

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

EFFECTIVE DATE: October 1, 2019

ISSUED TO

**Metal Technologies – Ravenna Casting Center LLC**

State Registration Number (SRN): N5866

LOCATED AT

3800 Adams Road, Ravenna, Muskegon County, Michigan 49451

**RENEWABLE OPERATING PERMIT**

Permit Number: MI-ROP-N5866-2019

Expiration Date: October 1, 2024

Administratively Complete ROP Renewal Application  
Due Between April 1, 2023 and April 1, 2024

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Rule 210(1) of the administrative rules promulgated under Act 451, this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

**SOURCE-WIDE PERMIT TO INSTALL**

Permit Number: MI-PTI-N5866-2019

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environment, Great Lakes, and Energy

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Heidi Hollenbach, Grand Rapids District Supervisor

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## AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

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

## A. GENERAL CONDITIONS

### Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. (**R 336.1213(5)**)
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. (**R 336.1213(5)(a), R 336.1214a(5)**)
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. (**R 336.1213(5)(b), R 336.1214a(3)**)

### General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. (**R 336.1213(1)(a)**)
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. (**R 336.1213(1)(b)**)
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. (**R 336.1213(1)(c)**)
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: (**R 336.1213(1)(d)**)
  - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
  - c. Inspect, at reasonable times, any of the following:
    - i. Any stationary source.
    - ii. Any emission unit.
    - iii. Any equipment, including monitoring and air pollution control equipment.
    - iv. Any work practices or operations regulated or required under the ROP.
  - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. (**R 336.1213(1)(e)**)

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. (**R 336.1213(1)(f)**)
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. (**R 336.1213(1)(g)**)
8. This ROP does not convey any property rights or any exclusive privilege. (**R 336.1213(1)(h)**)

## Equipment & Design

9. Any 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).<sup>2</sup> (**R 336.1370**)
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. (**R 336.1910**)

## Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in Subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"<sup>2</sup> (**R 336.1301(1)**)
  - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
  - b. A limit specified by an applicable federal new source performance standard.

The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
  - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.<sup>1</sup> (**R 336.1901(a)**)
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> (**R 336.1901(b)**)

## Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).<sup>2</sup> (**R 336.2001**)
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. (**R 336.2001(2)**, **R 336.2001(3)**, **R 336.2003(1)**)
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. (**R 336.2001(5)**)

## Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. (**R 336.1213(3)(b)**)
  - a. The date, location, time, and method of sampling or measurements.
  - b. The dates the analyses of the samples were performed.
  - c. The company or entity that performed the analyses of the samples.
  - d. The analytical techniques or methods used.
  - e. The results of the analyses.
  - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. (**R 336.1213(1)(e), R 336.1213(3)(b)(ii)**)

## Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. (**R 336.1213(3)(c)**)
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. (**R 336.1213(4)(c)**)
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. (**R 336.1213(4)(c)**)
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. (**R 336.1213(3)(c)**)
  - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
  - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
  - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
  - a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
  - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. 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 appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.<sup>2</sup> **(R 336.1912)**

## Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
  - a. The applicable requirements are included and are specifically identified in the ROP.
  - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
  - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
  - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
  - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. (**R 336.1213(6)(b)(iv)**)
- 28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
  - a. Operational flexibility changes made pursuant to Rule 215. (**R 336.1215(5)**)
  - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). (**R 336.1216(1)(b)(iii)**)
  - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. (**R 336.1216(1)(c)(iii)**)
  - d. Minor Permit Modifications made pursuant to Rule 216(2). (**R 336.1216(2)(f)**)
  - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. (**R 336.1216(4)(e)**)
- 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. (**R 336.1217(1)(c), R 336.1217(1)(a)**)

## **Revisions**

- 30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. (**R 336.1215, R 336.1216**)
- 31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). (**R 336.1219(2)**)
- 32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. (**R 336.1210(10)**)
- 33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. (**R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d)**)

## **Reopenings**

- 34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
  - a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. (**R 336.1217(2)(a)(i)**)
  - b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. (**R 336.1217(2)(a)(ii)**)
  - c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. (**R 336.1217(2)(a)(iii)**)
  - d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. (**R 336.1217(2)(a)(iv)**)

## Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

## Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

## Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
  - a. June 21, 1999,
  - b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
  - c. The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

## Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

## Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.<sup>2</sup> (**R 336.1201(1)**)
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.<sup>2</sup> (**R 336.1201(8), Section 5510 of Act 451**)
45. The terms and conditions of a PTI 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 the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI 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. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.<sup>2</sup> (**R 336.1219**)
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.<sup>2</sup> (**R 336.1201(4)**)

### **Footnotes:**

<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

## C. EMISSION UNIT SPECIAL CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

### 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-CLEAN	Cast cleaning operations. Baghouse control of emissions (West Blast Baghouse).	08-15-1995/04-04-2000	FG-CAMUNITS
EU-PREHEATER	One 13.2 MMBTU/hr natural gas-fired pre-heater. Baghouse control of emissions (East and West Melt Baghouses). (PTI No. 17-15)	08-15-1995/10-29-2012	FG-MELTING FG-MACT EEEEE
EU-MELTING	Three (3) 9-ton/hr electric induction furnaces. Baghouse control of emissions. (East and West Melt Baghouses). (PTI No. 17-15)	08-15-1995/04-04-2000	FG-MELTING FG-CAMUNITS FG-MACT EEEEE
EU-INOCULATION	Inoculation of gray iron. Baghouse control of emissions (Inoculation Baghouse). (PTI No. 17-15)	08-15-1995/04-04-2000	FG-MELTING
EU-POURING	Two (2) pouring stations. Baghouse control of emissions (East and West Sand Baghouses). (PTI No. 17-15)	08-15-1995/09-11-2000	FG-SAND FG-CAMUNITS FG-MACT EEEEE
EU-COOLING	Two (2) mold cooling lines. Baghouse control of emissions (East and West Sand Baghouses). (PTI No. 17-15)	08-15-1995/04-04-2000	FG-SAND FG-CAMUNITS
EU-SHAKEOUT	Two (2) sonic shakeout systems. Baghouse control of emissions (East and West Sand Baghouses). (PTI No. 17-15)	08-15-1995/04-04-2000	FG-SAND FG-CAMUNITS
EU-SANDSYSTEM	Sand handling system. Baghouse control of emissions (East and West Sand Baghouses). (PTI No. 17-15)	08-15-1995/04-04-2000	FG-SAND FG-CAMUNITS

## **EU-CLEAN EMISSION UNIT CONDITIONS**

### **DESCRIPTION**

Cast cleaning operations including three (3) shotblasters, one (1) tumblaster, sixteen (16) grinders and miscellaneous inspection/cleaning stations. This emission unit is subject to CAM for particulate emissions.

