

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

March 21, 2023

PERMIT TO INSTALL
125-14C

ISSUED TO
Howmet Corporation

LOCATED AT
Plant 3
One Misco Drive
Whitetail, Michigan 49461

IN THE COUNTY OF
Muskegon

STATE REGISTRATION NUMBER
B1889

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: March 2, 2023 | |
| DATE PERMIT TO INSTALL APPROVED: March 21, 2023 | SIGNATURE: |
| DATE PERMIT VOIDED: | SIGNATURE: |
| DATE PERMIT REVOKED: | SIGNATURE: |

PERMIT TO INSTALL

Table of Contents

| | |
|--|----|
| COMMON ACRONYMS | 2 |
| POLLUTANT / MEASUREMENT ABBREVIATIONS..... | 3 |
| GENERAL CONDITIONS | 4 |
| EMISSION UNIT SPECIAL CONDITIONS..... | 6 |
| EMISSION UNIT SUMMARY TABLE | 6 |
| EUHCLRINSE | 7 |
| EU-T-302 | 9 |
| FLEXIBLE GROUP SPECIAL CONDITIONS..... | 11 |
| FLEXIBLE GROUP SUMMARY TABLE | 11 |
| FGEXTDCS | 12 |
| FGMACT6Z..... | 15 |
| FGACIDBATHS | 17 |
| FGFACILITY CONDITIONS..... | 19 |

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)) | Flexible Group ID |
|------------------|--|-------------------|
| EUHCLRINSE | One Hydrochloric Acid (HCl) rinse line consisting of an acid bath followed by a cold water and a hot water bath. Process is for neutralizing parts and is located in the Salt Bath area. Controlled by a wet scrubber. | NA |
| EU-T-302 | 2 Ferric Acid Etch lines, total of 12 tanks (consisting of Ferric Acid Etch tanks and rinse baths), located in Plant 3. Ferric Acid Etch tanks and hot water rinse tanks are controlled by a wet scrubber. The Ferric Acid Etch tanks compose of FeCl ₃ , HCl, HNO ₃ , and H ₂ O. | NA |
| EU-DC-103 | Material processing and handling operations in Plant 1 for the Pre-Finish 1 (PF1) operations. Controlled by Dust Collector 103. | FGEXTDCS |
| EU-DC-104 | Material processing and handling operations in Plant 1 for the Pre-Finish 1 (PF1) operations. Controlled by Dust Collector 104. | FGEXTDCS |
| EU-DC-106 | Material processing and handling operations in Plant 1 for the Metal Control operations. Controlled by Dust Collector 106. | FGEXTDCS |
| EU-DC-107 | Material processing and handling operations in Plant 1 for the Knockout operations. Controlled by Dust Collector 107. | FGEXTDCS |
| EU-DC-108 | Material processing and handling operations in Plant 1 for the Metal Control operations. Controlled by Dust Collector 108. | FGEXTDCS |
| EU-DC-109 | Material processing and handling operations in Plant 1 Tool Room. Controlled by Dust Collector 109. | FGEXTDCS |
| EU-DC-301 | Material processing and handling operations in Plant 3 for the Pre-Finish 1 (PF1) operations. Controlled by Dust Collector 301. | FGEXTDCS |
| EU-DC-346 | Material processing and handling operations in Plant 3 for the Pre-Finish 1 (PF1) and Pre-Finish (PF2) operations. Controlled by Dust Collector 346. | FGEXTDCS |
| EU-DC-347 | Material processing and handling operations in Plant 3 including tumble blast, belt sanders, alumina oxide hand blast and auto blast, nylon wheels (solid and flapper). Controlled by Dust Collector 347. | FGEXTDCS |
| EU-DC-305 | Material processing and handling operations in Plant 3 including MAC cells, NPI cells, Pre-finish 2 (PF2), FPI rework, and Final Finish 2 (FF2). Controlled by Dust Collector 305, or back-up Dust Collector 302. | FGEXTDCS |
| EU-DC-308 | Material processing and handling operations in Plant 3 for the Final Inspection Rework station. Controlled by Dust Collector 308. | FGEXTDCS |
| EU-T-321 | Acid bath line consisting of 12 process tanks, including two heated ferric chloride tanks, an inorganic alkaline tank, and a wash booth. Controlled by a shared horizontal wet scrubber with a mist eliminator. | FGACIDBATHS |
| EU-T-322 | Acid bath line consisting of 12 process tanks, including two heated ferric chloride tanks, an inorganic alkaline tank, and a wash booth. Controlled by a shared horizontal wet scrubber with a mist eliminator. | FGACIDBATHS |

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.

