

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

October 27, 2014
REVISED July 27, 2015 and August 10, 2015

PERMIT TO INSTALL
102-12A

ISSUED TO
Gerdau Macsteel, Inc.

LOCATED AT
3000 East 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: August 7, 2014	
DATE PERMIT TO INSTALL APPROVED: October 27, 2014	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
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	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (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	<p>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. The conditions in this table will apply after the facility has the capacity to operate at increased output. The term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.</p>	05/05/1978/ 01/04/2013/ 10/27/2014	FGMELTSHOP FG102-12A
EULMF	<p>The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF will be controlled by a hotwell until a new baghouse control system (DVLMBAGHOUSE) is installed. At that time, the hotwell and LRS Boiler will be removed from service. Thereafter, emissions from EULMF will be directed to DVLMBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.</p>	01/04/2013/ 10/27/2014	FGMELTSHOP FGBLDGFUG FG102-12A
EUVTD	<p>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.</p>	01/04/2013/ 10/27/2014	FGMELTSHOP FGBLDGFUG FG102-12A

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
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.	April 1, 2011	FGBLDGFUG FG102-12A
EUCASTERCOOLTWR	Cooling tower for caster process water. Maximum water flowrate for cooling tower is 1,630 gallons per minute.	01/04/2013	FG102-12A
EUBILLETREHEATWB	A walking beam billet reheat furnace equipped with Ultra-Low NOx burners with the total heat input capacity of 260.7 MMBtu/hr.	01/04/2013/ 10/27/2014	FG102-12A
EUFLINN	25 MMBTU/HR natural gas heat treat furnace.	02/01/2006	FG102-12A
EUDUST-SILO	This silo stores dust generated from the FGMELTSHOP baghouse until the dust is properly disposed.	05/05/1978	FG102-12A
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	FG102-12A

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: 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.

The conditions in this table will apply after the facility has the capacity to operate at increased output. The term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.

Flexible Group ID: FGMELTSHOP, FGBLDFUG

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 stack	SC VI.2	R 336.1362 R 336.2810 40 CFR 60.272a(a)(2)
2. Visible Emissions	6%	6-minute average	EUEAF Shop Building	SC VI.6	40 CFR 60.272a(a)(3)
3. PM	0.0052 gr/dscf	Test Protocol*	EUEAF	GC 13	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. **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate the electric arc furnace, with the modifications that allow increased output capacity unless the Direct Shell Evacuation (DEC), CO and VOC reaction chamber, canopy hood, and baghouse are installed and operating properly. As used in these permit conditions, the term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**
2. The permittee shall not melt any radioactive scrap metal in the electric arc furnace. **(40 CFR 52.21)**
3. The permittee shall not transfer material to the LMF from EUEAF without a ladle cover **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EUEAF unless the CO and VOC reaction chamber, DEC canopy hood, quench system, and baghouses 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)**
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)**
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 FGMELTSHOP EAF baghouse stack (SVBH-01-Stack) on a continuous basis. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days of achieving the increased output capacity or at the completion of the initial trial operating period, whichever occurs first, the permittee shall conduct the initial smoke test for verifying capture efficiency of the EUEAF portion of the shop building, by in-plant 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 limits 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 336.1205, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2802)**

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)**
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 A and shall use the COM data for determining compliance with SC I.1. **(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 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. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.272a(a)(2))**
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. **(40 CFR Part 60, Subpart AAa, 40 CFR 60.274a)**
5. Applicant 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. **(40 CFR 52.21)**

6. The permittee shall perform a visible emission 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. **(R 336.1301, R 336.1303)**
7. The permittee shall perform a visible emission 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. **(R 336.1301, R 336.2803, R 336.2804, R 336.2810)**
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). 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))**

11. During the initial performance test of the non-fugitive enclosure for the EUEAF portion of the building, and annually thereafter, the permittee shall verify 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. **(R 336.1810)**

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-STACK	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 YYYYYY, "Area Sources: Electric Arc Furnace Steelmaking Facilities". **(40 CFR Part 63, Subparts A and YYYYYY)**
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 will be controlled by a hotwell until a new baghouse control system (DVLMFBAGHOUSE) is installed. At that time, the hotwell and LRS Boiler will be removed from service. Thereafter, emissions from EULMF will be directed to DVLMFBAGHOUSE via removable covers or decks, which are located over the ladle while the process is operating.