**Flexible Group ID:** FG-CAMUNITS

### **POLLUTION CONTROL EQUIPMENT**

West Blast Baghouse

#### **I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate	0.01 lb. per 1,000 lbs. exhaust gases on a dry gas basis <sup>2</sup>	Hourly	EU-CLEAN	SC V.1 FG-CAMUNITS	R336.1331(1)(c)
2. Particulate	2.2 lbs. per hour <sup>2</sup>	Hourly	EU-CLEAN	SC V.1 & VI.2 FG-CAMUNITS	R336.1331(1)(c)
3. Particulate	9.6 tpy <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-CLEAN	SC V.1 & VI.2 FG-CAMUNITS	R336.1331(1)(c)
4. Opacity	5% <sup>2</sup>	6-minute average	EU-CLEAN	SC III.1 & III.2 FG-CAMUNITS	R336.1301(1)(a)

#### **II. MATERIAL LIMIT(S)**

NA

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate the emission unit unless the baghouse is installed and operating properly.<sup>2</sup> (R 336.1910)
2. The permittee shall not operate the emission unit unless the malfunction/preventative maintenance plan is implemented and maintained.<sup>2</sup> (R 336.1910)

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall equip and maintain the baghouse with instrumentation to continuously measure the pressure drop across each fabric filter collector.<sup>2</sup> (R 336.1910)

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1213(3)(b)(ii))

1. The permittee shall verify particulate matter emission rates from EU-CLEAN by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method

listed in 40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules. An alternate method, or a modification to the approved USEPA 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 the appropriate AQD 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 the appropriate AQD District Office within 60 days following the last date of the test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)

2. The permittee shall verify the particulate matter emission rates from EU-CLEAN, at a minimum, every five years from the date of the last test. (**R 336.1213(3), 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 336.1213(3)**)

**See Appendix 5**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall maintain a monthly record of the hours of operation for the emission unit. (**R 336.1213(3)**)
2. The permittee shall calculate and maintain records of particulate emissions in pounds per hour and tons per year based on a 12-month rolling time period on a monthly basis. (**R 336.1213(3)**)

**VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)
4. 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 336.1213(3)(c), R 336.2001(5)**)
5. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (**R 336.12001(3)**)
6. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date. (**R 336.2001(4)**)
7. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (**R 336.2001(5)**)

**See Appendix 8**

### **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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-CLEAN-03	60 <sup>1</sup>	65 <sup>1</sup>	R 336.1901

### **IX. OTHER REQUIREMENT(S)**

NA

#### **Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## D. FLEXIBLE GROUP SPECIAL CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

### 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-MELTING	Flexible group consists of metal processing operations that have combined emission limits, including pre-heater, induction melting furnaces, and inoculation operations. EU-PREHEATER and EU-MELTING are controlled by the East Melt Baghouse and West Melt Baghouse. EU-INOCULATION is controlled by the Inoculation Baghouse.	EU-PREHEATER EU-MELTING EU-INOCULATION
FG-SAND	Sand system, shakeout and cooling operations controlled by East and West Sand Baghouses.  Pouring, cooling, shakeout, and sand system operations controlled by East and West Sand Baghouses.	EU-POURING EU-COOLING EU-SHAKEOUT EU-SANDSYSTEM
FG-CAMUNITS	This flexible group consists of emission units that use a control device to achieve compliance with a federally enforceable emission limitation or standard for particulate matter and are subject to CAM because precontrolled emissions are greater than 100 tons.	EU-CLEAN EU-MELTING EU-POURING EU-COOLING EU-SHAKEOUT EU-SANDSYSTEM
FG-MACT EEEEE	Foundry processes subject to 40 CFR Part 63, Subpart EEEEE.	EU-PREHEATER EU-MELTING EU-POURING
FG-RULE287(c)	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.	NA
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	NA
FG-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	NA

## **FG-MELTING FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

Flexible group consists of metal processing operations that have combined emission limits, including pre-heater, induction melting furnaces, and inoculation operations.

**Emission Units:** EU-PREHEATER, EU-MELTING, EU-INOCULATION

### **POLLUTION CONTROL EQUIPMENT**

EU-PREHEATER and EU-MELTING are controlled by the East Melt Baghouse and West Melt Baghouse. EU-INOCULATION is controlled by the Inoculation Baghouse.

