MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

October 29, 2018

PERMIT TO INSTALL
75-18

ISSUED TO
Gerdau MacSteel, Inc.

LOCATED AT
3000 Front Street
Monroe, Michigan

IN THE COUNTY OF
Monroe

STATE REGISTRATION NUMBER
B7061

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **September 18, 2018**	
DATE PERMIT TO INSTALL APPROVED: **October 29, 2018**	SIGNATURE: MaryAnn Dolehanty
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

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

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

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

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUEAF	An electric arc furnace (EAF) with 130 tons of liquid steel per hour capacity used to melt steel scrap in a batch operation. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. Emissions are captured from the EAF via the use of a Direct Evacuation Control (DEC) system and separately using a canopy hood located directly above the EAF. DEC captured emissions go through a duct elbow that contains an adjustable gap opening to allow extra air to enter the system so that CO and hydrogen are combusted prior to entering a reaction chamber that acts to further reduce CO and VOC emissions. DEC emissions are then directed to a baghouse (DVBAGHOUSE-01). Emissions not captured by the DEC are captured by the canopy hood and are also sent to DVBAGHOUSE-01.	05/05/1978/ 01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY
EULMF	The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF emissions are routed to a baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating. Fugitive emissions from this process exit via the West Ladle Bay roof monitor vent.	01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EUVTD	Two vacuum tank degassers (VTD) which remove entrained gases from the molten metal. Only one station can be degassed at a time. This emission unit does not include reheating. The VTD emissions are routed to the LMF baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating.	01/04/2013/ 10/27/2014 Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EULADLEPREHEAT2	A new 30 MMBTU/hr natural gas-fired ladle preheater will be installed in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.	Permit Issue Date	FGMELTSHOP FGMACTYYYYY FGLMFVTD
EUROADS&PKG-01	Facility roadways, parking area, material storage areas, stockpile areas, permittee slag transferring and hauling operations, and material handling operations.	05/05/1978	FGMACTYYYYY
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to:
EUEAF

DESCRIPTION: An electric arc furnace (EAF) with 130 tons of liquid steel per hour capacity used to melt steel scrap in a batch operation. Electrodes are lowered and raised through the furnace roof for melting the steel scrap. Six oxy-fuel burners are used to increase the steel melting rate. The molten steel is gravity fed from the EAF to the ladle used in the LMF by tapping at the bottom of the unit. Emissions are captured from the EAF via the use of a Direct Evacuation Control (DEC) system and separately using a canopy hood located directly above the EAF. DEC captured emissions go through a duct elbow that contains an adjustable gap opening to allow extra air to enter the system so that CO and hydrogen are combusted prior to entering a reaction chamber that acts to further reduce CO and VOC emissions. DEC emissions are then directed to a baghouse (DVBAGHOUSE-01). Emissions not captured by the DEC are captured by the canopy hood and are also sent to DVBAGHOUSE-01.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY

POLLUTION CONTROL EQUIPMENT: DVBAGHOUSE-01 and Direct Evacuation Control (DEC) and CO and VOC reaction chamber

