

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

April 8, 2024

PERMIT TO INSTALL
69-21A

ISSUED TO
CWC Textron

LOCATED AT
1085 West Sherman Boulevard
Muskegon, Michigan 49441

IN THE COUNTY OF
Muskegon

STATE REGISTRATION NUMBER
B1909

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. 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: December 21, 2023	
DATE PERMIT TO INSTALL APPROVED: April 8, 2024	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

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 Environment, Great Lakes, and Energy, 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 Rule 210 (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 Rule 219 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 Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(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 condition 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 Rule 301, 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 Rule 303 (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 Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT 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 (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-BULK-BOND	A silo and bin which store bulk bond and have a pneumatic transport system. The silo and bin are each controlled by separate bin vent filters.	Install – 1/1/1964	N/A
EU-DUCTILE-IRON	Equipment used for preparation of ductile iron which includes magnesium treatment vessels, a desulfurize ladle and an Ajax holding furnace. The furnace is also used for regular gray iron. Emissions from ductile treatment are controlled by Wheelabrator DC#5.	Install – 12/29/1995	N/A
EU-NEW-SAND	A bin which stores new sand. The bin is controlled by a bin vent filter.	Install - 03/07/1980	N/A
EU-WEST-CUPOLA-1	Cupola #1, which is the west cupola. The emissions are controlled by two 5 MBtu direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator. Emission unit includes charging operations.	Install - 07/27/1977	FG-MACT-ZZZZZ
EU-MP-RBB	Knockoff operation #227, Spiral Elevator #228 and Rocker Barrel Blast (finish blast). Emissions controlled by Baghouse collectors DC#13 and DC#1.	Install – 11/30/1998 Mod. – 1/5/2004	N/A
EU-ACS-SAND	The ACS sand handling system. The system includes: New DC#19 which controls emissions from the sand cooler #16, the sand muller, the sand distribution tower, sand elevators #18 and #23 and from the sand basement.	Install – 1/1/1964 Mod. – 10/17/2011	N/A
EU-CLEAN	Metal cleaning operations which include hand grinders, cut-off saw, stand grinders and the East and West tumblast shotblasters. Emissions from the metal cleaning operations and the West tumblast shotblast are controlled by Wheelabrator DC#1 and the East tumblast shotblast is controlled by Wheelabrator DC#5.	Install – 1/1/1964	FG-PARTICULATE
EU-FINISHING	Metal finishing operations including milling, drilling, stand grinders, and finishing machines. Emissions from the metal finishing operations are controlled by Pangborn DC#2.	Install – 03/25/1983	FG-PARTICULATE
EU-SHAKEOUT	Foundry shakeout includes the Vibra Drum #212, Shakeout #213 and the degating conveyor #225. Emissions are controlled by baghouses DC#17 and DC#6. Mold Dump #211 is controlled by DC#12.	Install – 1/1/1964 Mod. – 1/5/2004	FG-PARTICULATE

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-AJAX-FURN	The East and West Ajax holding furnaces.	Install – 1/1/1964	FG-PARTICULATE
EU-POURING	Iron pouring operation including both manual and automatic pouring operations.	Install – 1/1/1964 Mod. – 2015, 2021	FG-PARTICULATE
EU-COOLING	Cast cooling operation.	Install – 1/1/1964	FG-PARTICULATE

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 336.1291.

**EU-POURING
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Iron pouring operation including both manual and automatic pouring operations.