### **I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate Matter	0.01 pounds per 1,000 pounds of exhaust gases, as calculated on a dry gas basis <sup>2</sup>	Hourly	FG-MELTING	SC V.1 FG-CAMUNITS	<b>R 336.1331(1)(c)</b>
2. Particulate Matter	2.5 pounds per hour <sup>2</sup>	Hourly	FG-MELTING	SC V.1 & VI.4 FG-CAMUNITS	<b>R 336.1331(1)(c)</b>
3. Particulate Matter	10.95 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	FG-MELTING	SC V.1 & VI.4 FG-CAMUNITS	<b>R 336.1331(1)(c)</b>
4. Carbon Monoxide	15.1 pounds per hour <sup>2</sup>	Hourly	FG-MELTING	SC V.1 & VI.4	<b>R 336.1205(1)</b>
5. Carbon Monoxide	42.8 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	FG-MELTING	SC V.1 & VI.4	<b>R 336.1205(1)</b>
6. VOC	4.4 pounds per hour <sup>2</sup>	Hourly	FG-MELTING	SC V.1 & VI.4	<b>R 336.1205(1)</b>
7. VOC	10.8 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	FG-MELTING	SC V.1, VI.4	<b>R 336.1205(1)</b>
8. Nitrogen Oxides	3.1 pounds per hour <sup>2</sup>	Hourly	FG-MELTING	SC V.1 & VI.4	<b>R 336.1205(1)</b>
9. Nitrogen Oxides	13.2 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	FG-MELTING	SC V.1 & VI.4	<b>R 336.1205(1)</b>
10. Lead	0.07 pound per hour <sup>1</sup>	Hourly	FG-MELTING	SC V.1 & VI.4	<b>R 336.1225</b>
11. Lead	0.16 ton per year <sup>1</sup>	12-month rolling time period as determined at the end of each calendar month	FG-MELTING	SC V.1 & VI.4	<b>R 336.1225</b>
12. Total Chromium	0.000876 pound per hour <sup>2</sup>	Hourly	FG-MELTING	SC V.1 & VI.4	<b>R 336.1225</b>
13. Opacity	5% <sup>2</sup>	6-minute average	FG-MELTING	SC III.1 & III.2	<b>R 336.1301(1)(c)</b>

## **II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Furnace charge material	27 tons per hour <sup>2</sup>	Monthly average	EU-MELTING	SC VI.3	<b>R 336.1205(1) R 336.1225</b>
2. Furnace charge material	132,000 tons per year <sup>2</sup>	12-month rolling time period as determined at the end of each calendar month	EU-MELTING	SC VI.3	<b>R 336.1205(1) R 336.1225</b>

3. The permittee shall not use EU-MELTING for the production of stainless steel products.<sup>2</sup> (**R 336.1224, R 336.1225**)

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate FG-MELTING unless an updated malfunction/preventative maintenance plan as described in Rule 911(2), has been submitted within 45 days of permit issuance, and is implemented and maintained. If at any time the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days, if new equipment is installed, or upon request from the AQD District Supervisor. The permittee shall submit the plan and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits<sup>2</sup> (**R 336.1225, R 336.1331, R 336.1910, R 336.1911**)
2. The permittee shall not operate any emission unit in FG-MELTING unless the corresponding baghouses are installed and operating properly.<sup>2</sup> (**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 336.1213(3)(b)(ii)**)

1. The permittee shall verify PM, NOx, CO, VOC, Lead and total chromium emission rates from FG-MELTING 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
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved USEPA 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 the appropriate AQD 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 the

appropriate AQD District Office within 60 days following the last date of the test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)

2. The permittee shall verify the PM, NOx, CO, VOC, Lead and total chromium emission rates from FG-MELTING, at a minimum, every five years from the date of the last test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)
3. The permittee shall notify the AQD Technical Programs Unit Supervisor and the AQD District Supervisor not less than 30 days of the time and place before performance tests are conducted. (**R 336.1213(3)**)

#### **See Appendix 5**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. All required records shall be completed 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.<sup>2</sup> (**R 336.1201**)
2. The permittee shall maintain a monthly record of the hours of operation for each emission unit in FG-MELTING.<sup>2</sup> (**R 336.1205(1), R 336.1331(1)(c), R 336.1225**)
3. The permittee shall maintain a monthly record of material charge rates to the furnaces.<sup>2</sup> (**R 336.1205(1), R 336.1225**)
4. The permittee shall calculate and maintain the following records of emissions for all pollutants listed in SC I.1 through SC I.12:
  - a. Average pounds per hour on a monthly basis, and
  - b. Tons per month and tons per 12-month rolling time period.

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.<sup>2</sup> (**R 336.1205(1), R 336.1331(1)(c), R 336.1225**)

#### **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and the appropriate AQD District Office, in a format approved by the AQD. (**R 336.1213(3)(c), R 336.2001(5)**)
5. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (**R 336.12001(3)**)
6. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date. (**R 336.2001(4)**)

7. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. **(R 336.2001(5))**

See Appendix 8

### **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-MELT-01	60 <sup>1</sup>	70 <sup>1</sup>	<b>R 336.1225</b>
2. SV-INOCULATION-04	52 <sup>1</sup>	70 <sup>1</sup>	<b>R 336.1225</b>

### **IX. OTHER REQUIREMENT(S)**

NA

#### **Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## **FG-SAND FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

Pouring, cooling, shakeout, and sand system operations.

**Emission Units:** EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM

### **POLLUTION CONTROL EQUIPMENT**

East Sand Baghouse  
West Sand Baghouse

### **I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring/ Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Particulate Matter	0.01 pound per 1,000 pounds of exhaust gases, calculated on a dry gas basis <sup>2</sup>	Hourly	FG-SAND	SC V.1 & VI.2	<b>R 336.1331(1)(c)</b>
2. Particulate Matter	6.0 pounds per hour <sup>2</sup>	Hourly	FG-SAND	SC V.1, VI.3 & VI.4 FG-CAMUNITS	<b>R 336.1331(1)(c)</b>
3. Particulate Matter	26.3 tons per year <sup>2</sup>	Based on a 12-month rolling time period as determined at the end of each calendar month	FG-SAND	SC V.1, VI.3 & VI.4 FG-CAMUNITS	<b>R 336.1331(1)(c)</b>
4. Carbon Monoxide	98.5 pounds per hour <sup>2</sup>	Hourly	FG-SAND	SC V.1, VI.3 & VI.4	<b>40 CFR 52.21(d)</b>
5. Carbon Monoxide	270 tons per year <sup>2</sup>	Based on a 12-month rolling time period as determined at the end of each calendar month	FG-SAND	SC V.1 & VI.3	<b>40 CFR 52.21(d)</b>
6. VOC	4.0 pounds per hour <sup>2</sup>	Hourly	FG-SAND	SC V.1 or V.2, VI.3 & VI.4	<b>R 336.1702(a)</b>
7. VOC	12.0 tons per year <sup>2</sup>	Based on a 12-month rolling time period as determined at the end of each calendar month	FG-SAND	SC V.1 or V.2 & VI. 3	<b>R 336.1702(a)</b>
8. Total Chromium	0.00168 pounds per hour <sup>2</sup>	Hourly	FG-SAND	SC V.1, VI.3 & VI.4	<b>R 336.1225</b>
9. Opacity	5% Opacity <sup>2</sup>	6-minute average	FG-SAND	SC III.1 & III.2 FG-CAMUNITS	<b>R 336.1301(1)(a)</b>