Flexible Group ID: FGBLDGFUG, FGMELTSHP

POLLUTION CONTROL EQUIPMENT: Hotwell or DVLMFBAGHOUSE

I. EMISSION LIMITS

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

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Applicant shall not operate EULMF unless the hotwell or DVLMFBAGHOUSE is installed and operating properly. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**
2. Applicant shall not operate EULMF after the facility has the capacity to operate at the increased output, unless the baghouse control system is installed and operating properly. **(R 336.1301, R 336.1331, R 336.1910, R 336.2810)**
3. The permittee shall not transfer material to EUVTD from EULMF without a ladle cover. **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position. **(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 336.1201(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 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. **(R 336.1301, R 336.1303)**

VII. REPORTING

NA

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. SVBHLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804
2. Existing Hotwell Stack	20	136	R 336.1225 R 336.2803, R 336.2804
3. Existing Boiler Stack	40	80	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall not operate both EULMF and the LRS boiler and hotwell simultaneously after the facility has the capacity to operate at increased output or DVLMFBAGHOUSE is installed and operating properly. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall permanently shut down the existing LRS boiler and hotwell no later than 210 days after the facility has the capacity to operate at increased output or after the DVLMFBAGHOUSE is operational, whichever occurs first. Within 30 days after completion of shutdown of the LRS boiler and hotwell, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. As used in these permit conditions, the term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

The following conditions apply to:
EUVTD

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, FGBLDGFUG

POLLUTION CONTROL EQUIPMENT: DVBAGHOUSE-01

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Applicant 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 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	120	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall not operate EUVTD and the LRS boiler and hotwell simultaneously after DV-LMFbaghouse has been installed and is in operation. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate the degassing operation of EULRS for more than 210 days after the facility has the capacity to operate at increased output or at the completion of the initial trial operating period, whichever occurs first. Within 30 days after completion of shutdown of the LRS degassing operation, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. As used in these permit conditions, the term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

The following conditions apply to:
EUCASTER

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: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural Gas Usage	36MMSCF/yr	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 RESTRICTIONS

1. The cutting torches of EUCASTER shall be equipped with oxy-fuel burners. **(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). **(R336.2810)**
3. The permittee shall only burn pipeline quality natural gas in the SEN process heater. **(R 336.2810)**
4. The permittee shall operate EUCASTER using good combustion practices as described in the MAP. **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate the cutting torches of EUCASTER unless the oxy-fuel burners are installed, maintained and operating properly. **(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. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, 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. **(R 336.1224, R 336.1225, 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 **(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. **(R 336.2810)**

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 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, 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. **(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 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. **(R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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. **(R336.1225)¹**

IX. OTHER REQUIREMENTS

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to:
EUCASTERCOOLTWR

DESCRIPTION: Cooling tower for caster process water. Maximum water flowrate for cooling tower is 1,630 gallons per minute.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Drift eliminator.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.0005% Drift Loss	Test Protocol*	EUCASTERCOOLTWR	GC 13	R 336.1301, R 336.1331
2. PM10	0.0005% Drift Loss	Test Protocol*	EUCASTERCOOLTWR	GC 13	R 336.1331
3. PM2.5	0.0005% Drift Loss	Test Protocol*	EUCASTERCOOLTWR	GC 13	R 336.1331, R 336.2810

*Test Protocol specifies averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

IV. DESIGN/EQUIPMENT PARAMETERS

1. Cooling tower shall not be operated unless the high efficiency drift eliminator is installed and operating properly. (R 336.2810)

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 retain design specification documentation of the drift loss on file and make the information 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, R 336.2810)