Flexible Group ID: FG-PARTICULATE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.27 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
2. PM ₁₀	0.15 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
3. PM _{2.5}	0.08 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
4. CO	2.597 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
5. NO _x	0.14 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)
6. VOC	0.50 lb/ton of metal	Hourly	EU-POURING	SC V.1, VI.2 SC VI.3	R 336.2804 40 CFR 52.21(d)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Metal melted	576 tons per day ¹	Daily	EU-POURING	SC VI.3	R 336.1225

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. The permittee shall verify particulate matter (PM, PM10, and PM2.5), VOC, nitrogen oxide (NOx) and carbon monoxide (CO) emission rates from EU-POURING by testing at owner's expense, in accordance with the Department requirements at a minimum, once every 5 years. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM, PM10, PM2.5	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NOx	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. The permittee must submit 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 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. Verification of visible emissions from the four EU-POURING vents SV-POUR1, SV-POUR2, SV-POUR3, and SV-POUR4 shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1301(1)(c))**
2. The permittee shall calculate and maintain monthly records, in a format acceptable to the AQD District Supervisor, of 12-month rolling emission rates of PM, PM-10, PM-2.5, CO, NOx, and VOC calculated in the appropriate units and using emission factors approved by the AQD District Supervisor. **(R 336.1205 (3))**
3. The permittee shall monitor and record, in a satisfactory manner, the tons of metal melted per calendar day. The permittee shall keep all records on file at the facility and make them available to the Department upon request.¹ **(R 336.1225)**

See Appendix 3

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-POUR1	84	49	R 336.1225 40 CFR 52.21(c) & (d)

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
2. SV-POUR2	36	47	R 336.1225 40 CFR 52.21(c) & (d)
3. SV-POUR3	84	49	R 336.1225 40 CFR 52.21(c) & (d)
4. SV-POUR4	36	47	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

**EU-WEST-CUPOLA-1
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Cupola #1, which is the west cupola. The emissions are controlled by two 5 MMBtu direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator. Emission unit includes charging operations. Emission unit is subject to Compliance Assurance Monitoring (CAM) for particulate emissions.

Flexible Group ID: FG-MACT-ZZZZZ

POLLUTION CONTROL EQUIPMENT

Direct flame afterburner, wet cap, high energy venturi scrubber, high velocity mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.15 lb. per 1,000 lbs. of exhaust gases, calculated on a dry gas basis	Hourly	EU-WEST-CUPOLA-1	SC III.2 SC V.2 SC VI.1 SC VI.4 SC VI.5	R 336.1331(1)(a), Table 31(D)(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the cupola unless the afterburner, high energy venturi scrubber and high velocity mist eliminator are installed and operating properly. **(R 336.1910)**
2. The permittee shall not operate the process unless the Preventative Maintenance Plan is implemented and maintained. Acceptable plans and any modifications shall be submitted to the AQD District Supervisor. **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the water line(s) in the emission control system with a water pressure indicator. **(R 336.1910)**
2. The permittee shall equip the high energy venturi scrubber and demister with pressure drop monitors. **(R 336.1201(3))**

V. TESTING/SAMPLING

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

1. Opacity observations, utilizing Method 9 when operating, shall be performed and recorded semiannually. **(R 336.1201(3), R 336.2001, R 336.2003, R 336.2004)**

- The permittee shall verify the particulate matter and opacity emission rates from EU-WEST-CUPOLA-1 by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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 336.1201(3), R 336.2001, R 336.2003, R 336.2004)**

- The permittee shall verify the particulate matter and opacity emission rates from EU-WEST-CUPOLA-1, at a minimum, every five years from the date of the last test. Alternative test schedules may be used upon approval of the AQD District Supervisor. **(R 336.1201(3), R 336.2001, R 336.2003, R 336.2004)**
- Within 5 years after permit issuance, and once every five years thereafter the permittee shall verify CO emission rates from EU-WEST-CUPOLA-1 by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below:

Pollutant	Test Method Reference
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit 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. **(40 CFR 52.21(c) & (d), 336.2001, R 336.2003, R 336.2004)**

- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

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

- Verification of visible emissions from EU-WEST-CUPOLA-1 shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1201(3))**
- The permittee shall record the number and weight of charges added to the cupola, including a separate record of coke, on a production day basis when the cupola is operating and melting. **(R 336.1201(3))**
- The permittee shall maintain a monthly record of the hours of cupola operation. **(R 336.1201(3))**
- The permittee shall record the water pressure rate to the high energy venturi scrubber system once per day. The gauge shall be calibrated according to manufacturer's recommendations. **(R 336.1201(3), 40 CFR 64.6(c)(i), (ii) & (iii))**
- The permittee shall record the static pressure drop across the high energy venturi scrubber and demister once per day. The gauge shall be calibrated according to manufacturer's recommendations. **(R 336.1201(3), 40 CFR 64.6(c)(i), (ii) & (iii))**