## **II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Sand	600,000 tons per year <sup>2</sup>	Based on a 12-month rolling time period as determined at the end of each calendar month	FG-SAND	SC V1.3	<b>R 336.1205(1)</b>

2. The permittee shall not use FG-SAND for the production of stainless steel products.<sup>2</sup> (**R 336.1224, R 336.1225**)

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate FG-SAND unless an updated malfunction/preventative maintenance plan as described in Rule 911(2), has been submitted within 45 days of permit issuance, and is implemented and maintained. If at any time the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the plan within 45 days after such an event occurs. The permittee shall also amend the plan within 45 days, if new equipment is installed, or upon request from the AQD District Supervisor. The permittee shall submit the plan and any amendments to the plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the plan or amended plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.<sup>2</sup> (**R 336.1225, R 336.1331, R 336.1910, R 336.1911**)
2. The permittee shall not operate FG-SAND unless the baghouses are installed and operating properly.<sup>2</sup> (**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 336.1213(3)(b)(ii)**)

1. The permittee shall verify PM, CO, VOC, and total chromium emission rates from FG-SAND 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
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved USEPA 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 the appropriate AQD 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 the appropriate AQD District Office within 60 days following the last date of the test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)

2. As an alternative to the requirements of SC V.1 stack testing, the permittee may forego stack testing of VOC and instead demonstrate compliance with SC I.6 and 1.7 using emission factors for VOC developed as part of the Casting Emission Reduction Program (CERP), as long as those emission factors continue to be representative of the materials that are in use at the plant.<sup>2</sup> (**R 336.1702(a)**)
3. The permittee shall verify the PM, CO, VOC, and total chromium emission rates from FG-SAND, at a minimum, every five years from the date of the last test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the AQD District Supervisor not less than 30 days of the time and place before performance tests are conducted. (**R 336.1213(3)**)

**See Appendix 5**

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. All required records shall be completed 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.<sup>2</sup> (**R 336.1201**)
2. The permittee shall maintain a monthly record of the hours of operation for FG-SAND.<sup>2</sup> (**R 336.1331(1)(c), R 336.1225, R 336.1702(a), 40 CFR 52.21(d)**)
3. The permittee shall calculate and maintain the following records of emissions for PM, CO, VOC, and total chromium:
  - a. Average pounds per hour on a monthly basis, and
  - b. Tons per month and tons per 12-month rolling time period.

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.<sup>2</sup> (**R 336.1331(1)(c), R 336.1225, R 336.1702(a), 40 CFR 52.21(d)**)

4. The permittee shall maintain a monthly record and 12-month rolling average record of the amount of sand used in molding operations.<sup>2</sup> (**R 336.1205(1)**)

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)
4. 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 336.1213(3)(c), R 336.2001(5)**)
5. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (**R 336.12001(3)**)

6. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor no less than 7 days prior to the anticipated test date. (**R 336.2001(4)**)
7. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (**R 336.2001(5)**)

See Appendix 8

### **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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-SAND-02	84 <sup>1</sup>	126.25 <sup>1</sup>	<b>R 336.1225</b>

### **IX. OTHER REQUIREMENT(S)**

1. The permittee shall report any product formulation changes and/or compositional changes in any agent (binding agent, mold release, mold coating agents) and shall receive written approval from the AQD for any product prior to its use in production. This condition does not apply to testing of products for possible use in production provided that the duration of the testing does not exceed five days in any month for any product.<sup>1</sup> (**R 336.1225**)

#### **Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## **FG-CAMUNITS FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

This flexible group consists of emission units that use a control device to achieve compliance with a federally enforceable emission limitation or standard for particulate matter and are subject to 40 CFR Part 64 CAM because pre-controlled emissions are greater than 100 tons.

**Emission Units:** EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM

### **POLLUTION CONTROL EQUIPMENT**

EU-CLEAN – West Blast Baghouse.

EU-MELTING – East and West Melt Baghouses.

EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM – East and West Sand Baghouses

#### **I. EMISSION LIMIT(S)**

NA

#### **II. MATERIAL LIMIT(S)**

NA

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. If visible emissions are observed, the permittee shall initiate corrective action, beginning with an evaluation of the occurrence to determine the action necessary to correct the situation. (**40 CFR 64.7(d), 40 CFR 64.6(c)**)
2. The permittee shall operate the West Blast Baghouse (EU-CLEAN), East and West Melt Baghouse (EU-MELTING) and East and West Sand Baghouse (EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM) in accordance with the differential pressure drop ranges contained within the Operation and Maintenance Plan (O&M Plan). If an excursion occurs outside of these ranges, the permittee shall initiate corrective action. (**40 CFR 64.7(d), 40 CFR 64.6(c)**)
3. For EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, and EU-SANDSYSTEM, the permittee shall install, operate and maintain bag leak detection systems on each of the baghouse outlets that is equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm set point established in the O&M Plan. (**40 CFR 64.7(d), 40 CFR 64.6(c)**)

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall, at all times, maintain the monitoring and differential pressure gauge for EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, and EU-SANDSYSTEM. A bag leak detection system shall be maintained for EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, and EU-SANDSYSTEM, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. (**40 CFR 64.7(d)**)

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall verify opacity from CAM-affected emission units, EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM by testing at the owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 51,

Appendix M; 40 CFR Part 60, Appendix A and B. An alternate method, or a modification to the approved USEPA Method, may be specified in an AQD-approved Test Protocol. 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 appropriate AQD District Office within 30 days following the last date of the test. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)