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUBILLETREHEATWB

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: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Visible Emissions	5% (or 20% at start up**)	6-minute average	EUBILLETREHEATWB	SC VI.4	R 336.1301, R 336.2810
2. CO	84 lb/MMSCF	Test Protocol*	EUBILLETREHEATWB	SC V.1	R 336.2804 R 336.2810
3. CO	68.6 tpy	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEATWB	SC VI.2	R 336.2804 R 336.2810
4. NOx	0.07 lb/MMBTU	Test Protocol*	EUBILLETREHEATWB	SC V.1	R 336.2803, R 336.2804 R 336.2810
5. NOx	18.3 pph	Test Protocol*	EUBILLETREHEATWB	SC V.1	R 336.2803, R 336.2804, R 336.2810
6. NOx	57.9 tpy	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEATWB	SC VI.2	R 336.2803, R 336.2804, R 336.2810
7. VOC	5.5 lb/MMSCF	Test Protocol*	EUBILLETREHEATWB	GC 13	R 336.1702(a)
8. VOC	4.5 tpy	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEATWB	SC VI.2	R 336.1702(a)
9. GHG as CO2e	119 lb/MMBTU	Test Protocol*	EUBILLETREHEATWB	GC 13, SC II.1	R 336.2810
10. GHG as CO2e	97,907 tpy	12-month rolling time period as determined at the end of each calendar month.	EUBILLETREHEATWB	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 LIMITS

1. The permittee shall only burn pipe-line quality natural gas in EUBILLETREHEATWB. **(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 EUBILLETREHEATWB based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage from EUBILLETREHEATWB on a continuous basis. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.2803, R 336.2804)**
2. The permittee shall operate EUBILLETREHEATWB using good combustion practices as described in the MAP. **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall install a device to continuously monitor and record the natural gas usage rate for EUBILLETREHEATWB. **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall not operate EUBILLETREHEATWB unless the Ultra-Low NOx burners are installed and operating properly. **(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 336.1201(3))**

1. Within 180 days after commencement of trial operation, the permittee shall verify NOx and CO emission rates from EUBILLETREHEATWB 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 336.1205, 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 336.1201(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 336.1225, 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 EUBILLETREHEATWB:
 - 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. **(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 EUBILLETREHEATWB on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall perform a visible emission observation for EUBILLETREHEATWB 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:
 - a) The permittee shall continue performing visible emission 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 emission observation indicate a violation of the opacity standard specified in GC 11, the permittee shall immediately initiate corrective actions.
 - d) The permittee shall keep records of all Method 9 readings that were performed. **(R 336.1301, R 336.1303)**
5. The permittee shall keep records for EUBILLETREHEATWB that document when it operates in start-up mode or normal operation mode as defined in SC I.1. **(R 336.1301, R 336.2810)**

VII. REPORTING

NA

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. SVREHEAT-FRN	96	185	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. During the time before the existing reheat furnace is permanently shut down, the permittee shall not operate both the existing and new reheat furnaces simultaneously at full capacity. If both reheat furnaces operate simultaneously, then the combined emission rates from both the existing and new reheat furnaces shall not exceed the emission rates specified in MI-ROP-B7061-2009a (effective August 28, 2009) for the existing reheat furnace (EUBILLET-REHEAT). The permittee will keep records of the dates and time that both reheat furnaces are operated simultaneously, as well as the combined emissions from both reheat furnaces during such times. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**
2. The permittee shall permanently shut down the existing reheat furnace no later than 210 days after start-up of EUBILLETREHEATWB. Within 30 days after completion of shutdown of the existing reheat furnace, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. **(R 336.1205, R 336.2803, R 336.2804, R 336.2810)**

The following conditions apply to:
EUFLINN

DESCRIPTION: 25 MMBTU/HR natural gas heat treat furnace.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

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

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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

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)**
2. The applicant shall keep natural gas usage records, acceptable to the District Supervisor AQD, 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 applicant 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 District Supervisor AQD, the applicant 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 Air Quality Division upon request. **(R 336.1205)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

None of the operations within the EUFLINN shall be directly vented to the outside atmosphere. **(R336.1225)**¹

IX. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to:
EUDUST-SILO

DESCRIPTION: This silo stores dust generated from DV-Baghouse01 until the dust is properly disposed.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Bin vent fabric filter

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.2 pph	Test Protocol*	EUDUST-SILO	GC 13	R 336.1331
2. PM	0.8 tpy	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 LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Applicant shall not operate the electric arc furnace dust silo unless the silo vent fabric filter is installed and operating properly. **(R 336.1910)**

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 336.1225, 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. **(R 336.1225, R 336.2803, R 336.2804, R 336.2810)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUROADS&PKG-01

DESCRIPTION: Facility Roadways, Parking area, Material Storage areas, Stockpile areas, Gerdau Monroe 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 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 not operate EUROADS&PKG-01 unless an appropriate program for fugitive emissions control has been implemented and is maintained. **(R 336.1371, R 336.1372, R 336.2810, Act 451 324.5524)**
2. Within 180 days after the facility has the capacity to operate at the increased output, the permittee shall update the program for fugitive emissions control to include the following activities for EUROAD&PKG-01:
 - 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) The South Road will be paved.