See Appendix 3

VII. REPORTING

1. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1201(3), R 336.2001(5))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

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
FG-MACT-ZZZZZ	The affected source is an existing iron and/or steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by 40 CFR Part 63, Subpart ZZZZZ.	EU-WEST-CUPOLA-1
FG-PARTICULATE	Various particulate emission sources.	EU-CLEAN, EU-FINISHING, EU-SHAKEOUT, EU-AJAX-FURN, EU-POURING, EU-COOLING
FG-PROJECT-2021	An increase in the facility-wide melt limit. An Actual-to-Projected Actual analysis was used to determine a non-significant emission increase.	EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-WEST-CUPOLA-1, EU-DUCTILE-IRON, EU-BULK-BOND, EU-MP-RBB

FG-MACT-ZZZZZ
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

The affected source is an existing iron and/or steel foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing large foundry as defined by 40 CFR Part 63, Subpart ZZZZZ.

Emission Unit: EU-WEST-CUPOLA-1

POLLUTION CONTROL EQUIPMENT

Two 5 MBtu direct flame afterburners, wet cap, a high energy venturi scrubber and a high velocity mist eliminator.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Opacity (fugitive)	20% 6-min. average, except for one 6-min. average per hour that does not exceed 30%	6-minute average	Each Building or Structure Housing any Iron or Steel Foundry Emission Source	SC III.1 SC III.3 SC III.4 SC V.1	40 CFR 63.10895(e)
2. PM ---OR--- Total Metal HAP	0.8 pounds per ton of metal charged ---OR--- 0.06 pound per ton of metal charged	Hourly	EU-WEST-CUPOLA-1	SC III.1 SC III.2 SC III.3 SC V.2	40 CFR 63.10895(c)

II. MATERIAL LIMIT(S)

1. The permittee shall not utilize a binder chemical formulation that uses methanol as a specific ingredient of the catalyst formulation for a furfuryl alcohol warm box mold or core making line. This requirement does not apply to the resin portion of the binder system. **(40 CFR 63.10886)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. For each segregated metallic scrap storage area, bin or pile, the permittee must comply with the material acquisition requirements contained in 40 CFR 63.10885(a)(1) or 40 CFR 63.10885(a)(2). **(40 CFR 63.10885(a))**
2. For scrap containing motor vehicle scrap, the permittee must procure the scrap pursuant to one of the compliance options in 40 CFR 63.10885(b)(1), (2), or (3). **(40 CFR 63.10885(b))**
3. The permittee shall operate a capture and collection system for each metal melting furnace at a new or existing iron and steel foundry unless that furnace is specifically uncontrolled as part of an emissions averaging group. Each capture and collection system must meet accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists. **(40 CFR 63.10895(b))**

4. The permittee shall prepare and operate at all times according to a written Operation and Maintenance Plan (O&M Plan) for each control device for an emissions source subject to a PM, metal HAP, or opacity emissions limit in 40 CFR 63.10895. At a minimum the plan must contain the information listed in 40 CFR 63.10896(a)(1)-(6)). **(40 CFR 63.10896)**
5. The permittee shall conduct inspections of each operating particulate matter control device for a metal melting furnace in accordance with 40 CFR 63.10897(a). **(40 CFR 63.10897(a))**
6. The permittee shall conduct monthly inspections of the equipment important to the performance of the total capture system in accordance with 40 CFR 63.10897(e). **(40 CFR 63.10897(e))**
7. The permittee shall implement and maintain an approved plan to address the pollution prevention management practices for metallic scrap and mercury switches by the applicable compliance date specified in 40 CFR 63.10881. The plan shall include the following:
 - a) Metallic scrap management program. **(40 CFR 63.10885(a))**
 - b) Mercury requirements. **(40 CFR 63.10885(b))**

