

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

EFFECTIVE DATE: October 8, 2020

ISSUED TO

Grede, LLC – Iron Mountain

State Registration Number (SRN): B1577

LOCATED AT

801 South Carpenter Avenue, Kingsford, Dickinson County, Michigan 49802

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B1577-2020

Expiration Date: October 8, 2025

Administratively Complete ROP Renewal Application Due Between
April 8, 2024 and April 8, 2025

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-B1577-2020

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

Ed Lancaster, Marquette 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.

This permit does not relieve the permittee from any responsibilities or obligations imposed on the permittee, at this source, under Consent Order Number AQD 23-2016, entered on June 22, 2016 between EGLE and the permittee.

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).² **(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:"² **(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.¹ **(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property.¹ **(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).² **(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.² **(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 reclaiming, 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.² **(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.² **(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.² **(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.² **(R 336.1201(4))**

Consent Orders

The conditions contained in this ROP for which a Consent Order is the only identified underlying applicable requirement shall be considered null and void upon the effective date of termination of the Consent Order. The effective date of termination is defined for the purposes of this condition as the date upon which the Termination Order is signed by the AQD Division Director.

Footnotes:

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

²This 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.

SOURCE-WIDE CONDITIONS

DESCRIPTION

Gray iron foundry utilizing a high efficiency cupola (EU-P009) with a maximum melt rate of 20 tons per hour. Molten iron is stored in a 28-ton capacity electric holding furnace. Major processes at facility include raw material handling (metal, fluxes, metallurgical coke), metal melting, mold and core production, casting, and finishing.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM10	69.97 tpy ²	12-month rolling time period as determined at the end of each calendar month	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SC VI. 1	R 336.1331
2. VOC	132.67 tpy ²	12-month rolling time period as determined at the end of each calendar month	All process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment.	SC VI. 1	R 336.1702

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
- If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

3. The permittee shall implement a Fugitive Dust Control Plan (incorporated into the facility's O & M Plan) for the Scrap and Charge Handling processes, and maintain records of periodic monitoring, in a manner acceptable to the AQD.² **(R 336.1201(3))**

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 calculate and record the source-wide tonnage of metal melted, PM10, and VOC emissions on a monthly and 12-month rolling time period. The calculations shall be completed by no later than the 30th day of each calendar month for the previous month. **(R 336.1205(1), R 336.1213(3)(b))**

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)

1. The conditions contained in this ROP for which a Consent Order is the only identified underlying applicable requirement shall be considered null and void upon the effective date of termination of the Consent Order. The effective date of termination is defined for the purposes of the conditions as the date upon which the Termination Order is signed by the Division Director of the AQD

Footnotes:

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

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

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-P009 CUPOLA	Cupola – Includes a 72 inch refractory lined, water wall, high efficiency cupola. The pollution control equipment includes afterburners, a quench tank, a totally enclosed treatment system (TET) and a positive pressure baghouse. Hot blast tubes also serve as a secondary (backup) control.	1992 1997 2007	FG-MACT EEEEE
EU-P011 SHELL CORE	Shell Core Making – Production of phenolic resin (shell) cores. The cores are produced on 21 natural gas heated core machines. Emissions from core machines are not directly vented to the outside atmosphere.	1979	NA
EU-P012 MAIN PLANT SAND SYSTEM	Main Plant Sand System – Process includes activities associated with collection and distribution of mold sand used in the Main Plant. The Main Plant Sand System is controlled by a Large Wet Dust Collector.	1978 1979	NA
EU-P014 MAIN PLANT FINISHING	Main Plant Finishing – Dust collection from all activities associated with metal finishing conducted in the Main Plant. These activities include grinding, chipping, and tumbling (Wheelabrators). Exhaust is collected by three baghouses (East Fuller, West Fuller, Steelcraft)	1980 1996	NA
EU-P016 MAIN PLANT POURING AND COOLING	Main Plant Pouring & Cooling – All activities associated with the pouring and cooling of molten iron on six mold lines in the Main Plant. The mold lines include four Hunter mold machine lines, one Disa mold machine line, one Disa Match mold machine, and one mold dump conveyor. There is no emission control equipment associated with this emission unit.	1978 1993	FG-MACT EEEEE

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-P018 MAIN PLANT SHAKEOUT	Castings, gates, risers, and sand are mechanically separated by shaking in the Main Plant. The shakeout receives the materials from the end of the dump conveyor. The Main Plant Shakeout process is controlled with two fabric filter baghouses (Torit and Linsmeyer). Fugitive emissions in the Main Plant Shakeout area are also controlled by a fabric filter baghouse (Hermann).	1977 1979 2016 2019	NA
EU-P021 ISOCURE	Isocure Core Making – Production of phenolic urethane coldbox (Isocure) cores in the Main Plant using dimethylethylamine (DMEA). Sand and resin are mixed in three mullers prior to addition to ten Isocure core machines. Emissions from the Main Plant Isocure mullers, sand silos are controlled by a baghouse. Emissions from the Main Plant Isocure core machines are controlled by a cartridge filter followed by an acid scrubber.	1977 1992 2004	NA
EU-P032 MODULE SAND SYSTEM	Module Sand System – Activities associated with collection and distribution of mold sand used in the Module Plant. These activities include the Module Sand Muller, collecting spill sand, screening used sand, and conveying sand. The Module Sand System is controlled by a Torit dry fabric filter baghouse collector.	1975 2016	NA
EU-P034 MODULE FINISHING	Module Finishing Process – Includes activities associated with metal finishing conducted in the Module Plant. These activities include grinding, chipping, and hang blast (Wheelabrators). The Module Finishing Process is controlled by a Torit dry fabric filter baghouse collector.	1975 2016	NA
EU-P036 MODULE POURING AND COOLING	Module Pouring & Cooling – All activities associated with the pouring and cooling of molten iron on one Hunter mold line in the Module Plant. There is no emission control equipment associated with this emission unit.	1975	FG-MACT EEEEE
EU-P038 MODULE SHAKEOUT	Module Shakeout -- Castings, gates, risers, and sand are mechanically separated by shaking in the Module Shakeout. Module Shakeout is controlled by a Torit dry fabric filter baghouse collector.	1975 2016	NA
EU-P040 SAND CONDITIONING SYSTEM	Sand Conditioning System – Mold sand is conditioned for use in the Main Plant. The process cools hot sand to not more than 120 °F while maintaining grain distribution and bond addition. A Steelcraft baghouse collects the emissions from the sand handling activities. A small baghouse collects the emissions from the bond tank and vents the discharge back into the building.	1995	NA