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Visible Emissions	3%	6-minute average	EUEAF baghouse stacks	SC VI.2	R 336.1362, R 336.2810, 40 CFR 60.272a(a)(2)
2. Visible Emissions	6%	6-minute average	Vents and openings in the upper portion of the EUEAF portion of the Melt Shop building including the roof that may receive fugitive emissions from the EAF.	SC VI.7	R 336.1331, R 336.2803, R 336.2804, 40 CFR 60.272a(a)(3)
3. PM	0.0018 gr/dscf	Hourly	EUEAF Baghouse	SC V.1	R 336.1225, R 336.1331, 40 CFR 60.272a(a)(1)
4. PM	7.84 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.1331, R 336.2803, R 336.2804
5. PM	32.15 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1331, R 336.2803, R 336.2804
6. PM10	12.91 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810
7. PM10	49.7 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
8. PM2.5	12.91 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
9. PM2.5	49.7 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1205, R 336.2803, R 336.2804
10. SO_2	0.25 lb/ton liquid steel	Monthly average	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
11. SO_2	32.5 pph	Hourly	EUEAF Baghouse	SC VI.4	R 336.2803, R 336.2804, R 336.2810
12. SO_2	112.5 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810
13. CO	2.0 lb/ton liquid steel	Monthly average	EUEAF Baghouse	SC VI.4 SC VI.5	R 336.2804, R 336.2810
14. CO	260.0 pph	Hourly	EUEAF Baghouse	SC VI.4	R 336.2804, R 336.2810
15. CO	900 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2804, R 336.2810
16. NO_x	0.27 lb/ton liquid steel	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810, R 336.2908
17. NO_x	35.1 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2803, R 336.2804, R 336.2810, R 336.2908
18. NO_x	121.5 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2803, R 336.2804, R 336.2810, R 336.2908
19. VOC	0.1 lb/ton liquid steel[1]	Hourly	EUEAF Baghouse	SC V.1	R 336.1702(a)
20. VOC	13.0 pph[1]	Hourly	EUEAF Baghouse	SC V.1	R 336.1702(a)
21. VOC	45.0 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1702(a)
22. Lead	0.10 pph	Hourly	EUEAF Baghouse	SC V.1	R 336.2802(4)(d)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
23. Lead	0.4 tpy	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.2802(4)(d)
24. Mercury (as Hg)	0.033 pph	Hourly	EUEAF Baghouse	SC V.2	R 336.1224, R 336.1225, 40 CFR 63.10685
25. Mercury (as Hg)	271 lb/year	12-month rolling time period as determined at the end of each calendar month.	EUEAF Baghouse	SC VI.5	R 336.1224, R 336.1225, 40 CFR 63.10685

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not melt any radioactive scrap metal in EUEAF. **(40 CFR 52.21)**

2. The permittee shall not transfer material from EUEAF to the LMF without a ladle cover. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.1702, 336.1910, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

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

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

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

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

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the SO_2 and CO emissions and exhaust flow rate on a continuous basis, from the EUEAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2). **(R 336.2802, R 336.2810)**

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

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

V. TESTING/SAMPLING

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

1. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC IX.1), and once every five years thereafter, the permittee shall verify the visible emissions, PM, PM10, PM2.5, NO_x, VOC, and Lead emission rates from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.272a)**

2. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC XI.1), and once every five years thereafter, the permittee shall verify the mercury (as Hg) emission rate from EUEAF by testing at owner's expense, in accordance with Department requirements. Compliance will be demonstrated by testing both stacks of the EAF baghouse simultaneously and adding both stacks together to obtain the total pound/hour mass emission rates. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.1228, 40 CFR 63.10685)**

VI. MONITORING/RECORDKEEPING

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

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

2. The permittee shall continuously monitor and record, in a satisfactory manner, the visible emissions from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate the COM system to meet the timelines, requirements and reporting detailed in Appendix A and shall use the COM data for determining compliance with SC I.1 for the average of the two baghouse stacks. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2802, 40 CFR 60.273a(a))**

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

4. The permittee shall continuously monitor and record, in a satisfactory manner, the SO2 and CO emissions and flow from the EAF baghouse stacks (SVBH-01-Stack1 and SVBH-01-Stack2) of EUEAF. The permittee shall operate each Continuous Emission Rate Monitoring System (CERMS) to meet the timelines, requirements and reporting detailed in Appendix B and shall use the CERMS data for determining compliance with SC I.10, I.12, I.13, I.14, and I.15 for both stacks combined. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1602, R 336.1702, R 336.2802)**

5. The permittee shall keep the following records on a monthly basis in accordance with SC VI.1:
   a) The annual emission rate of CO and SO_2 based on CERMS data for a 12-month rolling time period.
   b) The annual emission rate of PM, PM10, PM2.5, NO_x, VOC, Mercury, and Lead on a 12-month rolling time period determined at the end of each calendar month, either based on hours of operation and testing, or based on production and emission factors based on testing.
   c) The emissions of CO and SO_2 as lb/ton of steel produced on a monthly average basis, by dividing the CERMS monthly mass of each pollutant by the monthly steel production. Monthly steel production values shall correspond with recordkeeping required under FGMELTSHOP.
   d) The amount of lime that is used to precoat bags in DVBAGHOUSE-01.
   e) The average air-to-fuel ratio for the EAF burner.

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

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

7. After 180 days of permit issuance, the permittee shall conduct weekly visible emission observations at the EAF portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the EAF is operating. At least two of the weekly EAF portion of the Melt Shop building visible emission observations per month shall cover a full Tapping cycle at the EAF. The permittee shall conduct the observations from a Method 9 sun compliant location where the EAF portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately conduct a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings. **(R 336.1301, R 336.1303, R 336.2803, R 336.2804, R 336.2810, 40 CFR Part 60 Subpart AAa)**

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

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

10. The permittee has the option of monitoring each baghouse that controls emissions from EUEAF with either a COMS or a bag leak detection system. If applicable, the permittee shall maintain the following records for each bag leak detection system required under §60.273a(e):
    a) Records of the bag leak detection system output; **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(1))**
    b) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and **(40 CFR Part 60, Subpart AAa, 40 CFR 60.276a(h)(2))**

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

VII. REPORTING

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

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

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

VIII. STACK/VENT RESTRICTIONS

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

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

IX. OTHER REQUIREMENTS

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

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

The following conditions apply to:
EULMF

DESCRIPTION: The LMF is a complete ladle metallurgy system which includes arc reheating, alloy additions, powder injections and stirring. The LMF emissions are routed to a baghouse (DVLMFBAGHOUSE) via removable covers or decks, which are located over the ladle while the process is operating. Fugitive emissions from this process exit via the West Ladle Bay roof monitor vent.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

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

I. EMISSION LIMITS

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

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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

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

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

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EULMF unless the LMF process vessel roof is in operational position. Operational position is defined as the ladle being underneath the evacuation lid. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1362, R 336.2810 910)**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall perform a visible emission observation for SVBHLMF-STACK a minimum of once per week during operation of the LMF. If the permittee observes any visible emissions, the permittee shall perform a Method 9 visible emissions reading. If after performing the Method 9 visible emissions reading, the permittee determines that visible emissions from the stack exceed 5% opacity, the permittee shall immediately initiate an investigation to determine the cause of the visible emissions and take prompt corrective action. Records are required only when a Method 9 visible emissions reading is performed. When records are required, the records will include the time that the visible emissions were observed, identification of the cause, the corrective action taken if any, and the time of completion of the corrective action. **(R 336.1301, R 336.1303, R 336.2810)**

2. After 180 days of permit issuance, the permittee shall conduct weekly visible emission observations at the ladle bay portion of the Melt Shop building, in accordance with EPA Method 22, for a minimum of ten minutes when the LMF is operating. The permittee shall conduct the observations from a Method 9 sun compliant location where the ladle bay portion of the Melt Shop building is visible. If visible emissions are observed, the permittee shall immediately conduct a Method 9 opacity reading for a minimum of six minutes. If visible emissions are observed, the permittee shall investigate the cause of the emissions and implement corrective actions, if any, to stop the emissions as soon as possible. The permittee shall maintain records of the cause and corrective actions, if any; the date the cause was identified; and the date the corrective actions, if any, were implemented. Once the investigation is complete and corrective actions, if any, have been implemented, the permittee shall conduct another set of Method 22 or Method 9 readings, if applicable, to verify that the corrective actions have addressed the visible emissions. The permittee shall maintain a record of all visible emissions observations, including the start time of observations, end time of observations, whether any visible emissions were observed, and the results of any Method 9 opacity readings.

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

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

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

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUVTD

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

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

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

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EULADLEPREHEAT2

DESCRIPTION: A new 30 MMBTU/hr natural gas-fired ladle preheater will be installed in the Melt Shop Building. The emissions will be vented inside the Melt Shop exiting the building via the East Ladle Bay roof monitor vent and routed to DVLMFBAGHOUSE.

Flexible Group ID: FGMELTSHOP, FGMACTYYYYY, FGLMFVTD

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE, Low NOx Burner

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_X	0.08 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810, R 336.2908
2. SO_2	0.0006 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
3. CO	0.084 lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
4. PM	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
5. PM10	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810
6. PM2.5	0.0076 lb lb/MMBtu	Hourly	EULADLEPREHEAT2	SC V.1	R 336.2810

II. MATERIAL LIMITS

1. The permittee shall only burn pipe-line quality natural gas in EULADLEPREHEAT2. **(R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, R 336.2908)**

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EULADLEPREHEAT2 unless the Low-NO_x Burner is installed and operating properly. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.2810, R 336.2908)**

V. TESTING/SAMPLING

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

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup of EULADLEPREHEAT2, the permittee shall verify NO_X, SO_2, CO, PM, PM10, and PM2.5 emissions from EULADLEPREHEAT2 by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates include the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. If the AQD and permittee both agree that actual field testing to verify emission rates are not technically feasible, then the permittee shall propose an alternative method for laboratory bench testing of EULADLEPREHEAT2. The AQD must approve this alternative bench testing method prior to the permittee testing under it. Verification of emission rates include the submittal of a complete report of the bench test within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R336.2810, R 336.2908)**