| |
|--|
| EUHCLRINSE EMISSION UNIT CONDITIONS |
|--|

DESCRIPTION

One Hydrochloric Acid (HCl) rinse line consisting of an acid bath followed by a cold water and a hot water bath. Process is for neutralizing parts and is located in the Salt Bath area.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Controlled by a wet scrubber.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUHCLRINSE unless the scrubber is installed and operating properly.¹ **(R 336.1225)**
2. The permittee shall equip and maintain EUHCLRINSE scrubber with devices which measure the pressure drop, scrubber liquid flow rate, and scrubbing liquid pH. **(R 336.1224, R 336.1225, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall not operate EUHCLRINSE unless an approvable operation and maintenance plan for the baths and scrubber is implemented, maintained, and has been submitted to the AQD District Supervisor. **(R336.1225, R336.1910)**
2. Records in accordance with the operation and maintenance plan for the purpose of compliance demonstration shall be kept on file for a period of at least five years and shall be made available to the Department upon request. **(R336.1225, R336.1910)**

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 Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SV-HCLRINSE | 24 ¹ | 37 ¹ | R 336.1225 |

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

EU-T-302
EMISSION UNIT CONDITIONS

DESCRIPTION

Two (2) Ferric Acid Etch lines, total of 12 tanks (consisting of Ferric Acid Etch tanks and rinse baths), located in Plant 3. Ferric Acid Etch tanks and hot water rinse tanks are controlled by a wet scrubber. The Ferric Acid Etch tanks compose of FeCl₃, HCl, HNO₃, and H₂O.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Crossflow packed wet scrubber

I. EMISSION LIMIT(S)

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|------------------|---------------------------------|--|------------------|------------------------------------|---|
| 1. HCl | 16.8 lbs per day ¹ | Calendar day | EU-T-302 | SC VI.1, SC VI.2 | R 336.1225 |
| 2. HCl | 3.10 tons per year ¹ | 12-month rolling time period as determined at the end of each calendar month | EU-T-302 | SC VI.2 | R 336.1225 |

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EU-T-302 unless the scrubber is installed and operating properly.¹ **(R 336.1224, R 336.1225)**
2. The permittee shall equip and maintain the EU-T-302 scrubber with devices which measure the pressure drop, scrubber liquid flow rate, and scrubbing liquid pH. **(R 336.1224, R 336.1225, R 336.1910)**
3. The permittee shall not operate EU-T-302 unless an approvable operation and maintenance plan for the baths and scrubber is implemented, maintained, and has been submitted to the AQD District Supervisor. **(R 336.1225, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(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 keep daily records of the concentration of hydrochloric acid and the amount of acid added to EU-T-302. All such records shall be kept on file for a period of at least five years and made available to the Department upon request. ¹ **(R 336.1225)**
2. The permittee shall calculate the daily, monthly, and 12-month rolling time period HCl emission rates from EU-T-302 by the last day of the calendar month, for the previous calendar month. The hours of operation and emission calculation information shall be kept on file for a period of at least five years and made available to the Department upon request. ¹ **(R 336.1225)**
3. The permittee shall keep records in accordance with the operation and maintenance plan for the baths and scrubber. Records shall be kept on file for a period of at least five years and shall be made available to the Department upon request. **(R 336.1225, R 336.1910)**

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 Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SV-T-302 | 42 ¹ | 50 ¹ | R 336.1225 |

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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 |
|-------------------|---|---|
| FGEXTDCS | Material processing and handling operations in Plant 1 and Plant 3 controlled by externally vented dust collectors. | EU-DC-103 EU-DC-104 EU-DC-106 EU-DC-107 EU-DC-108 EU-DC-109 EU-DC-301 EU-DC-305 EU-DC-308 EU-DC-346 EU-DC-347 |
| FGACIDBATHS | Two acid bath lines controlled by a shared horizontal wet scrubber with a mist eliminator. | EU-T-321 EU-T-322 |
| FGMACT6Z | The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing small foundry as defined by 40 CFR Part 63 Subpart ZZZZZZ. | NA |

**FGEXTDCS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Material processing and handling operations in Plant 1 and Plant 3.

Emission Unit: EU-DC-103, EU-DC-104, EU-DC-106, EU-DC-107, EU-DC-108, EU-DC-109, EU-DC-301, EU-DC-305, EU-DC-308, EU-DC-346, EU-DC-347