The permittee shall revise the plan within 30 days after a change occurs. **(40 CFR 63.10885)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. The permittee shall conduct a performance test to demonstrate compliance with the opacity limit in 40 CFR 63.10895(e), following the test methods and procedures in 40 CFR 63.6(h)(5) and Table 1 of Subpart ZZZZ. Subsequent compliance testing shall be conducted no less frequently than every 6 months and each time a process change likely to increase fugitive emissions is made. **(40 CFR 63.10898(h), (40 CFR 63.10898(i), R 336.2001, R 336.2003, R 336.2004)**
2. The permittee shall conduct performance testing to demonstrate compliance with applicable PM or Total Metal HAP emission rates from EU-WEST-CUPOLA-1 according to the requirements in 40 CFR 63.7(e)(1), and Table 1 of Subpart ZZZZ and paragraphs (d) through (g) of subsection 40 CFR 63.10898. The permittee shall conduct subsequent compliance testing to demonstrate compliance with all applicable emission limits no less frequently than every 5 years and each time the permittee elects to change an operating limit or make a process change likely to increase HAP emissions. **(40 CFR 63.10898(b), R 336.2001, R 336.2003, R 336.2004)**
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.2001(3))**
4. In the performance test report, the permittee must certify that the capture system operated normally during the performance test. **(40 CFR 63.10898(j))**

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 to document use of any binder chemical formulation that does not contain methanol as a specific ingredient of the catalyst formulation for each furfuryl alcohol warm box mold or core making line as required by 40 CFR 63.10886. These records must be the Safety Data Sheets (provided that it contains appropriate information), a certified product data sheet, or a manufacturer's hazardous air pollutant data sheet. **(40 CFR 63.10890)**

2. The permittee shall keep records of the annual quantity and composition of each HAP-containing chemical binder or coating material used to make molds and cores. These records must be copies of purchasing records, Safety Data Sheets, or other documentation that provide information on the binder or coating materials used. **(40 CFR 63.10899)**
3. The permittee shall keep records of the metal melt production for each calendar month. **(40 CFR 63.10899(6))**
4. The permittee shall keep records documenting compliance with scrap material specifications in accordance with 40 CFR 63.10899(b)(1),(2) and (3). **(40 CFR 63.10899(b)(1), (2) and (3))**
5. The permittee shall keep records demonstrating compliance with the O&M Plan requirements. **(40 CFR 63.10899(7))**
6. The permittee must install, operate, and maintain each CPMS or other measurement device according to the O&M plan. The permittee must record all information needed to document conformance with the requirements of the O&M plan. **(40 CFR 63.10897(f))**
7. In the event of an exceedance of an established emissions limitation (including an operating limit), the permittee must restore operation of the emissions source and record the corrective action in accordance with 40 CFR 63.10897(g) and 40 CFR 10899(b)(12). **(40 CFR 63.10897(g), 40 CFR 10899(b)(12))**
8. The permittee shall keep records of periodic inspections as well as any maintenance action on a particulate matter control device for a metal melting furnace. Records shall include, at a minimum, the information specified in 40 CFR 63.1089(b)(13)(i) through (iii). **(40 CFR 63.10899(b)(13))**
9. The permittee shall keep records of monthly inspections and repairs of equipment important to the performance of the total capture system for the metal melting furnace control equipment. **(40 CFR 63.10899(b)(10))**
10. The permittee shall keep records of emission information and operating and maintenance information to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63, Subparts A and ZZZZZ. The permittee shall keep all source emissions and operating and maintenance information on file at the facility for a period of at least 5 years and make them available to the Department upon request. **(40 CFR Part 63, Subparts A & ZZZZZ)**

