

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 |
| PM ₁₀ | Particulate Matter equal to or less than 10 microns in diameter |
| PM _{2.5} | 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 |
|--|--|--|-------------------|
| EUBOILER1* | One boiler capable of firing either natural gas or a combination of natural gas and blast furnace gas (BFG). When exclusively firing natural gas, the boiler is rated at a design heat input of 763 MM Btu per hour, and while firing natural gas and BFG, the boiler is rated at a design heat input of 746 MM Btu per hour. While operating on either fuel, the boiler has a design output capacity of 500,000 pounds of steam per hour. | 8/7/2001 | FGBFG |
| EUBOILER2* | One boiler capable of firing either natural gas or a combination of natural gas and blast furnace gas (BFG). When exclusively firing natural gas, the boiler is rated at a design heat input of 763 MM Btu per hour, and while firing natural gas and BFG, the boiler is rated at a design heat input of 746 MM Btu per hour. While operating on either fuel, the boiler has a design output capacity of 500,000 pounds of steam per hour. | 8/7/2001 | FGBOILERS |
| EUBOILER3* | One boiler capable of firing either natural gas or a combination of natural gas and blast furnace gas (BFG). When exclusively firing natural gas, the boiler is rated at a design heat input of 763 MM Btu per hour, and while firing natural gas and BFG, the boiler is rated at a design heat input of 746 MM Btu per hour. While operating on either fuel, the boiler has a design output capacity of 500,000 pounds of steam per hour. | 8/7/2001 | FGBOILERS |
| EUBFGFLARE1* | One blast furnace gas flare equipped with a natural gas pilot flame. This flare is fired exclusively with blast furnace gas and is designed to operate when the blast furnace gas/natural gas boilers are not operating. The flare is rated at an approximate heat input of 480 MM Btu/hour. | 3/1/1999 | FGBFGFLARE S |
| EUBFGFLARE2* | One blast furnace gas flare equipped with a natural gas pilot flame. This flare is fired exclusively with blast furnace gas and is designed to operate when the blast furnace gas/natural gas boilers are not operating. The flare is rated at an approximate heat input of 1292 MM Btu/hour. | 5/1/1999 | FGBFGFLARE S |
| *Other applicable permit requirements for the emission units in this table can be found in the Title V permit, ROP-MI-N6631-2012a. | | | |

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.

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 |
|--------------------------|---|---|
| FGBFG | This emission group consists of any emission unit which combusts, or has the capability of combusting, blast furnace gas. | EUBOILER1, EUBOILER2, EUBOILER3, EUBFGFLARE1, EUBFGFLARE2 |

**FGBFG
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

This emission group consists of any emission unit which combusts, or has the capability of combusting, blast furnace gas.

Emission Unit: EUBOILER1, EUBOILER2, EUBOILER3, EUBFGFLARE1, EUBFGFLARE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

| Pollutant | Limit | Time Period / Operating Scenario | Equipment | Monitoring / Testing Method | Underlying Applicable Requirements |
|--------------------|--------------|---|------------------|------------------------------------|---|
| 1. SO ₂ | 840 pph** | Daily average | FGBFG | SC VI.1 | FIP, Docket Id No. EPA-R05-OAR-2021-0536, 40 CFR 52.1189(e)(1), Act 451 324.5503(b) |

** This limit includes all periods of operation (includes during startups, shutdowns and malfunctions).

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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 install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the SO₂ emissions from EUBOILER1, EUBOILER2 and EUBOILER3 on a continuous basis. Installation and operation of each continuous emission monitoring system (CEMS) shall meet the timelines, requirements and reporting detailed in 40 CFR Part 60 Appendix F. If the permittee chooses to use a Predictive Emissions Monitoring System (PEMS) in lieu of a Continuous Emissions Monitoring System (CEMS) to monitor SO₂ emissions, the permittee shall follow the protocol delineated in Performance Specification 16 in Appendix B of 40 CFR Part 60. **(FIP, Docket Id No. EPA-R05-OAR-2021-0536, 40 CFR 52.1189(e)(2)(i), Act 451 324.5503(b))**
2. The owner or operator shall verify compliance with the emission limits for Boilers 1, 2 and 3 and Flares 1 and 2 (combined) by following the procedures and methodologies contained in the document entitled

“Protocol for Demonstrating Continuous Compliance with the Emission Limitations of ROP MI-ROP-N6631-2004” dated May 31, 2011, or subsequent revisions to this document approved by EPA. (FIP, Docket Id No. EPA-R05-OAR-2021-0536, 40 CFR 52.1189(e)(2)(ii), Act 451 324.5503(b))

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA