Yes ☒ No ☐ Yes ☒ No ☐ ☐
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes, then a copy must be submitted as part of the ROP renewal application.	☒ Yes ☐ No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	☐ Yes ☒ No
☐	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: **AI-**	

SRN: B7061	Section Number (if applicable): 2

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. ☐ Yes ☒ No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**

SRN: B7061	Section Number (if applicable): 2

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to **all** emission units and **all** applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If Yes, identify changes and additions on Part F, Part G and/or Part H.	☒ Yes ☐ No
E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identity the stack(s) that was/were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If Yes, complete Part F with the appropriate information.	☐ Yes ☒ No
E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	☐ Yes ☒ No
Comments:	

☐ Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: **AI-**

SRN: B7061	Section Number (if applicable): 2

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. If No, go to Part G. ☒ Yes ☐ No

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed
Application Submitted 5-27-2021	EUSLAGPLANT	Existing EUSLAGPLANT to be upgraded with plant consisting of a VGF, two shaker screens, and several belt conveyors and stackers.	TBD

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. ☐ Yes ☒ No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. ☐ Yes ☒ No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☐ Yes ☒ No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. ☒ Yes ☐ No

Comments:

EUSLAGPLANT is proposed to be revised per the enclosed PTI application – it is not a new emission unit. The Site is proposing to upgrade the existing slag processing plant with a similar but more efficient slag processing plant. The existing plant will be decommissioned. The Permit to Install Application for the proposed upgrade is enclosed for reference. The upgrade will allow for an increased maximum throughput of 150,000 tons/yr, resulting in increased PTE emissions (calculations included in PTI application enclosure).

☒ Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: **AI-PARTF**

SRN: B7061	Section Number (if applicable): 2

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H. ☐ Yes ☒ No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☐ Rule 290 process with limited emissions		

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI-**

SRN: B7061	Section Number (if applicable): 2

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☐ Yes ☒ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes ☒ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes ☒ No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes ☒ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes ☒ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H7. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes ☒ No

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: B7061	Section Number (if applicable): 2

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
☐ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**	

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: B7061	Section Number (if applicable): 2

1. Additional Information ID
AI-PARTF

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Please note that EU-TORCHCUT from PTI 173-18 is exempt from ROP permitting as construction of the automated torch cutting machine ceased in Spring of 2019. The automated machine operates inside of a roofed structure equipped with a baghouse which controls externally vented emissions and is therefore exempt in accordance with Michigan Air Pollution Control Rule 285. The Scrap Cutting BMP for EUSCRAPCUT is enclosed to supplement the Fugitive Dust Control Plan in Appendix 3-2 of the existing ROP.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

EFFECTIVE DATE: December 1, 2016

ISSUED TO

Gerdau Macsteel Monroe Mill
and ~~Tube City IMS~~ TMS International, LLC

State Registration Number (SRN): B7061

LOCATED AT

3000 East Front Street, Monroe, Michigan 48161

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B7061-2016

Expiration Date: December 1, 2021

Administratively Complete ROP Renewal Application
Due Between June 1, 2020 and June 1, 2021

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B7061-2016

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

Scott Miller, Jackson District Supervisor

TABLE OF CONTENTS

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined, subsumed and/or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

SECTION 1 – Gerdau Macsteel Monroe Mill

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:" [2] **(R 336.1301(1))**
    a. A 6-minute average of 20 % opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUPAINTING	Spray painting of the ends of the steel bars using white latex paint.	10/01/1980	FGRULE290
EUPARTSWASHER	Parts washers, each with an air/vapor interface area of 10 square feet or less.	05/05/1978	FGCOLDCLEANERS
EUTURNER	Spray painting of steel bars with rust preventative coating. Emissions from this operation are discharged into the in-plant environment.	05/01/2006	FGRULE290
EUMILLSAWBH	Baghouse control for the Roll Mill Cutting saws.	01/01/2015	FGRULE290
EUENGINES	One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.	NA	FGENGINES
EUEAF	The electric arc furnace (EAF) melts steel scrap in a batch operation. The EAF is a refractory lined cylindrical vessel with a bowl-shaped hearth and dome shaped roof. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. The EAF is controlled by DEC followed by a baghouse. The exhaust gases are cooled using a water quench system prior to baghouse control.	05/05/1978/ 01/04/2013/ 10/27/2014	FGMELTSHOP FGMACTYYYYY FGGHG
EUDUST-SILO	This silo stores dust generated from DVBAGHOUSE-01 until it is properly disposed.	05/05/1978	FGGHG

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUROADS&PKG-01	Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.	05/05/1978	FGGHG
EUFLINN	25 MMBTU/HR natural gas heat treat furnace.	02/01/2006	FGGHG
EULMF	The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. Emissions from EULMF are directed to DVLMFBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/02/2015	FGMELTSHOP FGBLDGFUG FGGHG
EUVTD	Two vacuum tank degassers which remove entrained gases from the molten metal. This emission unit does not include reheating. Controlled by the existing EAF baghouse. Emissions are directed to the DVBAGHOUSE-01 via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/27/2014	FGMELTSHOP FGBLDGFUG FGGHG
EUCASTER	Molten steel produced by the electric arc furnace is delivered to the continuous caster in a ladle via the ladle metallurgy system and twin tank vacuum degasser. The molten steel is gravity fed from the bottom of the ladle to the tundish enclosure. From the tundish, the molten steel flows into the enclosed caster strands. The semi-molten steel is then cut into billets by oxy-fuel cutting torches. The four cutting torches have a combined rated capacity of 4,413 cubic feet of natural gas per hour. EUCASTER also includes a 0.4 MMBtu/hour, natural-gas-fired, internally vented process heater that preheats the submerged entry nozzle (SEN) prior to it being inserted into the caster mold. Molten metal is added after the SEN is in place.	06/01/2013	FGBLDGFUG FGGHG
EUCASTERCOOLTWR	Cooling tower for caster process water. Maximum water flow rate for cooling tower is 1,630 gallons per minute.	06/01/2013	FGGHG

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUBILLETREHEAT-WB	A walking billet reheat furnace equipped with Ultra-Low Nox Burners with the total heat input capacity of 260.7 MMBtu/hr.	01/04/2013/ 01/27/2015	FGGHG
EUGASTANK	This emission unit is for the existing stationary gasoline dispensing facilities (GDFs) located at an area source of hazardous air pollutants (HAPs) that have a maximum monthly gasoline throughput of one of the following: 1. Less than 10,000 gallons	1997	NA
EUADMINGEN	Emergency generator for administration building (natural gas). 203 HP	2009	FGNSPS SI-ICE
EUFINISHINGGEN	Emergency generator for finishing (diesel). 229 HP.	2005	FGMACT-ZZZZ-EMERGENCY RICE
EUMAINPUMPHOUSEGEN	Emergency generator for main pump house. 200 HP.	Pre-2000	FGMACT-ZZZZ-EMERGENCY RICE

EUEAF
EMISSION UNIT CONDITIONS

DESCRIPTION

The electric arc furnace (EAF) melts steel scrap in a batch operation. The EAF is a refractory lined cylindrical vessel with a bowl-shaped hearth and dome shaped roof. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. The EAF is controlled by DEC followed by a baghouse. The exhaust gases are cooled using a water quench system prior to baghouse control.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGGHG

POLLUTION CONTROL EQUIPMENT

DVBAGHOUSE-01, and Direct Evacuation Control (DEC) and CO and VOC reaction chamber.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	3%[2]	6-minute average	EUEAF baghouse stack	SC VI.2	**R 336.2810 40 CFR 60.272a(a)(2)**
2. Visible Emissions	6%[2]	6-minute average	EUEAF Shop Building	SC VI.6	**40 CFR 60.272a(a)(3)**
3. PM	0.0052 gr/dscf[2]	Test Protocol*	EUEAF	SC V.1	**40 CFR 60.272a(a)(1)**
*Test Protocol specifies averaging time.					

4. Visible emissions from openings and vents in the upper half of the EUEAF building portion of the facility shall not exceed a six-minute average of 0 percent opacity during operation of the electric arc furnace.[2] **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Underlying Applicable Requirement
NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not melt any radioactive scrap metal in the electric arc furnace.[2] **(40 CFR 52.21)**

2. The permittee shall not transfer material to the LMF from the EAF without a ladle cover.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUEAF unless the CO and VOC reaction chamber, DEC canopy hood, quench system, and baghouse are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

2. The permittee shall not operate EUEAF unless the combustion controls, including real time process optimization (RTPO) and the oxy-fuel burners are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

3. The permittee shall not operate EUEAF unless the transferring of liquid steel to the LMF ladles is accomplished by tapping the bottom of the unit.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, R 336.2810)**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the visible emissions from the FGMELTSHOP EAF baghouse stack (SVBH-01-Stack) on a continuous basis.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, R 336.2810, 40 CFR 64.6(c)(1)(ii))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from the EAF baghouse stack (SVBH-01-Stack) of FGMELTSHOP. The permittee shall operate the COM system to meet the timelines, requirements and reporting detailed in Appendix 9-1 and shall use the COM data for determining compliance with SC I.1.[2] **(R 336.1205, R336.1224, R 336.1225, R336.1301, R 336.1331, R 336.2802, 40 CFR 60.273a(a))**

3. The permittee shall use the COMS to assure compliance with the PM limit. An excursion for PM shall be 2 consecutive 1-hour block average opacity values greater than 3%. This condition does not affect compliance with R 336.1301.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.272a(a)(2), 40 CFR 64.6(c)(1)(ii))**

4. Monitoring and recording of emissions and operating information is required to comply with the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart AAa. All source emissions data and operating data shall be kept on file for a period of at least five years and made available to the AQD upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.274a)**

5. The permittee shall monitor all incoming material to determine if there are any radioactive materials mixed into the load. Monthly records of any shipments containing radioactive scrap material shall be recorded and kept on file for at least five years.[2] **(40 CFR 52.21)**

6. The permittee shall perform a visible emissions observation for the roofline portion of the shop building containing EUEAF a minimum of once per calendar day during charging. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.1303)**

7. The permittee shall perform a visible emissions observation for the vents and openings in the upper portion of the shop building containing EUEAF a minimum of once per calendar day while the electric arc furnace is operating. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 0% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and initiate prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

8. The permittee shall keep all records required per 40 CFR 60.276a on file at the facility and make available to the AQD District Supervisor upon request.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a)**

9. The permittee shall maintain records of all shop opacity observations made in accordance with 40 CFR 60.273a(d). All shop opacity observations in excess of 6% shall indicate a period of excess emission, and shall be reported to the administrator semiannually, according to 40 CFR 60.7(c).[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(g))**

10. The permittee has the option of monitoring the baghouse that controls emissions from EUEAF with either a COMS or a bag leak detection system. If applicable, the permittee shall maintain the following records for each bag leak detection system required under 40 CFR 60.273a(e):

    a. Records of the bag leak detection system output.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(1))**

    b. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(2))**

    c. An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(3))**

11. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emission unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). The specific corrective actions for an excursion are outlined in the Malfunction Abatement Plan. **(40 CFR 64.7(d))**

12. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**

13. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

14. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

15. The permittee shall verify, annually, that the direction of air flow at each natural draft opening (NDO) is into the non-fugitive enclosure, using a smoke test (i.e., smoke bomb, smoke tube) or an approved alternate method. The permittee shall notify the AQD District Supervisor in writing at least 15 days before the test is scheduled. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of air flow direction includes the submittal of a complete report of the test results to the AQD District Supervisor within 30 days following the date of the test. After two consecutive tests demonstrate that the direction of air flow at each NDO is into the non-fugitive enclosure, the permittee may submit a request for a change in the testing frequency to the AQD District Supervisor for review and approval.[2] **(R 336.1810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. Each owner or operator shall submit a written report of exceedances of the control device opacity to the AQD District Supervisor semiannually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(b))**

5. Operation at a furnace static pressure that exceeds the value established under 40 CFR 60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under 40 CFR 60.274a(c) or operation at flow rates lower than those established under 40 CFR 60.274a(c) may be considered by the AQD District Supervisor to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the AQD District Supervisor semiannually.[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(c))**

6. The permittee shall conduct the demonstration of compliance with 40 CFR 60.272a(a) and furnish the AQD District Supervisor a written report of the results of the test. This report shall include the information specified in 40 CFR 60.276a(f)(1)-(22).[2] **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(f))**

7. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9(a)(2)(i))**

8. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9(a)(2)(ii))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A, "General Provisions" and Subpart YYYYY, "Area Sources: Electric Arc Furnace Steelmaking Facilities".[2] **(40 CFR Part 63, Subparts A and YYYYY)**