2. The permittee shall verify opacity, through certified visible emissions observations, from EU-CLEAN, EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM, at a minimum, semiannually. (**R 336.1213(3), R 336.2001, R 336.2003, R 336.2004, CFR 64.6(c)(i),(ii))**)
3. The permittee shall notify the AQD District Supervisor not less than 30 days of the time and place before performance tests are conducted. (**R 336.1213(3)**)

**See Appendix 5**

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. Pressure drop across the West Blast Baghouse (EU-CLEAN), East and West Melt Baghouse (EU-MELTING) and East and West Sand Baghouse (EU-POURING, EU-COOLING, EU-SHAKEOUT, EU-SANDSYSTEM) shall be measured with a differential pressure gauge continuously and shall be recorded once daily when the process is in operation. The gauges shall be calibrated according to manufacturer's recommendations. (**40 CFR 64.6(c)(1), R 336.1213(3)**)
2. The permittee shall perform (non-certified) visual inspections for opacity, on a production day basis when the emission units are in operation, as an indicator of proper operation of the dust collector. The indicator is the presence of visible emissions. The visible emission checks shall be documented and recorded in accordance with Appendix 3. If visible emissions are observed, the permittee shall conduct an opacity reading using USEPA Reference Method 9. An excursion is an opacity reading of greater than 5%. (**40 CFR 64.7(d), 40 CFR 64.6(c)(1)(i and ii), R 336.1213(3)**)
3. The permittee shall monitor and record the relative particulate matter loadings from each baghouse controlling emissions from EU-MELTING, EU-POURING, EU-COOLING, EU-SHAKEOUT and EU-SANDSYSTEM on a continuous basis with a bag leak detection system. (**40 CFR 64.7(d), 40 CFR 64.6(c)**)
4. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. (**40 CFR 64.6(c)(3), 40 CFR 64.7(c)**)
5. The permittee shall initiate the preventive maintenance plan if the pressure drop deviates from the ranges established in the O&M Plan for the West Blast Baghouse (EU-CLEAN) based on the daily readings. These are excursions. (**40 CFR 64.6(c)(2), 40 CFR 64.7(d)**)
6. The permittee shall initiate the preventive maintenance plan if the alarm on the bag leak detection system sounds in response to an increase in relative particulate loadings over the alarm set point established in the operation and maintenance plan. These are excursions. (**40 CFR 64.6(c)(2), 40 CFR 64.7(d)**)

7. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). (**40 CFR 64.7(d)**)
8. The permittee shall, at all times, maintain the monitoring system, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment. (**40CFR 64.7(b)**)
9. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. (**40 CFR 64.9(b)(1)**)

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)
4. 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 336.1213(3)(c), R 336.2001(5)**)
5. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the first anticipated test date covered by the permit. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. The test protocol shall also provide the anticipated five (5) year test schedule. At least 30 days prior to each anticipated test date, the permittee shall notify the District Supervisor by email of the planned test date. (**R 336.12001(3), (R 336.2001(4)**)
6. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (**R 336.2001(5)**)
7. Each semiannual report of monitoring deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. (**40 CFR 64.9(a)(2)(i)**)
8. Each semiannual report of monitoring deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. (**40 CFR 64.9(a)(2)(ii)**)

**See Appendix 8**

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable requirements of 40 CFR Part 64. (**40 CFR 64**)
2. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. (**40 CFR 64.7(e)**)
3. The permittee shall submit a revised CAM Plan within 180 days of the issuance of the ROP. (**40 CFR 64.6(e)(2)**)

### **Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## **FG-MACT EEEEE FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

The affected source is a new or existing iron and steel foundry, that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. An existing affected source is a source that commences construction or reconstruction before December 23, 2002. A new affected source is a source that commences construction or reconstruction on or after December 23, 2002. The regulations cover emissions from metal melting furnaces, scrap preheaters, new pouring areas, pouring stations, new automated conveyor and new pallet cooling lines, new automated shakeout lines, mold and core making lines, and fugitive emissions from foundry operations.

**Emission Units:** EU-PREHEATER, EU-MELTING, EU-POURING

### **POLLUTION CONTROL EQUIPMENT**

EU-PREHEATER: East Melt Baghouse and West Melt Baghouse  
EU-MELTING: East Melt Baghouse and West Melt Baghouse  
EU-POURING: East Sand Baghouse and West Sand Baghouse

### **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 27%	6-minute average	Each Building or Structure Housing any Iron or Steel Foundry Emission Source at FG-MACT EEEEE	SC III.1, III.4, V.I, & VI.1 – VI.9	<b>40 CFR 63.7690(a)(7)</b>
2. PM ---OR--- Total Metal HAP	0.005 gr/dscf ---OR--- 0.0004 gr/dscf	Hourly	Existing Electric Induction Melting	SC III.6, V.2, V.3, VI.1, & VI.6	<b>40 CFR 63.7690(a)(1)(i) or (ii)</b>
3. PM ---OR--- Total Metal HAP	0.005 gr/dscf ---OR--- 0.0004 gr/dscf	Hourly	Existing Scrap Preheater	SC III.6, V.2, V.3, VI.1, VI.2, VI.6, & VI.7	<b>40 CFR 63.7690(a)(1)(i) or (ii)</b>
4. Volatile Organic HAP (VOHAP)	20 ppmv	Hourly	Existing Scrap Preheater	SC III.6, V.2, V.3, VI.1, VI.2, & VI.7	<b>40 CFR 63.7690(a)(9)</b>
5. PM ---OR--- Total Metal HAP	0.010 gr/dscf ---OR--- 0.0008 gr/dscf	Hourly	Existing Pouring Station	SC III.1, V.2, V.3, & VI.6	<b>40 CFR 63.7690(a)(5)(i) or (ii)</b>

## **II. MATERIAL LIMIT(S)**

1. As an alternative to meeting the VOHAP limit in 40 CFR 63.7690(a)(9) for a new or existing scrap preheater, the permittee shall charge only material to the scrap preheater that is subject to and in compliance with the scrap certification requirement of 40 CFR 63.7700(b). **(40 CFR 63.7700(e)(2) and (f))**