VII. REPORTING

1. The permittee shall submit semiannual compliance reports to the Administrator according to the requirements in 40 CFR 63.10(e). The reports must include, at a minimum, the following information as applicable: **(40 CFR 63.10899(c))**
 - a) Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective action taken;
 - b) Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other calibration checks, if applicable); and
 - c) Summary information on any deviation from the pollution prevention management practices in 40 CFR 63.10885 and 40 CFR 63.10886 and the operation and maintenance requirements 40 CFR 63.10896 and the corrective action taken.
2. If applicable, 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 must include a certification that the facility has conducted periodic inspections or taken other means of corroboration as required under 40 CFR 63.10885(b)(1)(ii)(C). The permittee shall identify which option in 40 CFR 63.10885(b) applies to each scrap provider, contract, or shipment. **(40 CFR 63.10899(b)(2)(i))**

3. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.2001(5))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A and ZZZZZ for Iron and Steel Foundries by the initial compliance date. **(40 CFR Part 63, Subparts A and ZZZZZ)**

Footnotes:

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

FG-PARTICULATE FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Various particulate sources: EU-SHAKEOUT is subject to CAM for particulate emissions.

Emission Units: EU-POURING, EU-CLEAN, EU-FINISHING, EU-SHAKEOUT, EU-AJAX-FURN, EU-COOLING

POLLUTION CONTROL EQUIPMENT

EU-CLEAN: 50,000 CFM DC#1, 50,000 CFM DC#5

EU-FINISHING: 15,000 CFM DC#2

EU-SHAKEOUT: 60,000 CFM DC#17, 50,000 CFM DC#6, 70,000 CFM DC#20, and 20,000 CFM DC#12

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 lb. per 1,000 lbs. of exhaust gas, on a dry gas basis	Hourly	FG-PARTICULATE	SC III.2 SC VI.1 SC VI.2 SC VI.3	R336.1331(1)(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate the processes associated with each emission unit unless the appropriate control equipment for the above listed emission units is installed and operating properly. **(R 336.1910)**
2. The permittee shall not operate any of the processes unless the approved Preventative Maintenance Plan is implemented and maintained. **(R 336.1201(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the dust collectors with instrumentation to continuously measure the pressure drop across the dust collectors. **(R 336.1201(3))**
2. The permittee shall equip and maintain dust collectors, DC#1 and DC#6, with a particle sensor device. **(R 336.1201(3))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. Verification of visible emissions from FG-PARTICULATE, for all emission units with control equipment, shall be performed and documented once daily by non-certified visible emissions readings while the emission unit is operating, per Appendix 3. **(R 336.1201(3))**
2. The permittee shall monitor and record the static pressure drop across the dust collectors once per day when the processes are in operation. The gauges for DC#6, DC#17, and DC#20 shall be calibrated according to manufacturer's recommendations. **(R 336.1201(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))**
3. The permittee shall monitor and record the particle sensor readings once per day when EU-SHAKEOUT is in operation. The device shall be calibrated according to manufacturer's recommendations. **(R 336.1201(3), 40 CFR 64.6(c)(1)(i), (ii) & (iii))**

See Appendix 3

VII. REPORTING

1. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1201(3)(c), R 336.2001(5))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FG-PROJECT-2021 FLEXIBLE GROUP CONDITIONS
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DESCRIPTION

This flexible group includes all equipment affected by the permitted increase to the facility-wide melt limit. The Actual-to-Projected Actual analysis used to determine a non-significant emission increase exceeded reasonable possibility thresholds.

Emission Unit: EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-WEST-CUPOLA-1, EU-DUCTILE-IRON, EU-BULK-BOND, EU-MP-RBB

POLLUTION CONTROL EQUIPMENT

Bin vent collectors (EU-BULK-BOND), dust collector (EU-DUCTILE-IRON), direct flame afterburner, wet cap, high energy venturi scrubber, high velocity mist eliminator (EU-WEST-CUPOLA-1), dust collectors (EU-MP-RBB),

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

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 in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))
2. The permittee shall calculate and keep records of the annual emissions of VOC and CO from FG-PROJECT-2021 described in Appendix 4, in tons per calendar year. The permittee shall maintain these calculations and records for each calendar year since the start of FG-PROJECT-2021 until ten (10) years of records are collected. (R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))