2. The permittee shall comply with all applicable provisions of the New Source Performance Standards, as specified in 40 CFR Part 60, Subpart A, "General Provisions" and Subpart AAa, "Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983".[2] **(40 CFR Part 60, Subparts A and AAa)**

3. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**

4. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUDUST-SILO
EMISSION UNIT CONDITIONS

DESCRIPTION

This silo stores dust generated from DVBAGHOUSE-01 until it is properly disposed.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

Bin vent fabric filter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.2 pph[2]	Test protocol*	EUDUST-SILO	SC.V1.1	**R 336.1331(1)(c)**
2. PM	0.8 tpy[2]	12-month rolling time period as determined at the end of each calendar month	EUDUST-SILO	SC VI.2	**R 336.1331**
*Test Protocol will specify averaging time					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUDUST-SILO unless the silo vent fabric filter is installed and operating properly.[2] **(R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1301, R 336.1303, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall keep PM emission calculations on a monthly and 12-month rolling time period basis for EUDUST-SILO. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1225, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUROADS&PKG-01
EMISSION UNIT CONDITIONS

DESCRIPTION

Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Visible emissions from all wheel loaders, all truck traffic, and each of the material storage pipes, operated and maintained in conjunction with EUROADS&PKG-01, shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, R 336.2803, R 336.2804, R 336.2810, Act 451 Section 325.5525(j))**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUROADS&PKG-01 unless an appropriate program for fugitive emissions control has been implemented and is maintained.[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**

2. The fugitive dust plan must include the following activities for EUROADS&PKG-01, or other activities that will result in equivalent control of fugitive emissions:[2] **(R 336.1371, R 336.1372, R 336.2810, Act 451 Section 324.5524)**
   a. Dust suppressant will be applied to unpaved areas at least twice per month, weather permitting.
   b. The posted maximum vehicle speed within the plant shall not exceed 12 miles per hour.
   c. Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe slag transferring and hauling operations, and material handling operations.
   d. South Road will be paved.

3. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient.[2] **(R 336.1371(5))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii), R 336.1372))**

1. The permittee shall perform a non-certified visible emissions observation of EUROADS&PKG-01 at least once per day during yard activity, which includes the operation of vehicles on the South Road. The permittee shall initiate appropriate corrective action upon observation of visible emissions and shall keep a written record of each required observation and corrective action taken.[2] **(R 336.1301, R 336.1303)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the facility unless an AQD District approved fugitive dust control program is implemented and maintained. This program is designed to limit all fugitive dust emissions from the roadways, the material storage piles, the stock pile areas, and all of the Gerdau Monroe slag transferring and hauling operations throughout the plant.[2] **(R 336.1372, R 336.2810)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUFLINN
EMISSION UNIT CONDITIONS

DESCRIPTION

25 MMBTU/HR natural gas heat treat furnace.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_x	10.8 Tons[2]	Per 12-month rolling time period determined at the end of each calendar month	EUFLINN	SC VI.1 & 2	R 336.1205

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only burn pipe-line quality natural gas in EUFLINN.[2] **(R 336.1205)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205)**

2. The permittee shall keep natural gas usage records, acceptable to the AQD District Supervisor, indicating the amount of natural gas used, in cubic feet, on a calendar month basis and a 12-month rolling time period basis. The records must indicate the total amount of natural gas used by the EUFLINN. Based upon these records, the permittee shall calculate the NOx emissions from the EUFLINN. These calculations shall be on a calendar month basis and a 12-month rolling time period basis. In the absence of any actual emissions test data, and unless an alternative emission factor is approved in writing by the AQD District Supervisor, the permittee shall use an emission factor of 100 pounds of NOx emitted per million cubic feet of gas burned. All data, amounts of natural gas burned and calculations shall be kept on file for a period of at least five years and made available to the AQD upon request.[2] **(R 336.1205)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

1. None of the operations within the EUFLINN shall be directly vented to the outside atmosphere.[1] **(R 336.1225)**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EULMF
EMISSION UNIT CONDITIONS

DESCRIPTION

The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. Emissions from EULMF are directed to DVLMFBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.

Flexible Group ID: FGMELTSHOP, FGBLDGFUG, FGGHG

POLLUTION CONTROL EQUIPMENT

DVLMFBAGHOUSE

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	5%[2]	6-minute average	LMF Baghouse stack	SC VI.1	**R 336.2810**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EULMF, unless DVLMFBAGHOUSE is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not transfer material to EUVTD from EULMF without a ladle cover.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall perform a visible emissions observation for SVBHLMF-STACK a minimum of once per calendar day during operation of the LMF. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R336.1303)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBHLMF-STACK	110[2]	150[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUVTD
EMISSION UNIT CONDITIONS

DESCRIPTION

Two vacuum tank degassers which remove entrained gases from the molten metal. This emission unit does not include reheating. Controlled by the existing EAF baghouse. Emissions are directed to the DVBAGHOUSE-01 via removable covers or decks, which are located over the ladle while the process is operating.

Flexible Group ID: FGMELTSHOP, FGBLDFUG, FGGHG

POLLUTION CONTROL EQUIPMENT

DVBAGHOUSE-01

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the EUVTD unless the process vessel roof is sealed and the baghouse control system is installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUCASTER
EMISSION UNIT CONDITIONS

DESCRIPTION

Molten steel produced by the electric arc furnace is delivered to the continuous caster in a ladle via the ladle metallurgy system and twin tank vacuum degasser. The molten steel is gravity fed from the bottom of the ladle to the tundish enclosure. From the tundish, the molten steel flows into the enclosed caster strands. The semi-molten steel is then cut into billets by oxy-fuel cutting torches. The four cutting torches have a combined rated capacity of 4,413 cubic feet of natural gas per hour. EUCASTER also includes a 0.4 MMBtu/hour, natural-gas-fired, internally vented process heater that preheats the submerged entry nozzle (SEN) prior to it being inserted into the caster mold. Molten metal is added after the SEN is in place.

Flexible Group ID: FGBLDGFUG, FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural Gas Usage	36MMSCF/yr [2]	12-month rolling time period determined at the end of each calendar month	EUCASTER	SC VI.3	**R 336.2803 R 336.2804 R 336.2810**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The cutting torches of EUCASTER shall be equipped with oxy-fuel burners.[2] **(R 336.2810)**

2. The only fuel the permittee may burn in the cutting torches of EUCASTER is oxy-fuel, i.e. pipeline quality natural gas mixed with oxygen.[2] **(R 336.2810)**

3. The permittee shall only burn pipeline quality natural gas in the SEN process heater.[2] **(R 336.2810)**

4. The permittee shall operate EUCASTER using good combustion practices as described in the MAP.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate the cutting torches of EUCASTER unless the oxy-fuel burners are installed, maintained and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810)**

2. The combined maximum design heat input rate of the cutting torches of EUCASTER shall not exceed 4.5 million British thermal units per hour (MMBtu/hr.) on a fuel heat input basis.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

3. The maximum design heat input rate of the SEN process heater shall not exceed 0.4 million British thermal units per hour (MMBtu/hr) on a fuel heat input basis.[2] **(R 336.1224, R336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

4. The permittee shall not operate EUCASTER unless the liquid steel is tapped from the bottom of the ladle to the caster and sealed at the top of the caster.[2] **(R 336.2810)**

5. The permittee shall not operate EUCASTER unless the tundish is enclosed so that fugitive emissions do not occur from ladle tapping operations.[2] **(R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

2. The permittee shall retain design specification documentation of the heat input rating of the cutting torch oxy-fuel burners on file and make the information available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1901, R 336.1910)**

3. The permittee shall monitor and record the natural gas usage on a monthly and 12-month rolling time period basis. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request.[2] **(R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

1. Except for the steam generated from the caster cooling system, none of the operations within the EUCASTER shall be directly vented to the outside atmosphere.[1] **(R 336.1225)**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUCASTERCOOLTWR
EMISSION UNIT CONDITIONS

DESCRIPTION

Cooling tower for caster process water. Maximum water flow rate for cooling tower is 1,630 gallons per minute.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

Drift eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R 336.1301 R 336.1331**
2. PM10	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R 336.1331**
3. PM2.5	0.0005% Drift Loss[2]	Test Protocol*	EUCASTERCOOLTWR	SC VI.1	**R336.1331 R 336.2810**
*Test Protocol specifies averaging time.					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method
NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cooling tower shall not be operated unless the high efficiency drift eliminator is installed and operating properly.[2] **(R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall retain design specification documentation of the drift loss on file and make the information available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUBILLETREHEAT-WB
EMISSION UNIT CONDITIONS

DESCRIPTION

A walking beam billet reheat furnace equipped with Ultra-Low NOx burners with the total heat input capacity of 260.7 MMBtu/hr.

Flexible Group ID: FGGHG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	5% (or 20% at startup**)[2]	6-minute average	EUBILLETREHEAT-WB	SC VI.4	**R 336.1301 R 336.2810**
2. CO	84 lb./MMSCF[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2804 R 336.2810**
3. CO	68.6 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.2804 R 336.2810**
4. NOx	0.07 lb./MMBTU[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
5. NOx	18.3 pph[2]	Test Protocol*	EUBILLETREHEAT-WB	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
6. NOx	57.9 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.2803 R 336.2804 R 336.2810**
7. VOC	5.5 lb./MMSCF[2]	Test Protocol*	EUBILLETREHEAT-WB	GC 13 SC VI.2	**R 336.1702(a)**
8. VOC	4.5 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	**R 336.1702(a)**
9. GHG as CO2e	119 lb./MMBTU[2]	Test Protocol*	EUBILLETREHEAT-WB	GC 13, SC II.1	**R 336.2810**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
10. GHG as CO2e	97,907 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEAT-WB	SC VI.2	R 336.2810

*Test Protocol will specify averaging time.
**Start-up conditions for this emission unit are defined as the time period from when a burner flame is first ignited until the unit reaches production operating conditions.

II. MATERIAL LIMIT(S)

1. The permittee shall only burn pipe-line quality natural gas in EUBILLETREHEAT-WB.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not burn more than 1,633 MMSCF/yr. of natural gas in EUBILLETREHEAT-WB based on a 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage from EUBILLETREHEAT-WB on a continuous basis.[2] **(R 336.1205(1)(a) & (3), R 336.1225, R 336.2803, R 336.2804)**

2. The permittee shall operate EUBILLETREHEAT-WB using good combustion practices as described in the MAP.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a device to continuously monitor and record the natural gas usage rate for EUBILLETREHEAT-WB.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall not operate EUBILLETREHEAT-WB unless the Ultra-Low NOx burners are installed and operating properly.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once every five (5) years, the permittee shall verify NOx and CO emission rates from EUBILLETREHEAT-WB by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1205, R 336.1299, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1225, R 336.1301, R 336.1303, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall keep the following information on a monthly basis for EUBILLETREHEAT-WB:

   a. CO, NOx, VOC, and CO2e mass emission calculations determining the monthly emission rate in tons per calendar month.

   b. CO, NOx, VOC, and CO2e mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall monitor and record the natural gas usage rate for EUBILLETREHEAT-WB on a monthly and 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall perform a visible emissions observation for EUBILLETREHEAT-WB at a minimum of once per calendar day during routine operations. If the permittee observes any visible emissions, the permittee shall immediately implement the following procedures:[2] **(R 336.1301, R 336.1303)**

   a. The permittee shall continue to perform the visible emissions readings at least once every 30 minutes until emissions are no longer visible or until emissions have been observed for more than two hours.

   b. If visible emissions have been observed for more than two hours, a certified reader shall determine the opacity using Federal Reference Test Method 9 (40 CFR Part 60, Appendix A).

   c. If the results of the Federal Reference Test Method 9 visible emissions observation indicate a violation of the opacity standard specified in General Condition **11**, the permittee shall immediately initiate corrective actions.[2]

   d. The permittee shall keep records of all Method 9 readings that were performed.

5. The permittee shall keep records for EUBILLETREHEAT-WB that document when it operates in start-up mode or normal operation mode as defined in SC I.1.[2] **(R 336.1301, R 336.2810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVREHEAT-FRN	96[2]	185[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUGASTANK
EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit includes existing stationary gasoline dispensing facilities (GDFs) located at an area source of hazardous air pollutants (HAPs) that have a maximum monthly gasoline throughput of one of the following:

1. Less than 10,000 gallons

GDF means any stationary source which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine use solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Required measures for a gasoline dispensing facility (GDF) with Monthly Throughput <10,000 gallons:
   a. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. **(40 CFR 63.11116(a))**
   b. The permittee shall minimize gasoline spills. **(40 CFR 63.11116(a)(1))**
   c. Spills shall be cleaned up as expeditiously as practicable. **(40 CFR 63.11116(a)(2))**
   d. The permittee shall cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use. **(40 CFR 63.11116(a)(3))**
      i. Portable gasoline containers that meet the requirements of 40 CFR Part 59, Subpart F, are considered acceptable for compliance with paragraph (1)(d) of this section

2. The permittee shall provide Gasoline Throughput Records upon request by USEPA or MDEQ: **(40 CFR 63.11116(b))**
   a. Facilities are not required to submit notifications or reports, but must have records available.