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall maintain an approved operation and maintenance (O&M) plan for each capture and control system and control device for an emission unit subject to an emission limit as described in 40 CFR 63.7710. The plan shall include, but is not limited to, the following:
  - a. Monthly inspections of the equipment that is important to the performance of the total capture system. **(40 CFR 63.7710(b)(1))**
  - b. Operating limits for each capture system for an emission unit subject to a limit for VOHAP or TEA. **(40 CFR 63.7710(b)(2))**
  - c. Preventative maintenance plan for each control device, including a schedule. **(40 CFR 63.7710(b)(3))**
  - d. A site-specific monitoring plan for each bag leak detection system. **(40 CFR 63.7710(b)(4))**
  - e. Corrective action plan for each baghouse. **(40 CFR 63.7710(b)(5))**
  - f. Procedures for igniting gases from mold vents. **(40 CFR 63.7710(b)(6))**

The permittee shall maintain and implement the approved O&M plans at all times. **(40 CFR 63.7710, 40 CFR 63.7745)**

2. For each capture system, wet scrubber, acid wet scrubber, or combustion device, the permittee shall establish site-specific operating limits in the O&M plans according to the procedures specified in 40 CFR 63.7733. **(40 CFR 63.7733)**
3. The permittee shall comply with the emission limits, work practice standards, and operation and maintenance requirements at all times, except during periods of startup, shutdown, or malfunction. **(40 CFR 63.7720(a))**
4. The permittee shall develop and implement a written Startup, Shutdown and Malfunction Plan (SSMP) in accordance with 40 CFR 63.6(e)(3). This plan must address the startup, shutdown and corrective actions in the event of a malfunction of the emission capture system or the add-on control device. The SSMP must also specify what constitutes a shutdown of a cupola and how to determine that operating conditions are normal following startup of a cupola. The permittee shall operate in accordance with the SSMP when applicable. **(40 CFR 63.7720(c), 40 CFR 63.6(e)(3))**
5. For each segregated scrap storage area, bin or pile, the permittee shall prepare and operate at all times according to a written certification that the facility purchases and uses only charge material that does not include post-consumer automotive body scrap, post-consumer engine blocks, oil filters, oily turnings, lead components, mercury switches, plastics or organic liquids. **(40 CFR 63.7700(a), 40 CFR 63.7700(b))**

AND/OR

For each segregated scrap storage area, bin or pile, the permittee shall prepare and operate according to a written plan for the selection and inspection of iron and steel scrap as specified in 40 CFR 63.7700(c). **(40 CFR 63.7700(a), 40 CFR 63.7700(c))**

6. As an alternative to meeting the VOHAP limit in 40 CFR 63.7690(a)(9) for an existing preheater, the permittee shall install, operate and maintain a gas-fired preheater where the flame directly contacts the scrap charged, or only charge material that is subject to and in compliance with the scrap certification requirement in 40 CFR 7700(b). **(40 CFR 63.7700(e)(1), 40 CFR 7744(c))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall conduct a performance test to demonstrate compliance with the opacity limit in 40 CFR 63.7690(a)(7), following the test methods and procedures in 40 CFR 63.7732(d). Compliance testing shall be conducted no less frequently than every 6 months. (**40 CFR 63.7730(a), 40 CFR 63.7731(b)**)
2. The permittee shall conduct performance testing to demonstrate compliance with applicable PM, Total Metal HAP, TEA and VOHAP emission rates from FG-MACT EEEEEE according to the requirements in 40 CFR 63.7(e)(1), following the test methods and procedures in 40 CFR 63.7732(b), (c), (e), (f), (g) and (h). No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (**40 CFR 63.7730(a), R 336.1213(3), R 336.2001, R 336.2003, R 336.2004**)
3. The permittee shall conduct subsequent compliance testing to demonstrate compliance with all applicable emission limits, no less frequently than every 5 years. This requirement does not apply if a CEMS is used to demonstrate continuous compliance. (**40 CFR 63.7731(a)**)

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall operate each CPMS according to the requirements of 40 CFR 63.7741(f)(1) through (3). (**40 CFR 63.7741(f)**)
2. During the period between the compliance date specified for the foundry and the date when operating limits have been established during the performance test, the permittee shall maintain a log detailing the operation and maintenance of the process and control equipment. (**40 CFR 63.7720(b)**)
3. The permittee shall monitor the relative change in PM loading using a bag leak detection system for any baghouse used to meet PM or Total Metal HAP emission limits. (**40 CFR 63.7740(b)**)
4. If using the alternative to meeting the VOHAP limit in 40 CFR 63.7690(a)(9) for a new or existing scrap preheater, the permittee shall keep records to document that the preheater charges only material that is subject to and in compliance with the scrap certification requirements. (**40 CFR 63.7744(c) and (d)**)
5. The permittee shall keep records of the chemical composition of the catalyst binder formulation applied in each furan warm box mold or core making line as specified in 40 CFR 63.7744(b). (**40 CFR 63.7744**)
6. For each baghouse that is applied to meet any PM or Total Metal HAP emission limit, the permittee shall install, operate, and maintain a bag leak detection system according to the requirements in 40 CFR 63.7741(b) and conduct inspections according to the requirements specified in 40 CFR 63.7740(b)(1) through (8). (**40 CFR 63.7740(b), 40 CFR 63.7741(b)**)
7. If a control device other than a baghouse, wet scrubber, wet acid scrubber, or combustion device is used, the permittee shall prepare and submit a monitoring plan containing the information in 40 CFR 63.7690(c)(1) through (5). (**40 CFR 63.7690(c)**)
8. For each emission unit in FG-MACT EEEEEE, the permittee shall demonstrate initial compliance with the work practice standards and the operation and maintenance requirements as specified in 40 CFR 63.7735 and 40 CFR 63.7736. (**40 CFR 63.7735, 40 CFR 63.7736**)