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

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

IX. OTHER REQUIREMENTS

NA

The following conditions apply to:
EUROADS&PKG-01

DESCRIPTION: Facility roadways, parking area, material storage areas, stockpile areas, permittee slag transferring and hauling operations, and material handling operations.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

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

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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

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

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

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

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

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGMELTSHOP	The Melt Shop includes EUEAF, EULMF, EUVTD ladle preheaters (including EULADLEPREHEAT2), and other Melt Shop natural gas combustion sources and other ancillary operations taking place inside the Melt Shop.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2
FGLMFVTD	FGLMFVTD includes the LMF and the VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).	EULMF, EUVTD, EULADLEPREHEAT2
FGMACTYYYYY	The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.	EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 EUROADS&PKG-01

The following conditions apply to:
FGMELTSHOP

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

Emission Units: EUEAF, EULMF, EUVTD, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT: DVBAGHOUSE-01, DVLMFBAGHOUSE

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. GHGs as CO2e	256,694 tpy	12-month rolling time period as determined at the end of each calendar month	FGMELTSHOP	SC VI.2	R 336.2803, R 336.2804, R 336.2810
2. Visible Emissions*	6%	6-minute average	EAF and Ladle Bay portions of the Melt Shop Building	EUEAF SC VI.7 & EULMF SC VI.2	40 CFR 60.272a(a)(3)
*Emission Limit and compliance method previously specified in EUEAF and EULMF					

II. MATERIAL LIMITS

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

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate each of the emission units in FGMELTSHOP for more than 8,200 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

2. Within 180 days after official notice of completion of the modification (see SC IX.1), the permittee shall review and update the facility Energy Efficiency Management Plan (EEMP), as necessary. Either an updated Plan or notification that the plan does not need to be updated, shall be submitted to the AQD District Supervisor. Thereinafter, the permittee shall not operate equipment covered by this permit unless the EEMP is implemented and maintained for each of the following emission units EUEAF, EULMF, EUVTD, and EULADLEPREHEAT2. At a minimum, the EEMP shall be updated to include the following:

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

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

3. The permittee shall not operate an emission unit or process equipment included in this permit unless a maintenance and malfunction abatement plan (MAP) as described in Rule 911(2), for the emission unit or process equipment has been submitted to the AQD District Supervisor within 365 days of permit issuance and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The MAP shall address the following emission units and flexible groups:
   a) EUEAF for the CO and VOC reaction chamber, DEC, quench system, DVBAGHOUSE-01, and the oxy-fuel burners (in EUEAF)
   b) EULMF, EUVTD, and ladle bay roof monitor for DVLMFBAGHOUSE
   c) EUCASTER, defining good combustion practices for the oxy-fuel torches and requiring parameters for natural gas meter calibration.
   d) EUCASTERCOOLTWR for the drift eliminator.
   e) EUBILLETREHEATWB, for the Ultra-Low NO_x Burners.
   f) EUDUST-SILO for the silo vent fabric filter.

   If an emission unit or flexible group specified in this permit has not been installed or modified within 180 days of permit issuance, then the permittee shall revise the MAP within 90 days after completion of the initial operating period for the new or modified emission unit or flexible group. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

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

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

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

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

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

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

2. The permittee shall provide 157.94 tons of NO_X offsets to the AQD prior to beginning construction of the changes approved under this permit (PTI: 75-18). **(R 336.2908)**

The following conditions apply to:
FGLMFVTD

DESCRIPTION: FGLMFVTD includes the LMF and the VTD operated at the facility. The emissions from these sources are captured and routed to the same baghouse (DVLMFBAGHOUSE). In addition, natural gas combustion source emissions released to the in-plant environment are captured in an enclosed roof vent section of the building and routed to the DVLMFBAGHOUSE; this includes the new ladle preheater (EULADLEPREHEAT2). All emissions from the DVLMFBAGHOUSE are exhausted through the baghouse stack (SVBHLMF-STACK).