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep a record of gasoline throughput to be able to demonstrate that monthly throughput is less than 10,000 gallons and such record must be made available to USEPA or to MDEQ within 24 hours of a request. **(40 CFR 63.11116(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the Gasoline Distribution GACT as specified in 40 CFR Part 63, Subpart CCCCCC. **(40 CFR Part 63, Subpart CCCCCC)**

2. If the permittee's affected source's throughput ever exceeds an applicable throughput threshold, then the permittee's affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold. **(40 CFR 63.11111(i))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGENGINES	One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.	EUENGINES
FGMELTSHOP	The Melt Shop includes the EUEAF, EULMF, and two vacuum tank degasser operations (EUVTD) at the facility.	EUEAF, EULMF, EUVTD
FGBLDGFUG	Processes located in the portion of the shop building that houses the EUCASTER, EULMF, and EUVTD, which vent fugitive emissions indoors that may escape the building through the roof monitor, as well as processes or activities other than EUEAF which are located in the portion of the shop building that houses EUEAF and which vent fugitive emissions that may escape though building vents. A portion of the plant ventilation that is vented through the ladle bay roof monitor is controlled by the LMF baghouse.	EUCASTER, EULMF, EUVTD
FGGHG	The conditions in this table requiring a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan apply to the emission units associated with PTI No. 102-12A.	EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB
FGMACTYYYYY	The affected source is an existing electric arc furnace (EAF) steelmaking facility that is part of an area source of hazardous air pollutant (HAP) emissions. The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63, Subpart YYYYY.	EUEAF
FGNSPS-SI-ICE	This table contains requirements of the New Source Performance Standards for Stationary Spark Ignition - Internal Combustion Engines, 40 CFR 60 Subpart JJJJ for spark ignition (SI, i.e. natural gas/propane) emergency generators.	EUADMINGEN

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMACT-ZZZZ-EMERGENCY RICE	Each existing emergency stationary reciprocating internal combustion engines (RICE) as identified within 40 CFR Part 63, Subpart ZZZZ, 63.6590(a)(1), and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g)	EUFINISHINGGEN, EUMAINPUMPHOUSEGEN
FGRULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.	EUPAINTING EUTURNER EUMILLSAWBH
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUPARTSWASHER

FGENGINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

One or more diesel fuel-fired reciprocating engine generators, including portable units, each with a maximum nameplate capacity of 5 megawatts (MW), used for power generation including emergency back-up and/or peak power shaving.

Emission Unit: EUENGINES

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NO_x	515 lb./1000 gal[2]	Test Method	FGENGINES	SC V.1	**R 336.1205(1)(a)**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Diesel Fuel-Sulfur content	0.05 percent by weight[2]	Annual average	FGENGINES	SC VI.3	**40 CFR Part 72.7**
2. Diesel Fuel	136,000 gallons[2]	Per 12-month rolling time period	FGENGINES	SC VI. 1 & 4	**R 336.1205(1)(a) R 336.1220 R 336.1224 R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate FGENGINES in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction.[2] **(R 336.1912)**

2. The permittee shall burn only diesel fuel in FGENGINES.[1] **(R 336.1224, R 336.1225)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The total capacity from each unit included in FGENGINES shall not exceed 5 MW.[2] **(40 CFR Part 72.7)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Verification of the NOx emission limit (515 pounds NOx per 1000 gallon fuel used) from one or more representative units of FGENGINES, by testing at owner's expense, in accordance with Department requirements may be required. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of the emission factor includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205(1)(a), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the fuel use for FGENGINES on a monthly basis.[2] **(R 336.1205(1)(a), R 336.1220, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction, any maintenance performed and any testing results for FGENGINES. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(R 336.1912)**

3. If any electricity produced by FGENGINES is sold to a utility power distribution system, the permittee shall keep records of the sulfur content calculated in percent by weight, on an annual average as required by SC II.1. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(40 CFR Part 72.7)**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period fuel use records for FGENGINES. The records must indicate the total amount of fuel used in FGENGINES. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(R 336.1205(1)(a), R 336.1220, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

1. The exhaust gases from FGENGINES shall be discharged unobstructed vertically upwards to the ambient air.[2] **(R 336.1225, 40 CFR 52.21(c) & (d))**

IX. OTHER REQUIREMENT(S)

1. The permittee shall not replace or modify FGENGINES, or any portion of FGENGINES, unless all of the following conditions are met:[2] **(R 336.1201(a)(1))**

   a. The permittee shall update the general permit by submitting a new Process Information form (EQP5787) to the AQD Permit Section and District Supervisor identifying the existing and new equipment a minimum of 10 days before the equipment is replaced or modified.

   b. The permittee shall continue to meet all general permit to install applicability criteria after the replacement or modification is complete.

   c. The permittee shall keep records of the date and description of the replacement or modification.

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGMELTSHOP
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The Melt Shop includes the EUEAF, EULMF, and EUVTD.

Emission Units: EUEAF, EULMF, EUVTD

POLLUTION CONTROL EQUIPMENT

DVBAGHOUSE-01 for the EAF and vacuum tank degassers, DEC for the EAF, CO and VOC reaction chamber for the EAF, and DVLMFBAGHOUSE for the LMF.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf[2]	Test Protocol*	FGMELTSHOP Each baghouse individually	SC V.1	**R 336.1331**
2. PM	7.2 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1331 R 336.2803 R 336.2804**
3. PM	29.2 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.1331 R 336.2803 R 336.2804**
4. PM10	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
5. PM10	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2803 R 336.2804 R 336.2810**
6. PM2.5	0.1 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
7. PM2.5	10.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1205 R 336.2803 R 336.2804**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
8. PM2.5	41.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.1205 R 336.2803 R 336.2804**
9. SO2	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1 SC VI.4	**R 336.2803 R 336.2804 R 336.2810**
10. SO2	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1 SC VI.4	**R 336.2803 R 336.2804 R 336.2810**
11. SO2	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2803 R 336.2804 R 336.2810**
12. CO	2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1 SC VI.4	**R 336.2804 R 336.2810**
13. CO	260 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1 SC VI.4	**R 336.2804 R 336.2810**
14. CO	850 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2804 R 336.2810**
15. NOx	0.2 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
16. NOx	26 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2803 R 336.2804 R 336.2810**
17. NOx	85 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2803 R 336.2804 R 336.2810**
18. VOC	0.13 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1702(a)**
19. VOC	16.9 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.1702(a)**
20. VOC	55.3 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.1702(a)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
21. Lead	0.09 pph[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2802(4)(d)**
22. Lead	2.15 lb/day[2]	Calendar Day	FGMELTSHOP	SC VI.4	**R 336.2802(4)(d)**
23. Lead	0.37 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2802(4)(d)**
24. GHG (as CO_2e)	320 lb/ton liquid steel[2]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	**R 336.2810**
25. GHG (as CO_2e)	134,396 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	**R 336.2810**
26. Mercury (as Hg)	0.033 pph[1]	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.2	**R 336.1224 R 336.1225**
27. Mercury (as Hg)	271 lb/year[1]	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC V.2	**R 336.1224 R 336.1225**
*Test Protocol shall specify averaging time.					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Steel Output	130 tons liquid steel per hour[2]	Based on a 24-hour calendar day average	FGMELTSHOP-	SC VI.4	**R 336.2810**
2. Steel Output	850,000 tons liquid steel per year[2]	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.4	**R 336.2810**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGMELTSHOP unless the baghouse control systems, pollution control equipment and canopy hood are installed and operating properly.[2] **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**

2. The permittee shall not operate each of the emission units in FGMELTSHOP for more than 8,200 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the SO2 and CO emissions and exhaust flow rate on a continuous basis, from the FGMELTSHOP (EAF) baghouse stack (SVBH-01-STACK).[2] **(R 336.2802, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Once every five (5) years, the permittee shall verify visible emissions, PM, PM10, PM2.5, CO, NOx, VOC, SO2, Lead and CO2e emission rates from FGMELTSHOP by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. As used in these permit conditions, "start-up" means the time when FGMELTSHOP begins processing liquid steel after the facility has the capacity to operate at increased output and "initial trial operating period" means the period of time when FGMELSTSHOP is undergoing "Preproduction Approval Process" certification.[2] **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.272a)**

2. Once every five (5) years, the permittee shall verify the mercury emission rate from FGMELTSHOP by testing at owner's expense, in accordance with Department requirements. After the initial stack test, subsequent testing for mercury shall be conducted at least once every year for five years and once every 5 years thereafter. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[1] **(R 336.1224, R 336.1225, R 336.1228)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1901, R 336.2803, R 336.2804)**

2. The permittee shall continuously monitor and record, in a satisfactory manner, the SO2 and CO emissions and flow from the EAF baghouse stack (SVBH-01-STACK) of FGMELTSHOP. The permittee shall operate each Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed in Appendix 9-1 and shall use the CERMS data for determining compliance with SC I.9, I.10, I.11, I.12, I.13, I.14.[2] **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1602, R 336.1702, R 336.2802)**

3. The permittee shall monitor and record the 24-hour calendar day liquid metal production rate for the electric arc furnace and use the data to demonstrate compliance with SC II.1 and II.2 in a format approved by the AQD District Supervisor. The permittee shall keep the records on file and make them available to the AQD District Supervisor upon request.[2] **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1910)**

4. The permittee shall keep the following records on a monthly basis:

   a. The hourly emission rates of PM, PM10, PM2.5, CO, SO2, NOx, VOC and Lead on a monthly average basis.
   b. The calendar day emission rate of lead on a month average.
   c. The annual emission rate of PM, PM10, PM2.5, CO, SO2, NOx, VOC and Lead, Mercury and CO2e on a 12-month rolling time period determined at the end of each calendar month.
   d. The emissions of CO and, SO2 as lb./ton of steel produced on a monthly average basis.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request.[2] **(R 336.1205 R 336.2803, R 336.2804, R 336.2810)**

5. The permittee shall monitor and record the hours of operation of FGMELTSHOP on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall keep records on file at the facility and make them available to the AQD District Supervisor upon request.[2] **(R 336.1225, R 336.2810)**

See Appendix 10-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBH-01-STACK-2	136[2]	120[2]	**R 336.1225, R 336.2803, R 336.2804**
2. SVLMF-STACK-2	110[2]	150[2]	**R 336.1225, R 336.2803, R 336.2804**

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGBLDGFUG
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Processes located in the portion of the shop building that houses the EUCASTER, EULMF, and EUVTD, which vent fugitive emissions indoors that may escape the building through the roof monitor, as well as processes or activities other than EUEAF which are located in the portion of the shop building that houses EUEAF and which vent fugitive emissions that may escape through building vents. A portion of the plant ventilation that is vented through the ladle bay roof monitor is controlled by the LMF baghouse.

Emission Units: EUCASTER, EULMF, EUVTD

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	6%[2]	6-minute average	EUCASTER as measured at the roof monitors of FGBLDGFUG	SC VI.2	**R 336.1301 R 336.1365 R 336.2004(1)(l) R 336.2803 R 336.2804 R 336.2810**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall update the fugitive dust plan if it is determined to be insufficient by the AQD District Supervisor. The permittee shall provide an updated fugitive dust plan to the AQD District Supervisor for review and approval within 30 days of notification that the plan is insufficient.[2] **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.1901, R 336.2803)**

2. The permittee shall perform visible emissions observations for FGBLDGFUG from the two uncontrolled ladle bay roof monitors and vents in the portions of the shop building containing material handling for EUEAF, as well as the portion of the shop building containing EULMF, EUVTD, and EUCASTER, a minimum of once per calendar day. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the shop building exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions, and initiate prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When the records are required, the records will include the time that the visible emissions were observed, identification on the cause, the corrective action taken, and the time of completion of corrective action.[2] **(R 336.1301, R 336.1303)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not operate the facility unless an AQD District approved fugitive dust control program is implemented and maintained. This program is designed to limit all fugitive dust emissions from the material storage piles and containers, and the Gerdau Monroe slag transferring and hauling operations throughout the plant.[2] **(R 336.2810)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGGHG
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The conditions in this table require a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan.