9. The permittee shall monitor and collect data to demonstrate continuous compliance in accordance with 40 CFR 63.7742. (**40 CFR 63.7742**)
10. The permittee shall demonstrate continuous compliance with all applicable emission limitations in accordance with 40 CFR 63.7743. (**40 CFR 63.7743**)
11. The permittee shall maintain records that document continuous compliance with the requirements of 40 CFR 63.7700(b) or (c) as specified in 40 CFR 63.7744(a). (**40 CFR 63.7744**)

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and the appropriate AQD District Office, in a format approved by the AQD. (**R 336.1213(3)(c), R 336.2001(5)**)
5. The permittee shall report each instance in which each emission limitation, each work practice standard, and each operation and maintenance requirement was not met, in accordance with the requirements of 40 CFR 63.7751. (**40 CFR 63.7746, 40 CFR 63.7751**)
6. The permittee shall submit applicable notifications specified in 40 CFR 63.6(h)(4) and (5), 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), 40 CFR 63.8(f)(4) through (6), and 40 CFR 63.9(b) through (h) for an initial notification, a notification of intent to conduct a performance test, and a notification of compliance status as specified in 40 CFR 63.7750. (**40 CFR 63.7750**)
7. The permittee shall submit all semiannual compliance reports and semiannual reports of monitoring and deviations from any emissions limitation or operation and maintenance requirement as required by 40 CFR 63.7751(a), (b), and (d). (**40 CFR 63.7751 (a), (b), and (d)**)
8. If a startup, shutdown, or malfunction occurs during the semiannual reporting period, that is not consistent with the SSMP, the permittee shall submit an immediate SSM report according to the requirements of 40 CFR 63.10(d)(5)(ii). (**40 CFR 63.10(d)(5)(ii), 40 CFR 63.7751(c)**)
9. The permittee shall submit two complete test protocols to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor for approval at least 30 days prior to the anticipated test date. The protocol shall describe the test method(s) and the maximum routine operating conditions, including targets for key operational parameters associated with air pollution control equipment to be monitored and recorded during testing. (**R 336.12001(3)**)
10. The permittee shall notify the AQD Technical Programs Unit Supervisor and the AQD District Supervisor no less than 7 days prior to the anticipated test date. (**R 336.2001(4)**)
11. The permittee shall submit two complete test reports of the test results to the AQD, one to the Technical Programs Unit Supervisor and one to the District Supervisor, within 60 days following the last date of the test. (**R 336.2001(5)**)

**See Appendix 8**

**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 EEEEE for Iron and Steel Foundries by the compliance date. (**40 CFR Part 63, Subparts A and EEEEE**)

**Footnotes:**

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

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

## **FG-RULE287(2)(c) FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.

**Emission Units installed on or after December 20, 2016:** NA

**Emission Units installed prior to December 20, 2016:** NA

### **POLLUTION CONTROL EQUIPMENT**

NA

#### **I. EMISSION LIMIT(S)**

NA

#### **II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/Operating Scenario	Equipment	Underlying Applicable Requirement
1. Coatings	200 Gallons/month (minus water as applied)	Calendar month	Each emission unit	<b>R 336.1287(2)(c)(i)</b>

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. Any exhaust system installed on or after December 20, 2016, that serves only coating spray equipment shall be equipped with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the permittee develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions. All emission units installed before December 20, 2016, with an exhaust system that serves only coating spray equipment must have a properly installed and operated particulate control system. (**R 336.1213(2), R 336.1287(2)(c)(ii), R 336.1910**)

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the EGLE, AQD Rule 287(2)(c), Permit to Install Exemption Record form (EQP 3562) or in a format acceptable to the AQD District Supervisor. **(R 336.1213(3))**
  - a. Volume of coating used, as applied, minus water, in gallons. **(R 336.1287(2)(c)(iii))**
  - b. Documentation of any filter replacements or maintenance of water wash control for exhaust systems serving coating spray equipment or other documentation included in a plan developed by the owner or operator of the equipment. **(R 336.1213(3))**

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

NA

## **FG-RULE290**

### **FLEXIBLE GROUP CONDITIONS**

#### **DESCRIPTION**

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

**Emission Units installed on or after December 20, 2016:** (EU-RULE290 and any future emission unit that meets the requirements of this flexible group.)

**Emission Units installed prior to December 20, 2016:** NA

#### **POLLUTION CONTROL EQUIPMENT**

NA

#### **I. EMISSION LIMIT(S)**

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO<sub>2</sub> equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
  - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(A))**
  - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(B))**
  - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(2)(a)(ii)(C))**
  - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(D))**
  - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**

- a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute. (**R 336.1290(2)(a)(iii)(A)**)
- b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in Rule 303. (**R 336.1290(2)(a)(iii)(B)**)
- c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. (**R 336.1290(2)(a)(iii)(C)**)

## **II. MATERIAL LIMIT(S)**

NA

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. (**R 336.1290**)
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
  - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: (**R 336.1290(2)(b)(i), R 336.1910**)
    - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device.
    - ii. Wet scrubbers equipped with a liquid flow rate monitor.
    - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
  - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate.  
(**R 336.1290(2)(b)(ii), 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 336.1213(3)(b)(ii)**)

NA

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. The permittee shall maintain records of the following information for each emission unit for each calendar month using the methods outlined in the EGLE, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. (**R 336.1213(3)**)
  - a. Records identifying each air contaminant that is emitted. (**R 336.1213(3)**)
  - b. Records identifying if each air contaminant is controlled or uncontrolled. (**R 336.1213(3)**)

- c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. (**R 336.1213(3)**)
  - d. Records identifying the ITSL and IRS<sub>L</sub>, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii). (**R 336.1213(3)**)
  - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor. (**R 336.1213(3), R 336.1290(2)(d)**)
  - f. Records are maintained on file for the most recent 2-year period and are made available to the department upon request. (**R 336.1213(3), R 336.1290(2)(e)**)
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. (**R 336.1213(3)**)
- a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. (**R 336.1290(2)(c), R 336.1213(3)**)
  - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (**R 336.1213(3)**)
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (**R 336.1213(3)**)