VII. REPORTING

1. The permittee shall submit records of the annual emissions of VOC and CO from FG-PROJECT-2021 described in Appendix 4, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:

- a) The calendar year actual emissions of VOC and CO exceed the baseline actual emissions (BAE) by a significant amount (as defined in Rule 119), and
- b) The calendar year actual emissions differ from the pre-construction projection.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.1, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).
(R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FGFACILITY CONDITIONS

DESCRIPTION

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	Less than 9.0 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	VI.3 & VI.4 GC 13	R 336.1205(3)
2. Aggregate HAPs	Less than 22.5 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	VI.3 & VI.4 GC 13	R 336.1205(3)

II. MATERIAL LIMIT(S)

1. The permittee shall not melt more than 129,325 tons per year of iron, based on a 12-month rolling time period, as determined at the end of each calendar month. (R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804)

III. PROCESS/OPERATIONAL RESTRICTION(S)

IV. DESIGN/EQUIPMENT PARAMETER(S)

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 in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.2818, 40 CFR 52.21(r)(6)(c)(iii))
2. Monthly records of iron melt quantities to determine compliance with the 12-month rolling limit of 129,325 tons. (R 336.1205(3))

3. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month. **(R 336.1205(3))**
4. Individual and aggregate HAP emission calculations determining the cumulative emission rate of each during the first 12 months and the annual emission rate of each thereafter, in tons per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

APPENDIX 3

Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in EU-POURING, EU-BULK-BOND, EU-DUCTILE-IRON, EU-NEW-SAND, EU-WEST-CUPOLA-1, EU-MP-RBB, EU-ACS-SAND and FG-PARTICULATE.

The permittee shall conduct and record the following information during non-certified visual observations for opacity.

1. Visible emissions shall be recorded as "observed" or "not observed."
2. If visible emissions are observed, a description of the color of the emissions
3. If visible emissions are observed, the duration of the emission incident shall be recorded.
4. If visible emissions are observed, the maintenance supervisor shall be notified immediately.
5. A determination of cause and needed repairs and/or maintenance shall be made within 24 hours and recorded.
6. Repair and/or maintenance operations shall be performed within 48 hours of discovery.
7. Routine maintenance shall be performed according to the manufacturer's recommendations

APPENDIX 4
Recordkeeping Provisions for Source Using
Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and 40 CFR 52.21(r)(6)(i) for ten years after the emission unit(s) identified in Table C resume normal operations and shall be provided to the Department for the first year and thereafter made available to the Department upon request.

A. Project Description:

Increase to the metal throughput at the pouring lines (EU-POURING) to 129,325 tons per year of iron on a rolling 12-month basis.

B. Applicability Test Description: Actual-to-Projected Actual

The actual-to-projected applicability test as described in the table below was used to demonstrate that the project is a minor modification with respect to Prevention of Significant Deterioration (PSD) regulations.

C. Emissions in PSD Applicability Test

Table C

Emission Unit/Flexible Group ID	Pollutant	Emissions (tpy)			Reason for Exclusion
		Baseline Actual (tpy)	Projected Actual (tpy)	Excluded (tpy)	
EU-POURING	CO	111.6	167.9	142	Permittee could have accommodated a higher metal throughput rate during the baseline period.
EU-COOLING	CO	17.6	26.5		
EU-SHAKEOUT	CO	15.2	22.9		
EU-WEST-CUPOLA-1	CO	791	944.1		
EU-DUCTILE-IRON	CO	-	-		
EU-BULK-BOND	CO	-	-		
EU-MP-RBB	CO	-	-		
EU-POURING	VOC	-	32	-	-
EU-COOLING	VOC	-	-	-	-
EU-SHAKEOUT	VOC	-	-	-	-
EU-WEST-CUPOLA-1	VOC	-	3.2	-	-
EU-DUCTILE-IRON	VOC	-	-	-	-
EU-BULK-BOND	VOC	-	-	-	-
EU-MP-RBB	VOC	-	-	-	-