Emission Units: EUEAF, EUDUST-SILO, EUROADS&PKG-01, EUFLINN, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEAT-WB,

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. GHG as CO2e	294,201 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FGGHG	SC VI.2	**R 336.2810**

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall develop and submit an approvable Energy Efficiency Management Plan (EEMP) to the AQD District Supervisor. Thereinafter, the permittee shall not operate the process equipment covered by FGGHG unless EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER. At a minimum, the EEMP shall specify the following:

   a. Work practices to be followed to ensure optimal energy efficiency in the operation of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER.
   b. A maintenance plan to be followed to ensure optimal energy efficiency of all equipment necessary to operate the EUEAF, EULMF, EUVTD, EUBILLETREHEAT-WB, and EUCASTER in accordance with manufacturer's recommendations.

   The permittee shall amend the EEMP within 180 days if any changes are deemed necessary, or upon request by the AQD District Supervisor. The permittee shall submit the EEMP and any amendments to the AQD District Supervisor for review and approval.[2] **(R 336.2810)**

2. The permittee shall not operate an emission unit or process equipment included in FGGHG unless a maintenance and malfunction abatement plan (MAP) as described in Rule 911(2), for the emission unit or process equipment has been submitted to the AQD District Supervisor, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee

shall amend the MAP within 45 days after such an event occurs. The MAP shall address the following emission units and flexible groups:

a. EUEAF and EUVTD for the CO and VOC reaction chamber, Direct Evacuation Control (DEC), quench system, DVBAGHOUSE-01, and the oxy-fuel burners (in EUEAF)
b. EULMF and ladle bay roof monitor for DVLMFBAGHOUSE
c. EUCASTER, defining good combustion practices for the Oxy-fuel torches and requiring parameters for natural gas meter calibration.
d. EUCASTERCOOLTWR for the drift eliminator.
e. EUBILLETREHEAT-WB, for the Ultra-Low NOx Burners.
f. EUDUST-SILO for the silo vent fabric filter.

The permittee shall amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.[2] **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205, R 336.2803, R 336.2804)**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period CO_2e emission calculation records for FG102-12A, as required by SC I.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(R 336.1810)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGMACT-YYYYY
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The affected source is a new or existing electric arc furnace (EAF) steelmaking facility, which is (part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY.

Emission Unit: EUEAF

POLLUTION CONTROL EQUIPMENT

DVBAGHOUSE-01

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.0052 grains/dscf[2]	Test Protocol*	EAF control device	SC V.1	**40 CFR 63.10686(b)(1)**
2. VE	6%[2]	Test Protocol*	Melt Shop**	SC V.2	**40 CFR 63.10686(b)(2)**
* Test protocol shall specify averaging time ** Melt shop emissions include only emissions from an EAF					

II. MATERIAL LIMIT(S)

1. For metallic scrap utilized in the EAF at the facility, the permittee must comply with the requirements in paragraph (a)(1) of 40 CFR 63.10685.[2] **(40 CFR 63.10685)**

   a. For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685(a)(1) (Pollution Prevention Plan), the scrap utilized shall meet the following requirements:[2] **(40 CFR 63.10685)**

      i. Scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.[2] **(40 CFR 63.10685(a)(1)(i))**

      ii. Scrap shall be depleted (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.[2] **(40 CFR 63.10685(a)(1)(ii)**

      iii. The requirements of 40 CFR 63.10685(a)(1) do not apply to the routine recycling of baghouse bag or other internal process or maintenance materials in the furnace.[2] **(40 CFR 63.10685(a)(1)(iv)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall implement and maintain an approved Pollution Prevention Plan by the applicable compliance date specified in 40 CFR 63.10680. The Pollution Prevention Plan shall be kept on site and include the following, as applicable:

a. Control (to the extent practicable) of chlorinated plastics, lead, and free organic liquids per 40 CFR 63.10685(a)(1)(i-iv).

b. Provisions to meet the mercury requirements as specified in 40 CFR 63.10685(b). The permittee shall revise the plan within 60 days after a change occurs.

The permittee shall submit the scrap pollution prevention plan to the permitting authority for approval. The permittee shall operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. The permittee may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permittee shall keep a copy of the plan onsite, and must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties.[2] **(40 CFR 63.10685)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any EAF at the steelmaking facility unless a capture and collection system is properly installed, maintained, and operated. Collection from an EAF must include charging, melting and tapping operations.[2] **(40 CFR 63.10686(a))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Within 180 days after the applicable compliance date specified in 40 CFR 63.10681, the permittee shall conduct a performance test to demonstrate initial compliance with PM emission limits for each EAF. The permittee shall conduct the performance test as specified in §63.7 and 40 CFR 60.275a, and 40 CFR 63.10686(d)(1)(i)-(vi). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(40 CFR 63.10686(d)(1))**

2. The permittee shall conduct each opacity test for melt-shop fugitive emissions according to the requirements in §63.6(h) and Method 9 of Appendix A-4 of 40 CFR Part 60. When emissions from an EAF vessel are combined with emissions from emission sources not subject to this subpart, compliance with the melt shop opacity limit shall be based on emissions from only the emission sources subject to this subpart. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(40 CFR 63.10686(d)(2))**

3. During any performance test, the permittee shall monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test.[2] **(40 CFR 63.10686(d)(3)))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep records for the Pollution Prevention Plan in SC II.1. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[2] **(40 CFR 63.10685(c)(1)(i) & (2))**

2. The permittee shall comply with the requirements of the General Provisions of 40 CFR Part 63, Subpart A according to Table 1 in 40 CFR Part 63, Subpart YYYYY.[2] **(40 CFR 63.10690(a))**

3. The notification of compliance status required by 40 CFR 63.9(h) shall include each applicable certification of compliance, signed by a responsible official, according to 40 CFR 63.10690(b)(1)-(6).[2] **(40 CFR 63.10690(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. If subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10685(b)(1) of this section, the permittee shall submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports shall include a certification that the permittee has conducted inspections or taken other means of corroboration as required under 40 CFR 63.10685(b)(1)(ii)(C). This information may be included in the semiannual compliance reports required under SC VII.2.[2] **(40 CFR 63.10685(c)(1)(ii))**

5. The permittee shall submit semiannual compliance reports regarding the control of contaminants from scrap according to the requirements in 40 CFR 63.10(e). The report must clearly identify any deviation from the requirements in 40 CFR 63.10685(a) and (b) and the corrective action taken. The permittee shall identify which compliance option in paragraph (b) applies to each scrap provider, contract, or shipment.[2] **(40 CFR 63.10685(c)(3))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart YYYYY for Area Sources: Electric Arc Furnace Steel Making Facilities by the initial compliance date.[2] **(40 CFR Part 63, Subparts A and YYYYY)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGNSPS-SI-ICE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This table contains requirements of the New Source Performance Standards for Stationary Spark Ignition - Internal Combustion Engines, 40 CFR Part 60, Subpart JJJJ for spark ignition (SI, i.e natural gas/propane) emergency generators.

Emission Unit: EUADMINGEN

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
Spark Ignition Engines **HP≥130, 2009 Model Years and Later**					
1. NOx	2.0 g/HP-hr. (160 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**
2. CO	4.0 g/HP-hr. (540 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**
3. VOC	1.0 g/HP-hr. (86 ppmvd @15% O2)[2]	Instantaneous	SI Engines HP≥130 model year 2009*	SC VI.1	**40 CFR 60.4233(d)**

*beginning model year

4. Emergency engines manufactured after January 1, 2009, which are greater than or equal to 25 horsepower (HP) must comply with the emission standards in Table 1 of 40 CFR Part 60, Subpart JJJJ (with the exception of gasoline and rich burn engines that use liquefied petroleum gas [LPG]).[2] **(40 CFR 60.4233(d))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the emergency generators for more than 500 hours per year.[2] **(R 336.1213(3)**

2. The permittee shall operate each emergency generator according to the requirements in paragraphs below:

   a. There is no time limit on the use of emergency stationary RICE in emergency situations.[2] **(40 CFR 60.4243(d)(1))**

   b. The permittee may operate each emergency stationary ICE for a maximum of 100 hours per calendar year for any of the following:

i. For maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission authority or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.[2] **(40 CFR 60.4243(d)(2)(i))**

3. The permittee may operate the emergency stationary ICE for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing.[2] **(40 CFR 60.4243(d)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip the SI generator with a non-resettable hour meters to track the number of operating hours.[2] **(40 CFR 60.4237)**

2. Except as provided in SC IV.3, and SC V.1, the engine must be installed and configured according to the manufacturer's emission-related specifications.[2] **(40 CFR 60.4243(a)(1))**

   a. Operate and maintain the stationary SI ICE and control device according to the manufacturer's emission-related written instructions.

   b. Adjust engine settings according to and consistent with the manufacturer's instructions, and your stationary SI ICE will not be considered out of compliance.

   c. Meet the requirements of 40 CFR Part 1068, Subparts A to D, as applicable.

3. If the engine and control device, if applicable, is not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered non-certified and you must demonstrate compliance as follows:[2] **(40 CFR 60.4243(a)(2)(ii),(iii))**

   a. For each stationary SI ICE greater than or equal to 100 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. If the engine and control device (if applicable) is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:[2] **(40 CFR 60.4243(a)(2)(ii))**

   a. For each stationary SI ICE greater than or equal to 100 HP and less than 500 HP conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(il))**

1. Except as provided in SC IV.2 and SC V.1 for 2009 model year and later engines, the permittee must comply with the emission standards specified in 40 CFR 60.4233(d) by purchasing an engine certified to the emission standards in Table 1 to Subpart JJJJ for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.[2] **(40 CFR 60.4243(a))**

2. Records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter.[2] **(40 CFR 60.4245(b))**

3. Record the time of operation of the engine and the reason the engine was in operation during that time.[2] **(40 CFR 60.4245(b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the SI ICE NSPS, 40 CFR Part 60, Subpart JJJJ.[2] **(40 CFR Part 60, Subpart JJJJ)**

2. Compliance with this Flexible Group represents compliance with 40 CFR Part 63, Subpart ZZZZ, and 40 CFR Part 60, Subpart JJJJ.[2] **(40 CFR Part 63, Subpart ZZZZ, 40 CFR Part 60, Subpart JJJJ)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGMACT-ZZZZ-EMERGENCY RICE FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Each existing emergency stationary reciprocating internal combustion engines (RICE) as identified within 40 CFR Part 63, Subpart ZZZZ, 40 CFR 63.6590(a)(1), and is exempt from the requirements of Rule 201 pursuant to Rules 282(b) or 285(g)

Compliance date – May 3, 2013 for CI Engines

Emission Units: EUFINISHINGGEN, EUMAINPUMPHOUSEGEN

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate and maintain any affected RICE, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.[2] **(40 CFR 63.6605(b))**

2. The permittee shall operate each existing emergency stationary RICE according to the requirements in paragraphs below:

   a. There is no time limit on the use of emergency stationary RICE in emergency situations.[2] **(40 CFR 63.6640(f)(1))**

   b. The permittee may operate each emergency stationary RICE for a maximum of 100 hours per calendar year for any of the following purpose: **(40 CFR 63.6640(f)(2))**

      i. For maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission authority or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.[2] **(40 CFR 63.6640(f)(2)(i))**

c. The permittee may operate each emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year operation provided for maintenance and testing in SC III.2.b. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.[2] **(40 CFR 63.6640(f)(4))**

3. The permittee shall comply with the following requirements, for each existing emergency stationary RICE, by the applicable compliance date.[2] **(40 CFR 63.6603, Table 2d)**

   a. **For CI Engines:**
      i. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.5.
      ii. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.
      iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

4. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6603 and as listed in SC III.2. The oil analysis program must be performed at the same frequency as oil changes are required. The analysis program must analyze the parameters and keep records as required in 40 CFR 63.6625(i) for CI engines or 40 CFR 63.6625(j) for SI engines.[2] **(40 CFR 63.6625(i) & (j))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each existing emergency stationary RICE with a non-resettable hour meter.[2] **(40 CFR 63.6625(f))**

2. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air-pollution control practice for minimizing emissions.[2] **(40 CFR 63.6625(e); 40 CFR 63.6640(a), Table 6)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. If using the oil analysis program for CI Engine(s), the permittee shall test for Total Base Number, viscosity and percent water content. **(40 CFR 63.6625(i))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep all records required by 40 CFR 63.6655 (except 63.6655(c)).[2] **(40 CFR 63.6655(a))**

2. The permittee shall maintain, at a minimum, the following records by the applicable compliance date:

   a. A copy of each notification and report that is submitted to comply with 40 CFR Part 63, Subpart ZZZZ and the documentation supporting each notification and report.[2] **(40 CFR 63.6655(a)(1))**

   b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.[2] **(40 CFR 63.6655(a)(2))**

   c. Records of all required maintenance performed on the air pollution control and monitoring equipment.[2] **(40 CFR 63.6655(a)(4))**

d. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.[2] **(40 CFR 63.6655(a)(5))**

3. The permittee shall keep records as required in SC IV.2 to show continuous compliance with each emission or operating limit that applies.[2] **(40 CFR 63.6655(d), 40 CFR 63.6660)**

4. The permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the permittee's maintenance plan.[2] **(40 CFR 63.6655(e), 40 CFR 63.6660)**

5. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document: [2] **(40 CFR 63.6655(f), 40 CFR 63.6660)**

   a. How many hours are spent for emergency operation.
   b. What classified the operation as emergency.
   c. How many hours are spent for non-emergency operation.