See Appendix 4

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)

See Appendix 8

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

NA

## **FG-COLDCLEANERS FLEXIBLE GROUP CONDITIONS**

### **DESCRIPTION**

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: NA

### **POLLUTION CONTROL EQUIPMENT**

NA

### **I. EMISSION LIMIT(S)**

NA

### **II. MATERIAL LIMIT(S)**

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The cold cleaner must meet one of the following design requirements:
  - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
  - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

- a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. (**R 336.1707(2)(a)**)
- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. (**R 336.1707(2)(b)**)
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. (**R 336.1707(2)(c)**)

## **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

NA

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (**R 336.1213(3)(b)(ii)**)

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. (**R 336.1213(3)**)
2. The permittee shall maintain the following information on file for each cold cleaner: (**R 336.1213(3)**)
  - a. A serial number, model number, or other unique identifier for each cold cleaner.
  - b. The date the unit was installed, manufactured or that it commenced operation.
  - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
  - d. The applicable Rule 201 exemption.
  - e. The Reid vapor pressure of each solvent used.
  - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. (**R 336.1611(3), R 336.1707(4)**)
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. (**R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c)**)

## **VII. REPORTING**

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (**R 336.1213(3)(c)(ii)**)
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (**R 336.1213(3)(c)(i)**)
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (**R 336.1213(4)(c)**)

**See Appendix 8**

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

## **E. NON-APPLICABLE REQUIREMENTS**

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

## APPENDICES

### Appendix 1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations
AQD	Air Quality Division	acf m Actual cubic feet per minute
BACT	Best Available Control Technology	BTU British Thermal Unit
CAA	Clean Air Act	°C Degrees Celsius
CAM	Compliance Assurance Monitoring	CO Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2e</sub> Carbon Dioxide Equivalent
CEMS	Continuous Emission Monitoring System	dscf Dry standard cubic foot
CFR	Code of Federal Regulations	dscm Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr Grains
EGLE	Michigan Department of Environment, Great Lakes, and Energy	HAP Hazardous Air Pollutant
EU	Emission Unit	Hg Mercury
FG	Flexible Group	hr Hour
GACS	Gallons of Applied Coating Solids	HP Horsepower
GC	General Condition	H <sub>2</sub> S Hydrogen Sulfide
GHGs	Greenhouse Gases	kW Kilowatt
HVLP	High Volume Low Pressure*	lb Pound
ID	Identification	m Meter
IRSL	Initial Risk Screening Level	mg Milligram
ITSL	Initial Threshold Screening Level	mm Millimeter
LAER	Lowest Achievable Emission Rate	MM Million
MACT	Maximum Achievable Control Technology	MW Megawatts
MAERS	Michigan Air Emissions Reporting System	NMOC Non-methane Organic Compounds
MAP	Malfunction Abatement Plan	NO <sub>x</sub> Oxides of Nitrogen
MSDS	Material Safety Data Sheet	ng Nanogram
NA	Not Applicable	PM Particulate Matter
NAAQS	National Ambient Air Quality Standards	PM10 Particulate Matter equal to or less than 10 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5 Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph Pounds per hour
NSR	New Source Review	ppm Parts per million
PS	Performance Specification	ppmv Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw Parts per million by weight
PTE	Permanent Total Enclosure	% Percent
PTI	Permit to Install	psia Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig Pounds per square inch gauge
ROP	Renewable Operating Permit	scf Standard cubic feet
SC	Special Condition	sec Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub> Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC Toxic Air Contaminant
SRN	State Registration Number	Temp Temperature
TEQ	Toxicity Equivalence Quotient	THC Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy Tons per year
VE	Visible Emissions	µg Microgram
		µm Micrometer or Micron
		VOC Volatile Organic Compounds
		yr Year

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

## Appendix 2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. (**R 336.1213(4)(a), R 336.1119(a)(ii)**)

## Appendix 3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-CAMUNITS.

The permittee shall 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, the maintenance supervisor shall be notified immediately.
3. If visible emissions are observed, Method 9 readings shall be taken.
3. A determination of needed repairs and/or maintenance shall be made within 24 hours and recorded.
4. Repair and/or maintenance operations shall be performed within 48 hours of discovery.
5. Routine maintenance shall be performed according to the manufacturer's recommendations.

## Appendix 4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 5. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

## Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N5866-2014. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (\*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N5866-2014b is being reissued as Source-Wide PTI No. MI-PTI-N5866-2019

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
17-15	201500078/August 7, 2015	Incorporate Permit to Install (PTI) No. 17-15. When the equipment was originally permitted in 1998, the permit application proposed that the pouring emission unit EU-POURING would exhaust with the melting process as part of the flexible group FG-MELTING. However, when the equipment was constructed, the exhaust	FG-MELTING FG-SAND

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
		<p>system for EU-POURING was connected to the control equipment for cooling, shakeout, and sand handling, which makes up the FG-SAND flexible group. This PTI application was submitted to modify the permit, so that it will reflect the actual equipment configuration.</p> <p>The PTI application also proposed a few other changes be made to the permit to reflect some equipment modifications that were performed. These activities did not go through new source review, because they were considered exempt. A new baghouse was added for EU-INOCULATION, which used to vent to the East and West Melt dust collectors. The description for EU-INOCULATION and FG-MELT in the permit will be updated to reflect this change. Also, a baghouse was added in the Desprue area to ventilate dusty air from the in-plant environment.</p>	
17-15A	201500188/ March 8, 2016	Incorporate Permit to Install (PTI) No. 17-15A. The PTI was issued to in order to allow the removal of several TAC emission limits in the existing permit and in order to increase the sand throughput.	FG-MELTING FG-SAND FG-CAMUNITS FG-MACT EEEEE

## Appendix 7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

## Appendix 8. Reporting

### A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the EGLE, AQD, Report Certification form (EQP 5736) and EGLE, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

### B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.