As used in these permit conditions, the term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month. The permittee shall submit the updated program for fugitive emissions control to the AQD District Supervisor for review and approval. **(R 336.1371, R 336.1372, R 336.2810, Act 451 324.5524)**

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. **(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)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. Applicant 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. **(R 336.1372, R 336.2810)**

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	<p>The Melt Shop includes the EUEAF, EULMF, and two vacuum tank degasser operations (EUVTD) at the facility.</p> <p>The conditions in this table will apply after the facility has the capacity to operate at increased output. The term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.</p>	EUEAF, EULMF, EUVTD
FGBLDGFUG	<p>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.</p>	EUCASTER, EULMF, EUVTD
FGMACTYYYYY	<p>The affected source is an 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 YYYYYY.</p>	EUEAF
FG102-12A	<p>All process equipment located at Gerdau covered by this permit action.</p> <p>The conditions in this table will apply after the facility has the capacity to operate at increased output. The term "increased output" means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.</p>	EUEAF, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEATWB, EUFLINN, EUDUST-SILO, EUROADS&PKG-01

The following conditions apply to:
FGMELTSHOP

DESCRIPTION: The Melt Shop includes the EAF, LMF, and two vacuum tank degasser operations at the facility.

The conditions in this table will apply after the facility has the capacity to operate at increased output. The term “increased output” means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.

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 LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf	Test Protocol*	FGMELTSHOP each baghouse individually	SC V.1	R 336.1331
2. PM	7.2 pph	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	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	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	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	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	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.1205, R 336.2803, R 336.2804
8. PM2.5	41.3 tpy	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	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	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1, SC VI.4	R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
11. SO2	85 tpy	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	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1, SC VI.4	R 336.2804, R 336.2810
13. CO	260 pph	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC IV.1, SC VI.4	R 336.2804, R 336.2810
14. CO	850 tpy	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	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.2803, R 336.2804, R 336.2810
16. NOx	26 pph	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.2803, R 336.2804, R 336.2810
17. NOx	85 tpy	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	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.1702(a)
19. VOC	16.9 pph	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.1702(a)
20. VOC	55.3 tpy	12-month rolling time period as determined at the end of each calendar month.	FGMELTSHOP	SC VI.4	R 336.1702(a)
21. Lead	0.09 pph	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.2802(4)(d)
22. Lead	2.15 lb/day	Calendar Day	FGMELTSHOP	SC VI.4	R 336.2802(4)(d)
23. Lead	0.37 tpy	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 ₂ e)	320 lb/ton liquid steel	Test Protocol*	FGMELTSHOP for both baghouse stacks combined	SC V.1	R 336.2810
25. GHG (as CO ₂ e)	134,396 tpy	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	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	V.2	R 336.1224, R 336.1225

*Test Protocol shall specify averaging time.

II. MATERIAL LIMITS

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

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGMELTSHOP unless the baghouse control systems, pollution control equipment and canopy hood are installed and operating properly. **(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. **(R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

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). **(R 336.2802, R 336.2810)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after achieving the capacity to operate at increased output, and once every five years thereafter, the permittee shall verify visible emissions, PM, PM₁₀, PM_{2.5}, CO, NO_x, VOC, and CO_{2e} 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 FGMELTSHOP is undergoing "Preproduction Approval Process" certification. **(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 after achieving the capacity to operate at increased output, 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. **(R 336.1224, R 336.1225, R 336.1228))¹**

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 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 B and shall use the CERMS data for determining compliance with SC I.9, I.10, I.11, and I.12. **(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 conditions 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. **(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, PM_{2.5}, CO, SO₂, NO_x, VOC and Lead on a monthly average basis.
 - b) The calendar day emission rate of Lead on a monthly average.
 - c) The annual emission rate of PM, PM₁₀, PM_{2.5}, CO, SO₂, NO_x, VOC and Lead, and CO_{2e} 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 in accordance with Appendix C.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)**
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. **(R 336.1225, R 336.2810)**

VII. REPORTING

NA

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-STACK	136	120	R 336.1225 R 336.2803, R 336.2804
2. SVLMF-STACK	110	150	R 336.1225 R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

NA

**The following conditions apply Source-Wide to:
 FGBLDGFUG**

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 LIMITS

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

*Test Protocol specifies averaging time.