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(I))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to FGMACT-ZZZZ-EMERGENCY RICE. The permittee may choose an alternative compliance method not listed in FGMACT-ZZZZ-EMERGENCY RICE by complying with all applicable provisions required by Subpart ZZZZ for the compliance option chosen.[2] **(40 CFR 70.6(9), 40 CFR 63.9(j), 40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
[2] This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGRULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission Units: EUPAINTING, EUTURNER, and EUMILLSAWBH

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(i))**

2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(a)(ii))**

   a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(ii)(A))**

   b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(B))**

   c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(a)(ii)(C))**

   d. The emission unit shall not emit any air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(a)(ii)(D))**

3. Each emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met: **(R 336.1290(a)(iii))**

   a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(a)(iii)(A))**

b. The visible emissions from the emission unit are not more than five percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(a)(iii)(B))**

c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the DEQ, AQD Rule 290, Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**

   a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**

   b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**

   c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**

   d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(a)(ii) and (iii). **(R 336.1213(3))**

   e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. **(R 336.1213(3), R 336.1290(c))**

2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**

   a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(b), R 336.1213(3))**

   b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**

3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating

conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FGCOLDCLEANERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUPARTSWASHER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:

   a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(h))**

   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**

2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**

3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**

c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**

2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**

   a. A serial number, model number, or other unique identifier for each cold cleaner.

   b. The date the unit was installed, manufactured or that it commenced operation.

   c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(h).

   d. The applicable Rule 201 exemption.

   e. The Reid vapor pressure of each solvent used.

   f. If applicable, the option chosen to comply with Rule 707(2).

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**

4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES-

Appendix 1-1. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
NA	Not Applicable	PM	Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10	Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants		
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SDS	Safety Data Sheet	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

Appendix 2-1. Schedule of Compliance

The permittee certified in this ROP application that the stationary source is in compliance with all applicable requirements of this ROP. However, the permittee is currently in noncompliance with FGMELTSHOP, SC I.4, I.6, I.7, I.18 and I.19. Compliance testing conducted subsequent to the permit application submittal showed that the facility was exceeding the permitted PM10, PM2.5 and VOC emission limits for FGMELTSHOP.

A Schedule of Compliance for any applicable requirements that the permittee is not in compliance with at the time of the ROP issuance is supplemental to, and shall not sanction non-compliance with, the underlying applicable requirements on which it is based.

As reflected in the Schedule of Compliance below, the permittee shall implement corrective measures to comply with the PM10, PM2.5 and VOC emission limits and incorporate those measures into an enforceable Consent Order and the Renewable Operating Permit.

Schedule of Compliance

The following schedule of compliance conforms to the provisions of Rule 119(a) and Rule 213(4).

Emission Unit/ Flexible Group ID and Condition No.	Applicable Requirement	Remedial Measure	Required Action	Milestone Date	Progress Reports
FGMELTSHOP, SC I.4, I.6, I.7, I.18, I.19	R 336.1205 R 336.2803 R 336.2804 R 336.2810	Compliance with PM10, PM2.5 and VOC emission limits.	TBD	TBD	TBD

Progress Reports

The permittee shall submit Certified Progress Reports to the appropriate AQD District Supervisor using the MDEQ Report Certification form (EQP 5736). Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor. **(R 336.1213(4)(b))**

Progress reports shall contain the following information:

The projected dates for achieving scheduled activities, milestones or compliance as required in the schedule of compliance. **(R 336.1213(4)(b)(i))**

The actual dates that the activities, milestones, or compliance are achieved. **(R 336.1213(4)(b)(i))**

An explanation of why any dates in the schedule of compliance were not or will not be met. **(R 336.1213(4)(b)(ii))**

A description of any preventative or corrective measures adopted in order to ensure that the schedule of compliance is met. **(R 336.1213(4)(b)(ii))**

Appendix 3-1. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4-1. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable

Appendix 5-1. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6-1. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B7061-2009. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-B7061-2009a is being reissued as Source-Wide PTI No. MI-PTI-B7061-2016.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
102-12A*	NA	The entire facility is being updated to operate at an increased capacity. This included new and updated emission units.	All
102-12	NA	PSD Permit for the installation and modification of emission units	All
182-11	201200150	Legal name change of the facility to Gerdau Macsteel Inc.	All
182-11A	NA	Temporary Boiler	NA
244-10	NA	Caster	EUCASTER

Appendix 7-1. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible group Special Conditions. Therefore, this appendix is not applicable

Appendix 8-1. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

Appendix 9-1. Continuous Emission Monitoring Systems

A. CO and SO2 Monitoring Continuous Emission Rate Monitoring System (CERMS) Requirements.

For an existing CERMS: If the permittee has satisfied the installation and testing requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after the commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CERMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CERMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CERMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
CO	4
SO2	2
CERMS	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 6 of Appendix B to 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CERMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in special conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CERMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) A report of any periods that the CERMS exceeds the instrument range.
   e) If no exceedances or CERMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

B. Continuous Opacity Monitoring System (COMS) Requirements

For an existing COMS: If the permittee has satisfied the installation and performance specification requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required COMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the COMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.

7. The permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, "Performance Audits Procedures for Opacity Monitors", or a procedure acceptable to AQD. The results of the annual audit shall be submitted to the AQD within 30 days after the end of the next calendar quarter in which the audit results are received.

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above limit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of COMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

   All monitoring data shall be kept on file for a period of at least five (5) years and made available to the AQD upon request.

Appendix 10-1. Compliance Demonstration for SO_2 and CO Emission Limitations for FGMELTSHOP

The Sulfur Dioxide and Carbon Monoxide emission limitations specified in FGMELTSHOP, SC I.9, I.10, I.12, and I.13 are combined limits for EUEAF, EULMF and EUVTD.

Emissions from EUEAF and EUVTD will be captured and directed to the DVBAGHOUSE-01. Controlled emissions from the baghouse will be emitted from SVBH-01-Stack. SVBH-01-Stack will be equipped with SO_2 and CO CERMS.

Emissions from EULMF will be captured and directed to the LMF Baghouse. Controlled emissions from the LMF Baghouse will be released from SVBHLMFBaghouse-STACK. Emissions from SVBHLMFBaghouse-STACK will be evaluated via periodic stack sampling.

Compliance with the emission limitations in FGMELTSHOP, SC I.9, I.10, I.12, and I.13 will be demonstrated as follows:

For SO_2

Compliance with the pound/ton of liquid steel and pound/hour SO_2 emission limitations specified in FGMELTSHOP SC I.9 and I.10, respectively, shall be demonstrated using the following algorithm:

FGMELTSHOP SO_2 lb/hr = EAF/VTD CEMS Lb/hr + LMF SO2 lb/hr (stack test value)

FGMELTSHOP SO_2 lb/ton = EAF/VTD CEMS Lb/ton + LMF SO2 lb/ton (stack test value)

For CO

Compliance with the pound/ton of liquid steel and pound/hour CO emission limitations specified in FGMELTSHOP SC I.12 and I.13, respectively, shall be demonstrated using the following algorithm:

FGMELTSHOP CO lb/hr = EAF/VTD CEMS Lb/hr + LMF CO lb/hr (stack test value)

FGMELTSHOP CO lb/ton = EAF/VTD CEMS Lb/ton + LMF CO lb/ton (stack test value)

SECTION 2 – ~~Tube City IMS~~ TMS International, LLC

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the

Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:" [2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that, "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete". The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(8))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUSLAGPLANT	Slag processing plant – consisting of a ~~hopper/feeder with grizzly~~ Vibrating Grizzly Feeder (VGF), two shaker screens and several belt conveyors and stackers, water sprays as needed	~~1989~~ 2021	FGPLANT PROC
EUDROPBALL	Large slag pieces broken into smaller pieces by dropballing	1989	FGPLANT PROC
EUROADS	Roadway emissions resulting from the transfer of slag	1989	FGPLANT PROC
EUSTOCKPILES	Slag stockpiles assorted to various size fractions	1989	FGPLANT PROC
EUSLAGPIT	Slag pit digging and dumping of molten slag	1989	FGPLANT PROC
EUSCRAPCUT	Large scrap pieces cut by either a torch or lance into smaller pieces	1989	FGPLANT PROC

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGPLANT PROC	Metal Recovery Processes	EUSLAGPLANT EUDROPBALL EUROADS EUSTOCKPILES EUSLAGPIT EUSCRAPCUT

FGPLANT PROC
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Metal Recovery Processes

Emission Units: EUSLAGPLANT, EUDROPBALL, EUROADS, EUSTOCKPILES, EUSLAGPIT, EUSCRAPCUT

POLLUTION CONTROL EQUIPMENT

Water Spray

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fugitive Dust	15% opacity[2]	15-minute average	EUSLAGPLANT (Slag Crushers)	SC VI.1 & 2	**R 336.1301 R 336.1331**
2. Fugitive Dust	10% opacity[2]	15-minute average	EUDROPBALL EUSLAGPIT EUSLAGPLANT (Belts conveyors, screens, and all transfer points on the belt conveyors)	SC VI.1 & 2	**R 336.1301 R 336.1331**
3. Fugitive Dust	5% opacity[2]	3-minute average[a,b]	EUROADS EUSTOCKPILES (Any road, lot, storage pile, or material handling activity at a storage pile)	SC VI.1 & 2	**Act 451, Section 5524, Paragraph (2) and Section 5525, Paragraph (j)**

[a] in accordance with Test Method 9D at Act 451, Section 5525, Paragraph (j)
[b] The provisions of this subsection shall not apply to storage pile material handling activities when wind speeds are in excess of 25 miles per hour (40.2 kilometers per hour).

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall implement the program for fugitive dust control specified in Appendix 3-2.[2] **(R 336.1371, Act 451 324.5524)**

2. For EUSCRAPCUT, the permittee shall submit a Best Management Practices (BMPs) plan for torch cutting within 60 days of the ROP issuance to the AQD District Supervisor for approval. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep, in a satisfactory manner, daily records of dust control activities for FGPLANT PROC. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(Act 451, Section 324.5524, R 336.1301, R 336.1371)**

2. The permittee shall perform a non-certified visible emission observation of the fugitive dust sources at least 5 days per week, excluding non-operating days, during March through October. The permittee shall initiate corrective action upon observation of visible emissions and shall keep a written or electronic record of each required observation and corrective action taken. **(R 336.1213(3))**

See Appendix 3-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1-2. Abbreviations and Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2-2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3-2. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGPLANT PROC.

FUGITIVE DUST CONTROL PLAN

PURPOSE: This plan provides dust control strategies for the areas adjacent to and associated with the metal recovery plant.

1. SITE MAINTENANCE.

a. The unpaved travel surfaces shall be treated with water, or other acceptable dust control agents as needed on a frequency sufficient to meet the visible emission opacity standard of 5% opacity specified in Michigan Act 451, Section 5524.

b. Stock piling will be performed in a manner that minimizes freefall drop distance.

c. Piles will be maintained to prevent fugitive dust. This may include the use of watering, covering and/or encrusting agents.

d. Any scrap or slag material spillage on roads shall be removed immediately.

2. MANAGEMENT OF FRONT-END LOADER OPERATIONS.

The front-end loader operator shall be directed to avoid overfilling the bucket of the loader and the feed hoppers to prevent spillage, and to minimize the drop height of the materiel when loading the feed hoppers or transferring material to stockpiles.