POLLUTION CONTROL EQUIPMENT

Externally vented dust collectors

I. EMISSION LIMIT(S)

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|------------------|--|---|---|------------------------------------|---|
| 1. PM | 0.02 lb/ 1,000 lb of exhaust gases ^{a*} | Hourly | The following in FGEXTDCS: EU-DC-103 EU-DC-104 EU-DC-106 EU-DC-107 EU-DC-108 EU-DC-301 EU-DC-305 EU-DC-308 EU-DC-346 EU-DC-347 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a) |
| 2. PM10 | 0.02 lb/ 1,000 lb of exhaust gases ^{a*} | Hourly | The following in FGEXTDCS: EU-DC-103 EU-DC-104 EU-DC-106 EU-DC-107 EU-DC-108 EU-DC-301 EU-DC-305 EU-DC-308 EU-DC-346 EU-DC-347 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |
| 3. PM2.5 | 0.02 lb/ 1,000 lb of exhaust gases ^{a*} | Hourly | The following in FGEXTDCS: EU-DC-103 EU-DC-104 EU-DC-106 EU-DC-107 EU-DC-108 EU-DC-301 EU-DC-305 EU-DC-308 EU-DC-346, EU-DC-347 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|-----------|---|--|-----------|-----------------------------|--|
| 4. PM | 0.01 lb/ 1,000 lb of exhaust gases ^a | Hourly | EU-DC-109 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a) |
| 5. PM10 | 0.01 lb/ 1,000 lb of exhaust gases ^a | Hourly | EU-DC-109 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |
| 6. PM2.5 | 0.01 lb/ 1,000 lb of exhaust gases ^a | Hourly | EU-DC-109 | SC V.1 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |
| 7. PM | 47.4 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGEXTDCS | SC VI.2 | R 336.1331(1)(c), R 336.1205(1)(a) |
| 8. PM10 | 47.4 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGEXTDCS | SC VI.2 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |
| 9. PM2.5 | 46.7 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGEXTDCS | SC VI.2 | R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d) |

^a Calculated on a dry gas basis.

* Emission limits are on a per stack basis.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any emission unit, within FGEXTDCS, unless its baghouse dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a), R 336.1301, R 336.1331, R 336.1910)**
2. The permittee shall equip each dust collector in FGEXTDCS with a device to measure the pressure drop across the cartridge/fabric filter. The pressure drop devices shall be installed, calibrated, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a), R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

1. Upon the request of the District Supervisor, the permittee shall verify PM, PM10, and PM2.5 emission rates from each emission unit within FGEXTDCS testing at owner's expense, in accordance with 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 |
| PM10/PM2.5 | 40 CFR Part 51, Appendix M |

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. 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, 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 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record, in a satisfactory manner, the pressure drop across each cartridge/fabric filter in FGEXTDCS on a weekly basis, at least once during each calendar week that the corresponding emission unit is in operation. (R 336.1205(1)(a), R 336.331, R 336.1910)
2. The permittee shall calculate and keep records of the annual emissions of PM, PM10, and PM2.5 from FGEXTDCS, in tons per 12-month rolling time period, as required by SC I.7, I.8, and I.9. (R 336.1331(1)(c), R 336.1205(1)(a), 40 CFR 52.21 (c) & (d))
3. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. (R 336.1331(1)(c), R 336.1205(1)(a))

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 Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SV-DC-103 | 18 | 35 | 40 CFR 52.21 (c) & (d) |
| 2. SV-DC-104 | 16 | 35 | 40 CFR 52.21 (c) & (d) |
| 3. SV-DC-106 | 18 | 35 | 40 CFR 52.21 (c) & (d) |
| 4. SV-DC-107 | 20 | 35 | 40 CFR 52.21 (c) & (d) |
| 5. SV-DC-108 | 14 | 35 | 40 CFR 52.21 (c) & (d) |
| 6. SV-DC-109 | 18 | 45 | 40 CFR 52.21 (c) & (d) |
| 7. SV-DC-301 | 30 | 28 | 40 CFR 52.21 (c) & (d) |
| 8. SV-DC-346 | 18 | 28 | 40 CFR 52.21 (c) & (d) |
| 9. SV-DC-347 | 28 | 28 | 40 CFR 52.21 (c) & (d) |
| 10. SV-DC-305 | 56 | 40 | 40 CFR 52.21 (c) & (d) |
| 11. SV-DC-308 | 16 | 32 | 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).

| |
|---|
| FGMACT6Z FLEXIBLE GROUP CONDITIONS |
|---|

DESCRIPTION

The affected source is the collection of all melting operations located at an aluminum, copper, or other nonferrous foundry, that is (or is part of) an area source of hazardous air pollutant (HAP) emissions. The affected source is an existing small foundry as defined by 40 CFR Part 63 Subpart ZZZZZZ.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall purchase only metal scrap that has been depleted (to the extent practicable) of other nonferrous foundry HAP in the materials charged to the melting furnace, except metal scrap that is purchased specifically for its HAP metal content for use in alloying or to meet specifications for the casting. *Other nonferrous foundry HAP* means any compound of the following metals: chromium, lead, and nickel, or any of these metals in the elemental form. This requirement does not apply to material that is not scrap (e.g., ingots, alloys, sows) or to materials that are not purchased (e.g., internal scrap, customer returns). **(40 CFR 63.11550(a)(2), 40 CFR 63.11556)**
2. The permittee shall melt less than 6,000 tons of metal(s) per calendar year. This condition is necessary to avoid requirements of 40 CFR Part 63.11550(b). **(40 CFR Part 63, Subpart ZZZZZZ)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operation to the extent practicable, except when access is needed; including, but not limited to charging, alloy addition, and tapping. **(40 CFR 63.11550(a)(1))**
2. The permittee shall prepare and operate pursuant to a written management practices plan. The management practices plan must include the required management practices in SC II.1 and SC III.1 and may include any other management practices that are implemented at the facility to minimize emissions from melting furnaces. **(40 CFR 63.11550(a)(3))**