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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. **(R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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 perform visible emission 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 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. **(R 336.1301, R 336.1303)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. Applicant 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. **(R 336.2810)**

The following conditions apply Source-Wide to:
FGMACT-YYYYY

DESCRIPTION: The affected source is an 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 Units: FGFACILITY as applicable

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	Test Protocol*	EAF control device	SC V.1	40 CFR 63.10686(b)(1)
2. VE	6%	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 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

- a) 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:
- i) 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)**).
 - ii) 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 subject to the requirements for a site-specific plan for mercury under §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 §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. **(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)**

The following conditions apply Source-Wide to:
FG102-12A

DESCRIPTION: All process equipment located at Gerdau covered by this permit action.

The conditions in this table requiring a GHG emission limit, associated recordkeeping and an Energy Efficiency Management Plan will apply after the facility has the capacity to operate at increased output. The term “increased output” means a liquid metal production rate greater than 2,375 tons per day, 73,625 tons per month, or 740,000 tons per year on a 12-month rolling time period basis as determined at the end of each calendar month.

Emission Units: EUEAF, EULMF, EUVTD, EUCASTER, EUCASTERCOOLTWR, EUBILLETREHEATWB, EUFLINN, EUDUST-SILO, EUROADS&PKG-01

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. GHGs as CO ₂ e	294,201 tpy	12-month rolling time period as determined at the end of each calendar month	FG102-12A	SC VI.2	R 336.2810

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Within 180 days after the facility has the capacity to operate at increased output, the permittee shall develop and submit an approvable Energy Efficiency Management Plan (EEMP) to the AQD District Supervisor. Thereinafter, the permittee shall not operate FG102-12A unless EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, EUBILLETREHEATWB, 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, 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.

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)**

2. The permittee shall not operate an emission unit or process equipment included in FG102-12A 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 180 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 and EUVTD for the CO and VOC reaction chamber, Direct Evacuation Control (DEC), quench system, DV BAGHOUSE-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) EUBILLETREHEATWB, for the Ultra-Low NOx 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 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. **(R 336.1810)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee will notify the AQD District Supervisor in writing within 45 days of when the facility has the capacity to operate at increased output. **(R 336.2810)**

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 at least 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.) A report of all periods of CERMS downtime and corrective action.
 - b) A report of the total operating time of the FGMELTSHOP during the reporting period.
 - c) A report of any periods that the CERMS exceeds the instrument range.
 - d) 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.

APPENDIX C

Compliance Demonstration for SO₂ and CO Emission Limitations for FGMELTSHOP

The Sulfur Dioxide and Carbon Monoxide emission limitations specified in FGMELTSHOP, conditions 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 EAF Baghouse. Controlled emissions from the baghouse will be emitted from SVBH-01-Stack. SVBH-01-Stack will be equipped with SO₂ 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, conditions I.9, I.10, I.12, and I.13 will be demonstrated as follows:

For SO₂

Compliance with the pound/ton of liquid steel and pound/hour SO₂ emission limitations specified in FGMELTSHOP conditions I.9 and I.10, respectively, shall be demonstrated using the following algorithm:

$$\begin{aligned} \text{FGMELTSHOP Emission Rate} = & \text{SO}_2 \text{ emission rate from SO}_2 \text{ CERMS on SVBH-01-Stack} \\ & + (\text{SO}_2 \text{ emission rate from most recent stack test of} \\ & \text{SVBHLMFBaghouse-STACK} \times \text{Steel production rate for} \\ & \text{EUEAF}) \end{aligned}$$

For CO

Compliance with the pound/ton of liquid steel and pound/hour CO emission limitations specified in FGMELTSHOP conditions I.12 and I.13, respectively, shall be demonstrated using the following algorithm:

$$\begin{aligned} \text{FGMELTSHOP Emission Rate} = & \text{CO emission rate from CO CERMS on SVBH-01-Stack} \\ & + (\text{CO emission rate from most recent stack test of} \\ & \text{SVBHLMFBaghouse-STACK} \times \text{Steel production rate for} \\ & \text{EUEAF}) \end{aligned}$$