3. RECORDKEEPING.

Records of dust control activities on storage piles, travel surfaces and other surfaces where fugitive dust emissions occur shall be kept on file for a period of at least five years and made available to MDEQ staff upon request. The records will indicate the date, time, what was observed or the reason for the dust control activity (routine or other), and what action was taken.

Appendix 4-2. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5-2. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6-2. Permits to Install

The following table lists any Permit to Install and/or Operate, that relate to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. MI-PTI-B7061-2016. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
537-89A	Metal Recovery Plant	FGPLANT PROC

Appendix 7-2. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 8-2. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

EGLE

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY

PERMIT TO INSTALL APPLICATION

For authority to install, construct, reconstruct, relocate, or modify process, fuel-burning or refuse burning equipment and/or control equipment. Permits to install are required by administrative rules pursuant to Section 5505 of 1994

FOR EGLE USE
APPLICATION NUMBER

Please type or print clearly. The "Application Instructions" and "Information Required for an Administratively Complete Permit to Install Application" are available on the Air Quality Division (AQD) Permit Web Page.
Please call the AQD at 517-899-6252. if you have not been contacted within 15 days of your application submittal.

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)
SRN: B 7 0 6 1 NAICS: 5 6 2 9 2 0

2. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)
TMS International, LLC

3. APPLICANT ADDRESS: (Number and Street)
1155 Business Center Drive, Suite 200

MAIL CODE:

CITY: (City, Village or Township)
Horsham

STATE:
PA

ZIP CODE:
19044

COUNTY:
Montgomery

4. EQUIPMENT OR PROCESS LOCATION: (Number and Street – if different than Item 3)
3000 East Front Street

CITY: (City, Village or Township)
Monroe

ZIP CODE:
48161

COUNTY:
Monroe

5. GENERAL NATURE OF BUSINESS:
Metal Recovery, Slag Processing, Scrap Cutting, and Material Handling Services.

6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary; number and date each page of the submittal.)
TMS is proposing to replace the existing EUSLAGPLANT with a more efficient slag processing plant consisting of a Vibrating Grizzly Feeder, two shaker screens, and several belt conveyors and stackers.

7. REASON FOR APPLICATION: (Check all that apply.)
- [x] INSTALLATION / CONSTRUCTION OF NEW EQUIPMENT OR PROCESS
- [ ] RECONSTRUCTION / MODIFICATION / RELOCATION OF EXISTING EQUIPMENT OR PROCESS – **DATE INSTALLED:**
- [ ] OTHER – DESCRIBE

8. IF THE EQUIPMENT OR PROCESS THAT WILL BE COVERED BY THIS PERMIT TO INSTALL (PTI) IS CURRENTLY COVERED BY ANY ACTIVE PERMITS, LIST THE PTI NUMBER(S): N/A

9. DOES THIS FACILITY HAVE AN EXISTING RENEWABLE OPERATING PERMIT (ROP)? ☐ NOT APPLICABLE ☐ PENDING APPLICATION ☒ YES
PENDING APPLICATION OR ROP NUMBER: MI-ROP-B7061-2016

10. AUTHORIZED EMPLOYEE:
Jerimi Yost

TITLE:
Director Global HSE

PHONE NUMBER: (Include Area Code)
215-956-5444

SIGNATURE:

DATE:
5/27/2021

E-MAIL ADDRESS:
jyost@tmsinternational.com

11. CONTACT: (If different than Authorized Employee. The person to contact with questions regarding this application)
Frank Bello Buono

PHONE NUMBER: (Include Area Code)
215-360-9723

CONTACT AFFILIATION:
Environmental Engineer

E-MAIL ADDRESS:
fbuono@tmsinternational.com

12. IS THE CONTACT PERSON AUTHORIZED TO NEGOTIATE THE TERMS AND CONDITIONS OF THE PERMIT TO INSTALL? ☒ YES ☐ NO

FOR EGLE USE ONLY - DO NOT WRITE BELOW

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:	PERMIT NUMBER:
DATE PERMIT TO INSTALL APPROVED:	SIGNATURE:
DATE APPLICATION / PTI VOIDED:	SIGNATURE:

1. FACILITY CODES: State Registration Number (SRN) and North American Industry Classification System (NAICS)	
DATE APPLICATION DENIED:	SIGNATURE:
A PERMIT CERTIFICATE WILL BE ISSUED UPON APPROVAL OF A PERMIT TO INSTALL	

EQP 5615E (Rev. 1/2021)

Appendix A

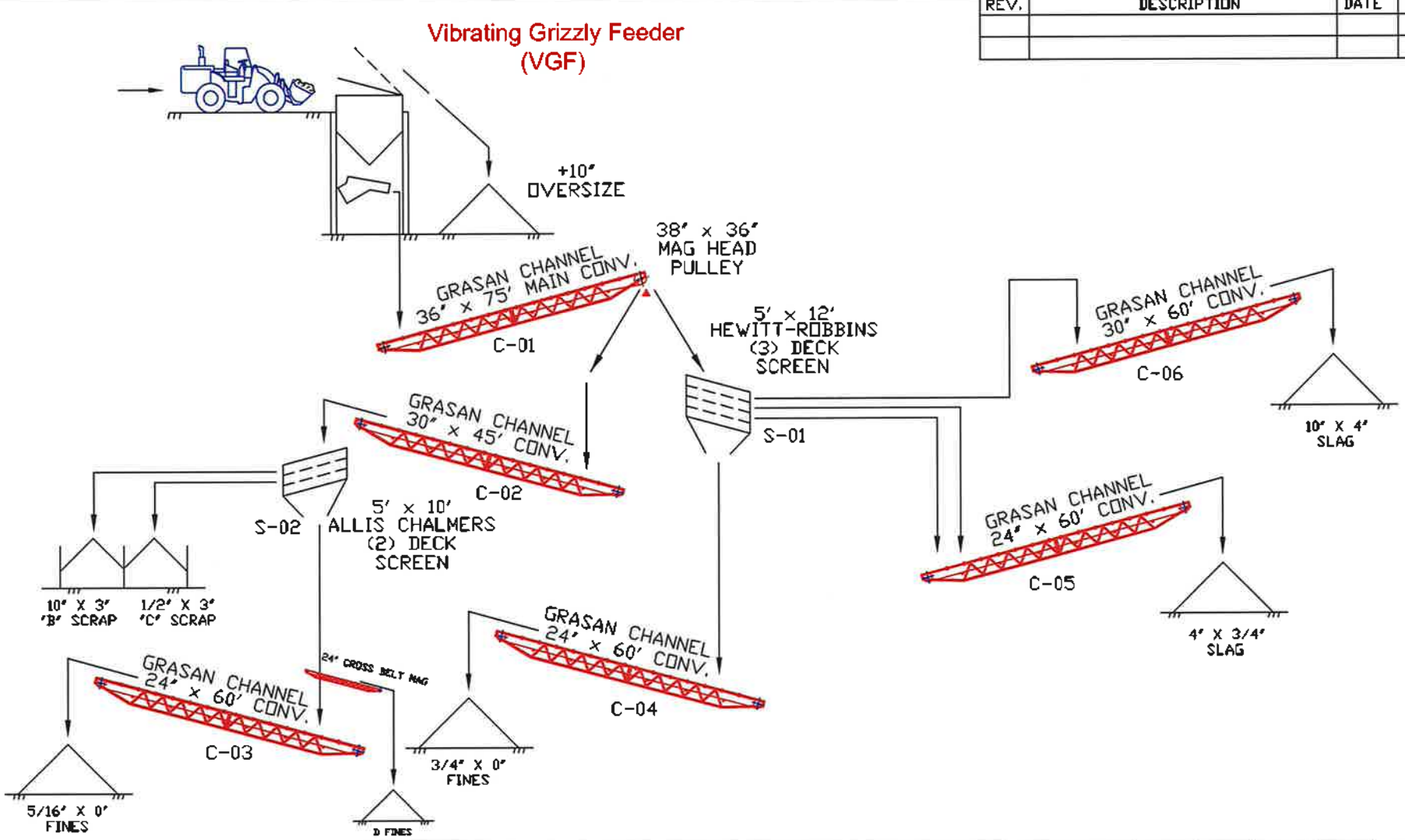
Process Description

Process Description

EUSLAGPLANT:

The slag processing plant consists of a Vibrating Grizzly Feeder (VGF) with 10" openings, which is primarily fed by a WA500 Komatsu. The VGF either removes +10" oversize material from the primary feed into a stockpile or feeds material through the 10" openings and onto the main conveyor – a 36"x75' Grasan Channel conveyor (C-01). A 38"x36" Dings magnetic head pulley is located at the top of the main conveyor to separate metallic material from non-metallic material. Metallic material drops onto a 30"x45' Grasan Channel conveyor (C-02) which feeds a 5'x10' Allis-Chalmers double deck screen (S-02). Material which does not pass through the top deck screen is stockpiled as "B" Scrap which is 10"x3" in size. Similarly, "C" Scrap, ½"x3" material, is stockpiled after not passing through the bottom deck screen. All other material is transferred to a 24"x60' Grasan Channel conveyor (C-03) equipped with a 24"x12" Dings cross belt magnet. The cross belt magnet separates stockpiles for $^{5}/_{16}$"x0" and D Fines. Non-metallic material is transferred from the main conveyor to a 5'x12' Hewitt Robins triple deck screen (S-01). Material which does not pass through the top deck screen is transferred to a 30"x60' Grasan Channel conveyor (C-06) and is stockpiled as 10"x4" Slag. Material which does not pass through the middle deck and bottom deck screens is transferred to a 24"x60' Grasan Channel conveyor (C-05) and is stockpiled as 4"x¾" Slag. All other material is dropped onto a 24"x60' Grasan Channel conveyor (C-04) and is stockpiled as ¾"x0" Slag. Reference the enclosed Flow Chart for further detail. The slag plant is scheduled to run six (6) hours per day, five (5) days per week, and approximately 49 weeks per year. The plant throughput is approximately 150 tons per hour or 150,000 tons per year. Reference the Emissions Calculations in Appendix D for detailed information.

REV.	DESCRIPTION	DATE	BY



(911)

TMS INTERNATIONAL
We Create Value

TMS AT GERDAU, MONROE	DRAWN BY	DATE	APPROVED	DATE	SCALE
	J.L.T	3/8/18			
SLAG PROCESSING PLANT	DRAWING NUMBER				REV.
FLOW CHART	146-93-F01				1.1

Appendix A

Appendix B

Regulatory Discussion

Regulatory Discussion

It is believed that the metal recovery, slag processing, and material handling services will be subject to all federal, state, and local regulations associated with air pollutants – including particulate matter [as defined in Rule 116 (R 336.1116(c))] and hazardous air pollutants (HAP's) – and fugitive dust, as defined in Rule 106 (R 336.1106(k)) of the Air Pollution Control Rules. Air pollutants and fugitive dust are regulated by implementing control measures for wind and material moisture content. Such control measures are described in detail in Appendix C – Control Technology Analysis. Federal regulations include the Clean Air Act and Title 40, Code of Federal Regulations (40 CFR). State regulations include Article II, Part 55 of the Natural Resources and Environmental Protection Public Act (NREPA) 451 and applicable Air Pollution Control Rules; including Rule 301 specifying standards for density of emissions, Rule 331 detailing emission of particulate matter, and Rules 371 and 372 outlining fugitive dust control programs. All monitoring/recordkeeping – including daily visible emissions observations – and deviation and semiannual/annual reporting pertinent to renewable operating permits will be maintained and submitted in accordance with Rule 213. Per Act 451, Rule 301, and Rule 371 daily records of fugitive dust sources will be kept and maintained for a period of at least five (5) years and made available to the Department upon request in accordance with Rule 213. Fugitive dust emission limits will comply with Act 451, Rule 301, and Rule 331 as applicable to each emission unit. A fugitive dust control plan consistent with Act 451 and Rule 371 is outlined in Appendix C – Control Technology Analysis.

Appendix C

Control Technology Analysis / Fugitive Dust Control Plan

Control Technology Analysis / Fugitive Dust Control Plan

Air pollutants and fugitive dust are regulated by implementing control measures for wind and material moisture content, as outlined below in a Fugitive Dust Control Plan. This plan exists in Appendix 3-2 of MI-ROP-B7061-2016, Section 2 for FGPLANT PROC and remains applicable.

1. SITE MAINTENANCE.
    a. The unpaved travel surfaces shall be treated with water, or other acceptable dust control agents, as needed on a frequency sufficient to meet the visible emission opacity standard of 5% opacity, as specified in Act 451, Section 5524.
    b. Stock piling will be performed in a manner that minimizes freefall drop distance.
    c. Piles will be maintained to prevent fugitive dust. This may include the use of watering, covering and/or encrusting agents.
    d. Any scrap or slag material spillage on roads shall be removed immediately.