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 perform monthly inspections and record results to ensure compliance with SC II.1 and SC III.1. **(40 CFR 63.11553(c)(2))**
2. The permittee shall keep the following records to document conformance with the management practices plan required by SC III.2: **(40 CFR 63.11552(a), 40 CFR 63.11553(c)(2))**
 - a) For melting furnaces equipped with a cover or enclosure, records must identify each melting furnace equipped with a cover or enclosure and document that the procedures in the management practices plan were followed during monthly inspections. These records may be in the form of a checklist.
 - b) Records documenting that the permittee purchased only metal scrap that has been depleted of HAP metals (to the extent practicable) charged to the melting furnace. If you purchase scrap metal specifically for the HAP metal content for use in alloying or to meet specifications for the casting, you must keep records to document that the HAP metal is included in the material specifications for the cast metal product.

VII. REPORTING

1. The permittee shall submit and keep a copy of an Initial Notification and a Notification Of Compliance Status to the Administrator as specified in 40 CFR Part 63 Subpart ZZZZZZ. **(40 CFR 63.11553(a), (b))**
2. If a deviation occurs during a semiannual reporting period, you must submit a compliance report to your permitting authority according to the requirements below. **(40 CFR 63.11553(e))**
 - a) Each reporting period covers the semiannual period from January 1 through June 30 or from July 1 through December 31. Your compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.
 - b) A compliance report must include all of the information below.
 - i. Company name and address.
 - ii. Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
 - iii. Date of the report and beginning and ending dates of the reporting period.
 - iv. Identification of the affected source, the pollutant being monitored, applicable requirement, description of deviation, and corrective action taken.

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

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

Footnotes:

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

| |
|--|
| FGACIDBATHS FLEXIBLE GROUP CONDITIONS |
|--|

DESCRIPTION

Two acid bath lines controlled by a shared horizontal wet scrubber with a mist eliminator.

Emission Unit: EU-T-321, EU-T-322

POLLUTION CONTROL EQUIPMENT

Horizontal wet scrubber with a mist eliminator on heated ferric chloride tanks

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate heated ferric chloride tanks in FGACIDBATHS unless the horizontal wet scrubber and mist eliminator pressure drop, liquid flow rate, and pH are maintained in the range specified in the operation and maintenance plan.¹ **(R 336.1224, R 336.1225)**
2. The permittee shall not operate heated ferric chloride tanks in FGACIDBATHS unless an approvable operation and maintenance plan for the baths and the horizontal wet scrubber with a mist eliminator is implemented, maintained, and has been submitted to the AQD District Supervisor. **(R 336.1224, R 336.1225, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the horizontal wet scrubber and mist eliminator with devices which measure the scrubbing liquid pH and continuously monitor the pressure drop and scrubber liquid flow rate. **(R 336.1224, R 336.1225, R 336.1910)**

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 monitor and record, in a manner satisfactory to the AQD District Supervisor, the horizontal wet scrubber and mist eliminator pressure drop on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**
2. The permittee shall monitor and record, in a manner satisfactory to the AQD District Supervisor, the horizontal wet scrubber liquid flow rate on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

3. The permittee shall monitor and record, in a manner satisfactory to the AQD District Supervisor, the horizontal wet scrubber scrubbing liquid pH on a daily basis. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1224, R 336.1225, R 336.1910)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of any emission unit in FGACIDBATHS. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

| Stack & Vent ID | Maximum Exhaust Diameter / Dimensions (inches) | Minimum Height Above Ground (feet) | Underlying Applicable Requirements |
|----------------------------|---|---|---|
| 1. SV-Scrubber2 | 46 | 37.5 | 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).

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. PM | 65 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGFACILITY | SC VI.2 | R 336.1205(3) |
| 2. PM10 | 75 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGFACILITY | SC VI.2 | R 336.1205(3) |
| 3. PM2.5 | 75 tons per year | 12-month rolling time period as determined at the end of each calendar month | FGFACILITY | SC VI.2 | R 336.1205(3) |

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. All such records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(3))**

2. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period PM, PM10, and PM2.5 emission calculation records for FGFACILITY, as required by SC I.1, SC I.2, and SC I.3. The permittee shall keep all records on file at a location approved by the AQD District Supervisor and make them available to the Department upon request. **(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).