Emission Units: EULMF, EUVTD, EULADLEPREHEAT2

POLLUTION CONTROL EQUIPMENT: DVLMFBAGHOUSE equipped with a lime injection system used to control the LMF, the VTD and fugitive emissions that exit the Melt Shop via the East Ladle Bay roof monitor vent.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM	0.0018 gr/dscf	Hourly	FGLMFVTD	SC V.1	R 336.1331
2. PM	3.88 pph	Hourly	FGLMFVTD	SC V.1	R 336.1331, R 336.2803, R 336.2804
3. PM	15.92 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1331, R 336.2803, R 336.2804
4. PM10	8.95 pph	Hourly	FGLMFVTD	SC V.1	R 336.2803, R 336.2804, R 336.2810
5. PM10	33.47 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810
6. PM2.5	8.95 pph	Hourly	FGLMFVTD	SC V.1	R 336.1205, R 336.2803, R 336.2804
7. PM2.5	33.47 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1205, R 336.2803, R 336.2804
8. SO_2	13.05 pph	Hourly	FGLMFVTD	SC V.1	R 336.2803, R 336.2804, R 336.2810
9. SO_2	45.22 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810
10. CO	18.55 pph	Hourly	FGLMFVTD	SC V.1	R 336.2804, R 336.2810
11. CO	70.69 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2804, R 336.2810
12. NO_x	10.3 pph	Hourly	FGLMFVTD	SC V.1 SC V.2	R 336.2803, R 336.2804, R 336.2810, R 336.2908

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
13. NO_x	42.23 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2803, R 336.2804, R 336.2810, R 336.2908
14. VOC	1.63 pph	Hourly	FGLMFVTD	SC V.1	R 336.1702(a)
15. VOC	6.08 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.1702(a)
16. Lead	0.03 pph	Hourly	FGLMFVTD	SC V.1	R 336.2802(4)(d)
17. Lead	0.13 tpy	12-month rolling time period as determined at the end of each calendar month.	FGLMFVTD	SC VI.2	R 336.2802(4)(d)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

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

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. Within 180 days from the date of the official notice of completion of the modification (see FGMELTSHOP special condition SC IX.1), and once every five years thereafter, the permittee shall verify visible emissions, PM, PM10, PM2.5, CO, NO_x, SO_2, VOC, and Lead emission rates from FGLMFVTD by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810; R 336.2908, 40 CFR 60.272a)**

VI. MONITORING/RECORDKEEPING

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

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

2. The permittee shall maintain a record of the emission rate of PM, PM10, PM2.5, CO, SO_2, NO_x, VOC and Lead on a monthly and 12-month rolling time period determined at the end of each calendar month. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 R 336.2803, R 336.2804, R 336.2810; R 336.2908)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

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

IX. OTHER REQUIREMENTS

NA

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

DESCRIPTION: The affected source is an EAF steelmaking facility as defined by 40 CFR Part 63 Subpart YYYYY. It is considered an area source of hazardous air pollutant (HAP) emissions.
Emission Units: EUEAF, EULMF, EUVTD, EULADLEPREHEAT2 EUROADS&PKG-01

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. PM**	0.0052 gr/dscf	Hourly	EAF control device	SC V.1	40 CFR 63.10686(b)(1)
2. Visible Emissions**	6%	6-minute average	EUEAF*	SC V.2	40 CFR 63.10686(b)(2)
* Emissions include only emissions from an EAF **These emission limits and associated compliance method were previously included in EUEAF					

II. MATERIAL LIMITS

1. For metallic scrap utilized in the EAF at the facility, the permittee must comply with the requirements in either paragraph (a)(1) or (2) of 40 CFR 63.10685. The permittee may have certain scrap at the facility subject to paragraph (a)(1) and other scrap subject to paragraph (a)(2) provided the scrap remains segregated until charge make-up. **(40 CFR 63.10685)**
   a) For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685 (a)(1) (*Pollution Prevention Plan*), the scrap utilized shall meet the following requirements:**(40 CFR 63.10685)**
      i) Scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace. **(40 CFR 63.10685(a)(1)(i))**
      ii) Scrap shall be depleted (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel. **(40 CFR 63.10685(a)(1)(ii)**
      iii) The requirements of 40 CFR 63.10685 (a)(1) do not apply to the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace. **(40 CFR 63.10685(a)(1)(iv)**
   b) For metallic scrap utilized in the EAF at the facility under 40 CFR 63.10685 (a)(2) (*Restricted metallic scrap*), the scrap utilized shall meet the following requirements:
      i) For the production of steel other than leaded steel, the permittee must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids (40 CFR 63.10685(a)(2).
      ii) For the production of leaded steel, the permittee must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of section 40 CFR 63.10685. **(40 CFR 63.10685(a)(2))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall implement and maintain an approved *Pollution Prevention Plan* by the applicable compliance date specified in 40 CFR 63.10680. The *Pollution Prevention Plan* shall be kept on site and include the following, as applicable:
   a) Control (to the extent practicable) of chlorinated plastics, lead, and free organic liquids (40 CFR 63.10685(a)(1)(i-iv) and/or restricted metallic scrap provisions of **40 CFR 63.10685(a)(2).**
   b) Provisions to meet the mercury requirements as specified in 40 CFR 63.10685(b).