2. DUST CONTROL ACTIVITIES.
    TMS shall pre-water or add water as needed to control emissions from each emission unit. Emissions from EUSLAGPLANT shall be controlled with water sprays as needed.

3. MANAGEMENT OF FRONT-END LOADER OPERATIONS.
    The front-end loader operation shall be directed to avoid overfilling the bucket of the loader and the feed hopper to prevent spillage and to minimize the drop height of the material when loading the feed hoppers or transferring material to stockpiles.

4. RECORDKEEPING.
    Records of dust control activities on storage piles, travel surfaces, and other surfaces where fugitive dust emissions occur shall be kept on-file for a period of at least five (5) years and made available to EGLE staff upon request. The records shall indicate the date, time, what was observed or the reason for the dust control activity (routine or other), and what corrective action was taken.

Appendix D

Emissions Calculations

PTE EMISSIONS
TSP EMISSION CALCULATIONS FOR
EUSLAGPLANT

Unloading	0.00034	
Loading	0.00020	
Ef(front end loader)	0.00880 lbs/ton	(Source: Table 12.5-4, Uncontrolled PM Emission Factors for Iron & Steel Mills (uncontrolled), AP-42, 10/86)
Control efficiency	90 %	

Conveyor drop emission factor calculated using AP-42 13.2.4.3 Equation 1 - EF=k(0.0032)*[((U/5)^1.3)/((M/2)^1.4)] where:

k =particle size multiplier =	0.74	unitless
U = mean wind speed in mph =	6	mph
M = material moisture content percent =	1.5	%

Ef(conveyor transfer uncontrolled) = 0.00449 lbs/ton

		Raw Material Throughputs		Uncontrolled Emissions			Controlled Emissions			
TRANSFERS	%	Throughput (tons/hr)	Amount Loaded or Transferred (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Control Factor %	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
Loader Drop to VGF	100.0	150	150,000	1.320	1,320	0.660		0.13	132.00	0.066
C-01 to S-01 & C-02	99.99	150	149,985	0.673	673	0.337		0.07	67.34	0.034
C-02 to S-02	16.1	24	24,105	0.108	108	0.054		0.01	10.82	0.005
C-03 to Pile	13.1	20	19,605	0.088	88	0.044		0.01	8.80	0.004
C-04 to Pile	41.0	62	61,515	0.276	276	0.138		0.03	27.62	0.014
C-05 to Pile	37.4	56	56,040	0.252	252	0.126		0.03	25.16	0.013
C-06 to Pile	5.6	8	8,325	0.037	37	0.019		0.00	3.74	0.002
C-07 to Pile	0.4	1	615	0.003	3	0.001		0.00	0.28	0.0001
TOTAL (TRANSFERS)				1.146	1146	0.573		0.115	115	0.057

Ef(screening uncontrolled) = 0.02500 lbs/ton (Source: Table 11.19.2-2, screening (uncontrolled), AP-42, 8/04)
Ef(screening controlled) = 0.00220 lbs/ton (Source: Table 11.19.2-2, screening (controlled), AP-42, 8/04)

				Uncontrolled Emissions			Controlled Emissions			
SCREENING	%	Throughput (tons/hr)	Amount Screened (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Controlled Emission Factor AP-42	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
VGF to C-01 and Oversize	100	150	150,000	3.750	3,750	1.875		0.330	330	0.165
S-01 to C-04, C-05, C06	83.9	126	125,895	3.147	3,147	1.574		0.277	277	0.138
S-02 to Piles " C-03	16.1	24	24,105	0.603	603	0.301		0.053	53	0.027
TOTAL (TRANSFERS)				8	7500	3.75		0.66	660	0.330

	Uncontrolled			Controlled		
	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
Transfers	1.15	1,146	0.57	0.11	115	0.057
Screening	7.50	7500	3.75	0.66	660	0.330
TOTAL PLANT	8.65	8,646	4.32	0.775	775	0.387

PTE EMISSIONS
PM10 EMISSION CALCULATIONS
EUSLAGPLANT

Unloading	0.000162
Loading	0.000100

Ef(front end loader) 0.00430 lbs/ton (Source: Table 12.5-4, Uncontrolled PM Emission Factors for Iron & Steel Mills (uncontrolled), AP-42, 10/86)
Control efficiency 90 %

Conveyor drop emission factor calculated using AP-42 13.2.4.3 Equation 1 - EF=k(0.0032)*[((U/5)^1.3)/((M/2)^1.4)] where:

k =particle size multiplier =	0.35	unitless
U = mean wind speed in mph =	6	mph
M = material moisture content percent =	1.5	%

Ef(conveyor transfer uncontrolled) = 0.00212 lbs/ton

		Raw Material Throughputs		Uncontrolled Emissions			Controlled Emissions			
TRANSFERS	%	Throughput (tons/hr)	Amount Loaded or Transferred (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Control Factor %	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
Loader Drop to VGF	100.0	150	150,000	0.645	645	0.323		0.065	64.500	0.032
C-01 to S-01 & C-02	99.99	150	149,985	0.319	319	0.159		0.032	31.850	0.016
C-02 to S-02	16.1	24	24,105	0.051	51	0.026		0.005	5.119	0.003
C-03 to Pile	13.1	20	19,605	0.042	42	0.021		0.004	4.163	0.002
C-04 to Pile	41.0	62	61,515	0.131	131	0.065		0.013	13.063	0.007
C-05 to Pile	37.4	56	56,040	0.119	119	0.060		0.012	11.901	0.006
C-06 to Pile	5.6	8	8,325	0.018	18	0.009		0.002	1.768	0.001
C-07 to Pile	0.4	1	615	0.001	1	0.001		0.000	0.131	0.0001
TOTAL (TRANSFERS)				1.325	1325	0.662		0.132	132.495	0.066

Ef(screening uncontrolled) = 0.00870 lbs/ton (Source: Table 11.19.2-2, screening (uncontrolled), AP-42, 8/04)
Ef(screening controlled) = 0.00074 lbs/ton (Source: Table 11.19.2-2, screening (controlled), AP-42, 8/04)

				Uncontrolled Emissions			Controlled Emissions			
SCREENING	%	Throughput (tons/hr)	Amount Screened (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Controlled Emission Factor AP-42	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
VGF to C-01 and Oversize	100	150	150,000	1.305	1,305	0.653		0.111	111	0.056
S-01 to C-04, C-05, C06	83.9	126	125,895	1.095	1,095	0.548		0.093	93	0.047
S-02 to Piles * C-03	16.1	24	24,105	0.210	210	0.105		0.018	18	0.009
TOTAL (TRANSFERS)				2.610	2,610	1.305		0.222	222	0.111

	Uncontrolled			Controlled		
	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (lbs/yr)	Annual Emission Rate (tons/yr)
Transfers	1.32	1,325	0.66	0.13	132	0.066
Screening	2.61	2610.00	1.31	0.22	222.00	0.111
TOTAL PLANT	3.93	3,935	1.97	0.354	354	0.177

PTE EMISSIONS
PM2.5 EMISSION CALCULATIONS
EUSLAGPLANT

Unloading	0.000162	
Loading	0.000100	
Ef(front end loader)	0.00160 lbs/ton	(Source: Table 12.5-4, Uncontrolled PM Emission Factors for Iron & Steel Mills (uncontrolled), AP-42, 10/86)
Control efficiency	90	

Conveyor drop emission factor calculated using AP-42 13.2.4.3 Equation 1 - EF=k(0.0032)*[((U/5)^1.3)/((M/2)^1.4)] where:

k =particle size multiplier =	0.053	unitless
U = mean wind speed in mph =	6	mph
M = material moisture content percent =	1.5	%

Ef(conveyor transfer uncontrolled) = 0.00032 lbs/ton

TRANSFERS	%	Raw Material Throughputs: Throughput (tons/hr)	Raw Material Throughputs: Amount Loaded or Transferred (tons/yr)	Uncontrolled Emissions: Hourly Emission Rate (lb/hr)	Uncontrolled Emissions: Annual Emission Rate (lbs/yr)	Uncontrolled Emissions: Annual Emission Rate (tons/yr)	Controlled Emissions: Control Factor %	Controlled Emissions: Hourly Emission Rate (lb/hr)	Controlled Emissions: Annual Emission Rate (lbs/yr)	Controlled Emissions: Annual Emission Rate (tons/yr)
Loader Drop to VGF	100.0	150	150,000	0.240	240	0.120		0.024	24.000	0.012
C-01 to S-01 & C-02	99.99	150	149,985	0.048	48	0.024		0.005	4.823	0.002
C-02 to S-02	16.1	24	24,105	0.006	9	0.004		0.001	0.775	0.000
C-03 to Pile	13.1	20	19,605	0.006	6	0.003		0.001	0.630	0.000
C-04 to Pile	41.0	62	61,515	0.020	20	0.010		0.002	1.978	0.001
C-05 to Pile	37.4	56	56,040	0.018	18	0.009		0.002	1.802	0.001
C-06 to Pile	5.6	8	8,325	0.003	3	0.001		0.000	0.268	0.000
C-07 to Pile	0.4	1	615	0.000	0	0.000		0.000	0.020	0.0000
TOTAL (TRANSFERS)				0.343	343	0.171		0.034	34.296	0.017

Ef(screening uncontrolled) = 0.00870 lbs/ton (Source: Table 11.19.2-2, screening (uncontrolled), AP-42, 8/04)
Ef(screening controlled) = 0.00005 lbs/ton (Source: Table 11.19.2-2, screening (controlled), AP-42, 8/04)

SCREENING	%		Throughput (tons/hr)	Amount Screened (tons/yr)	Uncontrolled Emissions: Hourly Emission Rate (lb/hr)	Uncontrolled Emissions: Annual Emission Rate (lbs/yr)	Uncontrolled Emissions: Annual Emission Rate (tons/yr)	Controlled Emissions: Controlled Emission Factor AP-42	Controlled Emissions: Hourly Emission Rate (lb/hr)	Controlled Emissions: Annual Emission Rate (lbs/yr)	Controlled Emissions: Annual Emission Rate (tons/yr)
VGF to C-01 and Oversize	100		150	150,000	1.305	1,305	0.653		0.008	8	0.004
S-01 to C-04, C-05, C06	83.9		126	125,895	1.095	1,095	0.548		0.006	6	0.003
S-02 to Piles * C-03	16.1		24	24,105	0.210	210	0.105		0.001	1	0.001
TOTAL (TRANSFERS)					2.610	2,610	1.305		0.015	15	0.008

	Uncontrolled: Hourly Emission Rate (lb/hr)	Uncontrolled: Annual Emission Rate (lbs/yr)	Uncontrolled: Annual Emission Rate (tons/yr)	Controlled: Hourly Emission Rate (lb/hr)	Controlled: Annual Emission Rate (lbs/yr)	Controlled: Annual Emission Rate (tons/yr)
Transfers	0.34	343	0.17	0.03	34	0.017
Screening	2.61	2610	1.31	0.02	15.00	0.008
TOTAL PLANT	2.95	2,953	1.48	0.049	49	0.025

ACTUAL EMISSIONS
HAP EMISSION CALCULATIONS
EUSLAGPLANT

Company Name: TMS International, LLC at Gerdau - Monroe, MI
Address: 3000 East Front Street, Monroe, MI 48161

HAP	mg/kg	Percentage
Antimony ND	0.30	2.95E-05
Arsenic	1.9	1.90E-04
Beryllium J	0.93	9.30E-05
Cadmium J	0.24	2.40E-05
Calcium	130,000	1.30E+01
Total Chromium	3,300	3.30E-01
Hexavalent Chromium J	0.37	3.70E-05
Copper	180	1.80E-02
Lead	4.2	4.20E-04
Manganese	25,000	2.50E+00
Mercury ND	0.007	7.00E-07
Nickel	38	3.80E-03
Selenium ND	0.6	6.00E-05

*HAP Concentrations from 11/25/2019 TestAmerica Slag Analysis
J indicates result is less than the reporting limit (RL) but greater than or equal to the method detection limit (MDL) and the concentration is an approximate value
ND indicates non-detect; value used is 1/2 the MDL

Potential to Emit:

Pollutant	EUSLAGPLANT			lbs/hr T-BACT Comparison			lbs/mo T-BACT Comparison		
	lbs/hr	lbs/mo	tons/yr	Comparison Test	Max Allowable Under Rule 226 (lbs/hr)[1]	Result	Comparison Test	Max Allowable Under Rule 226 (lbs/mo)[1]	Result
PM	0.775	64.649	0.387						
Antimony Compounds	2.3E-07	1.9E-05	1.14E-07	<	0.14	PASSES	<	10.00	PASSES
Arsenic Compounds	1.5E-06	1.2E-04	7.36E-07	<	0.14	PASSES	<	10.00	PASSES
Beryllium Compounds	7.2E-07	6.0E-05	3.60E-07	<	0.14	PASSES	<	10.00	PASSES
Cadmium Compounds	1.9E-07	1.5E-05	9.30E-08	<	0.14	PASSES	<	10.00	PASSES
Calcium Compounds	1.0E-01	8.4E+00	5.03E-02	<	0.14	PASSES	<	10.00	PASSES
Total Chromium Compounds	2.6E-03	2.1E-01	1.28E-03	<	0.14	PASSES	<	10.00	PASSES
Hexavalent Chromium Compounds	2.9E-07	2.4E-05	1.43E-07	<	0.14	PASSES	<	10.00	PASSES
Copper Compounds	1.4E-04	1.2E-02	6.97E-05	<	0.14	PASSES	<	10.00	PASSES
Lead Compounds	3.3E-06	2.7E-04	1.63E-06	<	0.14	PASSES	<	10.00	PASSES
Manganese Compounds	1.9E-02	1.6E+00	9.68E-03	<	0.14	PASSES	<	10.00	PASSES
Mercury Compounds	5.4E-09	4.5E-07	2.71E-09	<	0.14	PASSES	<	10.00	PASSES
Nickel Compounds	2.9E-05	2.5E-03	1.47E-05	<	0.14	PASSES	<	10.00	PASSES
Selenium Compounds	4.6E-07	3.9E-05	2.32E-07	<	0.14	PASSES	<	10.00	PASSES

Note: [1] As per R 336.1225(3), the maximum allowable rate of the carcinogen from the proposed new or modified emission unit or units results in ambient impacts that meet both of the following requirements: (i) The maximum ambient impact on industrial property or public roadways is less than or equal to the initial risk screening level multiplied by a factor of 10. Therefore, this limit (0.14 lbs/hr x 10 = 1.4 lbs/hr or 10 lbs/mo x 10 = 100 lbs/mo) is not exceeded.

Appendix E

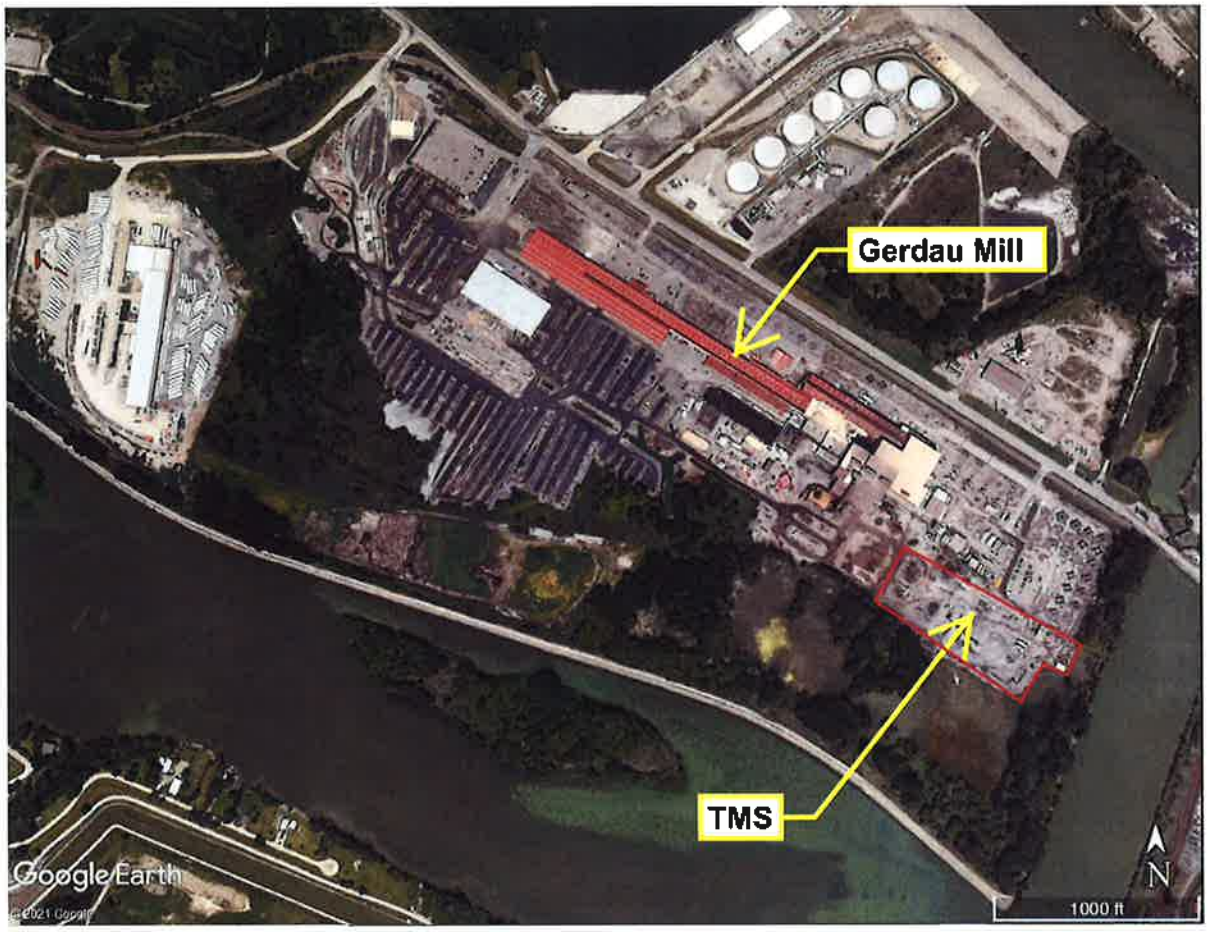
Stack/Vent Parameters

NOT APPLICABLE

Appendix F

Site Description and Process Equipment Location Drawings

APPENDIX F
MILL OVERVIEW



LEGEND:

TMS Operations Boundary

APPENDIX F
SITE OVERVIEW

LEGEND:

- TMS Operations Boundary
- EUDROPBALL
- EUROADS
- EUSTOCKPILES
- EUSLAGPIT
- EUSCRAPCUT

APPENDIX F
PROCESS EQUIPMENT LOCATION

LEGEND:

- **TMS Operations Boundary**
- **EUSLAGPLANT (Existing and Proposed)**

Stephanie N. Hahn, E.I.T.
Environmental Engineer

April 9, 2019

Michigan Department of Environmental Quality
Air Quality Division
Jackson District Office
301 Louis Glick Highway
Jackson, Michigan 49201

Attn: Mr. Mike Kovalchick, Environmental Engineer

Re: TMS International, LLC at Gerdau, Monroe Scrap Cutting BMP's - Revised

Dear Mr. Kovalchick:

Please accept the enclosed revised Scrap Cutting BMP as stipulated in Section 2, Condition D.III.2 in the Renewable Operating Permit No. MI-ROP-B7061-2016 that was effective December 1, 2016. The enclosed BMP for the EUSCRAPCUT emission unit has been revised to account for the cutting of unprocessed scrap that is too large and/or misshaped to cut on the ICT machine, and has been prepared according to Michigan R 336.1213(3).

Please do not hesitate to contact me at telephone number (215) 956-5412 or via email at shahn@tmsinternational.com should you have any questions or require additional information.

Sincerely,

Stephanie N. Hahn

Encl.

Cc: C. Metzger – Gerdau, Monroe
T. Young – TMS International, LLC at Gerdau, Monroe
M. Connolly – TMS International, LLC

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P: 215.956.5412 F: 215.956.5432
shahn@tmsinternational.com
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TMS International, LLC at
Gerdau Monroe, MI
3000 East Front Street
Monroe, MI 48161

Scrap Cutting
Best Management Practices (BMP)
Emission Unit: EUSCRAPCUT

Renewable Operating Permit: MI-ROP-B7061-2016

State Registration No. B7061

January 30, 2017

Revision: 01 – April 9, 2019

January 2017
Revision: 01 – April 2019

I. INTRODUCTION

TMS International, LLC (TMS) is an onsite contractor at the Gerdau facility in Monroe, Michigan. Services provided by TMS include slag pit digging, slag processing and sorting including metal recovery, scrap drop balling, and scrap torch cutting. Condition 2.D.III.2 of the Renewable Operating Permit No. MI-ROP-B7061-2016 (ROP) requires the creation of a BMP for the emission unit EUSCRAPCUT and has been prepared according to Michigan R 336.1213(3).

II. SCRAP CUTTING BMP

A. Testing and Monitoring

According to ROP Section 2.D.VI.1, " *the permittee shall keep, in a satisfactory manner, daily records of dust control activities for FGPLANTPROC*" and Section 2.D.VI.2, "*the permittee shall perform a non-certified visible emission observation of the fugitive dust source at least 5 days per week, excluding non-operating days, during March through October.*" This BMP has been designed to use periodic monitoring that is sufficient to yield reliable data from the relevant time period that are representative of the stationary source's compliance with the permit. There are 6 emission units covered by the ROP: EUSLAGPLANT, EUDROPBALL, EUROADS, EUSLAGPIT, EUSTOCKPILES, and EUSCRAPCUT. This plan addresses the BMP and visible emission observation requirements for EUSCRAPCUT.

To comply with the above requirements TMS has developed a visible emission form (Scrap Cutting Emission Observation Form) attached which will be used on a daily basis when scrap cutting activities take place between March and October. The completed forms will be retained onsite for MDEQ inspection for 5 years as per the record retention condition of the ROP. Certification that required monitoring and associated recordkeeping requirements in the ROP were met and any visible emission observation deviations will be reported to MDEQ every 6 months due March 15 for the July 1 through December 31 period; and September 15 for the January 1 through June 30 period.

B. Corrective Actions

If during the initial observation according to Section A of this BMP emissions in excess of 20% (Condition 2.A.11) at any time during the observation a corrective action will be conducted. Corrective actions that can be applied to the scrap cutting include (but not limited to): adjusting the flame; changing the distance between the torch and the scrap to be cut; increase distance from scrap to ground; changing the gas flow to the torch; slowing the cutting; remove build-up of material below scrap being cut; stop cutting and examine the scrap to determine if there is a better place to perform the cut.

Once the corrective action has been conducted and noted on the observation form, cutting will resume while observation continues to assure that the corrective action was successful. If it was not successful, another corrective action will be performed. The purpose of performing the corrective action as soon as opacity above 20% is seen as opposed to the 6-minute average is to avoid exceeding the 6-minute average as set forth in the ROP.

C. Reporting

Visual emission observation deviations will be summarized in a semi-annual report and be certified by a responsible person and submitted to MDEQ every March 15 for the reporting period July 1 through December 31, and September 15 for the reporting period January 1 through June 30. In addition to the required semi-annual reports, any deviations will be promptly reporter as per Michigan R 336.1912 (within 2 business days).

Appendix A
Fugitive Dust Control Activities & Visible Emissions Form

FUGITIVE DUST CONTROL ACTIVITIES & VISIBLE EMISSIONS FORM
TMS International at Gerdau - Monroe, Michigan prepared in accordance with Section 2.D.VI.1 and 2, and Appendix 3-2
Renewable Operating Permit No. MI-ROP-B7061-2015

Month:_____ EU: CIRCLE ONE EUSLAGPLANT EUSLAGPIT EUROADS EUSTOCKPILES EUSCRAPCUT EUDROPBALL

Day	Observer Initials	DUST CONTROL ACTIVITIES	Time (start/stop)	EMISSIONS OBSERVED (Yes, No)	CORRECTIVE ACTIONS	EMISSIONS OBSERVED AFTER CORRECTIVE ACTIONS? (Yes, No)	NOTES / COMMENTS (no dust, rained, etc.)
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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29							
30							
31							

136

Notes:
1. EUSLAGPLANT crusher opacity limit is 15% over a 15 minute average (slag crusher)
2. EUDROPBALL, EUSLAGPIT, and remainder of EUSLAGPLANT opacity limit is 10% over a 15 minute average (belts, conveyors, screens, and all conveyor and belt transfer points)
3. EUROADS and EUSTOCKPILES opacity limit is 5% over a 3 minute average (any road, lot, storage pile, or material handling activity at a storage pile)
4. EUSCRAPCUT opacity limit is 20% over 6 minute average except for one 6 minute average per hour no more than 27%