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

IV. DESIGN/EQUIPMENT PARAMETERS

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

V. TESTING/SAMPLING

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

1. Within 180 days after the applicable compliance date specified in 40 CFR 63.10681, the permittee shall conduct a performance test to demonstrate initial compliance with PM emission limits for each EAF. The permittee shall conduct the performance test as specified in §63.7 and 40 CFR 60.275a, and 40 CFR 63.10686(d)(1)(i)-(vi). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 63.10686(d)(1))**

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

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

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records, on a monthly basis, as required by 40 CFR 63.10685(c), concerning the Pollution Prevention Plan, or records that the scrap does not contain motor vehicle scarp, as applicable. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(40 CFR 63.10685(c)(1)(i) & (2))**

2. The permittee shall comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 1 in 40 CFR Part 63 Subpart YYYYY. **(40 CFR 63.10690(a))**

3. The notification of compliance status required by §63.9(h) shall include each applicable certification of compliance, signed by a responsible official, according to §63.10690(b)(1)-(6). **(40 CFR 63.10690(b))**

VII. REPORTING

1. If the permittee is subject to the requirements for a site-specific plan for mercury under 40 CFR 63.10685 (b)(1) the permittee shall submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports shall include a certification that the permittee has conducted inspections or taken other means of corroboration as required under 40 CFR 63.10685 (b)(1)(ii)(C). This information may be included in the semiannual compliance reports required under SC VII.2. **(40 CFR 63.10685(c)(1)(ii))**

2. The permittee shall submit semiannual compliance reports regarding the control of contaminants from scrap according to the requirements in §63.10(e). The report must clearly identify any deviation from the requirements in §63.10685 (a) and (b) and the corrective action taken. The permittee shall identify which compliance option in paragraph (b) applies to each scrap provider, contract, or shipment. **(40 CFR 63.10685(c)(3))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart YYYYY for Area Sources: Electric Arc Furnace Steel Making Facilities by the initial compliance date. **(40 CFR Part 63 Subparts A and YYYYY)**

APPENDIX A
Continuous Opacity Monitoring System (COMS) Requirements

For an existing COMS: If the permittee has satisfied the installation and performance specification requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required COMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the COMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the COMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the COMS complies with the requirements of Performance Specification (PS) 1.

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The COMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1 of Appendix B, 40 CFR Part 60.

7. The permittee shall perform an annual audit of the COMS using the procedures set forth in USEPA Publication 450/4-92-010, “Performance Audits Procedures for Opacity Monitors”, or a procedure acceptable to AQD. The results of the annual audit shall be submitted to the AQD within 30 days after the end of the next calendar quarter in which the audit results are received.

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to Air Quality Division, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above limit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of COMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) If no exceedances or COMS downtime occurred during the reporting period, the permittee shall report that fact.

   All monitoring data shall be kept on file for a period of five (5) years and made available to the AQD upon request.

APPENDIX B
CO and SO2 Monitoring
Continuous Emission Rate Monitoring System (CERMS)
Requirements

For an existing CERMS: If the permittee has satisfied the installation and testing requirements, Items 1 – 4 do not apply.

1. Within 30 calendar days after the commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CERMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CERMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CERMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CERMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
CO	4
SO2	2
CERMS	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CERMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 6 of Appendix B to 40 CFR Part 60.
7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CERMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in special conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CERMS downtime and corrective action.
   c) A report of the total operating time of the FGMELTSHOP during the reporting period.
   d) A report of any periods that the CERMS exceeds the instrument range.
   e) If no exceedances or CERMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep all monitoring data on file for a period of five years and make them available to the AQD upon request.