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-P041 MAIN PLANT BOND SILO	Main Plant Bond Silo -- Bond is loaded into the Main Plant Bond Silo for use in the Main Plant. The Bond Silo is located external to the Plant. A Rumelin bin vent filter collects the emissions generated during loading.	1978	NA
EU-P042-MODULE BOND SILO	Module Bond Silo -- Bond is loaded into the Module Bond Silo for use in the Module Plant. A Flex Kleen bin vent filter collects the emissions generated during loading.	1975	NA
EU-P043 MODULE ISOCURE	Module Isocure – Production of phenolic urethane cold box (Isocure) cores in the Module Plant using DMEA. The facility does not use TEA in the Isocure processes. Emissions from the Module Isocure process are controlled by a cartridge filter-acid scrubber system. The cores are produced on three core machines in the Module Plant. Sand and resin are mixed in a muller prior to addition to core machines. Exhaust from the Module Isocure silos and Module sand heater/cooler is ducted to and controlled by a Torit fabric filter baghouse.	2005	NA

**EU-P009 CUPOLA
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Emission unit includes a WRIB Company Inc. 72 inch refractory lined, water wall, high efficiency Cupola. The pollution control equipment includes afterburners, a quench tank, a totally enclosed treatment system (TET) and a positive pressure baghouse. Four hot blast tubes also provide a secondary (backup) method to control CO emissions

Flexible Group ID: FG-MACT EEEEE

POLLUTION CONTROL EQUIPMENT

Afterburners, quench tank, totally enclosed treatment system (TET), positive pressure fabric filter baghouse.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO	21.0 pph ²	Hourly	EU-P009 CUPOLA	SC V.1, V.2 SC VI.5, VI.6	R 336.1201(3)
2. CO	92.0 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P009 CUPOLA	SC V.1, V.2 SC VI.4	R 336.1201(3)
3. CO	250.0 milligrams per cubic meter, corrected to 70F and 29.92 inches Hg. ²	Continuous	EU-P009 CUPOLA	SC V.1, V.2, SC VI.4 VI.5, VI.6	R 336.1201(3)
4. PM	0.011 pound per 1000 pounds of exhaust gases. ²	Hourly	EU-P009 CUPOLA	SC V.1, V.2 SC VI.8, VI.10, VI.13	R 336.1331
5. PM10	1.30 pph ²	Hourly	EU-P009 CUPOLA	SC V.1, V.2, VI.8 SC VI.10, VI.13	R 336.1331
6. PM10	5.69 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P009 CUPOLA	SC V.1, V.2 SC VI.4	R 336.1331
7. SO ₂	170 milligrams per cubic meter, corrected to 70F and 29.92 inches Hg. ²	Continuous	EU-P009 CUPOLA	SC V.1, V.2	R 336.1201(3)
8. SO ₂	13.8 pph ²	Hourly	EU-P009 CUPOLA	SC V.1, V.2	R 336.1201(3)
9. SO ₂	60.44 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P009 CUPOLA	SC V.1, V.2 SC VI.4	R 336.1201(3)
10. Visible Emissions	0% ¹	6-minute average	EU-P009 CUPOLA	SC VI.11, VI.12, VI.13	R 336.1301(1)(c) ACO 23-2016(9.B)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Metal Charged	450 tons per day ²	Calendar Day	EU-P009 CUPOLA	SC VI.1	R 336.1205 R 336.1213(3) R336.1213(3)(b)(ii)
2. Metal Charged	164,250 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P009 CUPOLA	SC VI.2	R 336.1205 R 336.1213(3) R336.1213(3)(b)(ii)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1224, R 336.1225, R 336.1331, R 336.1702, 40 CFR 52.21 (c) and (d))**
2. The O & M Plan shall, at a minimum, specify the following for the afterburners, quench tank, totally enclosed treatment system (TET), and positive pressure fabric filter baghouse associated with EU-P009 CUPOLA:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

3. The permittee shall not operate the cupola unless the afterburners, quench tank, totally enclosed treatment system (TET) and positive pressure baghouse are installed and operating properly.² **(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, PM10, SO₂ and CO emission rates from EU-009 CUPOLA 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
PM10/PM2.5	40 CFR Part 51, Appendix M
SO ₂	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

- The permittee shall verify the PM, PM10, SO₂ and CO emission rates from EU-009 CUPOLA, 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)**
- 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))**

- The permittee shall record the number and weight of charges added to the cupola on a production day basis when the cupola is in operation and melting.² **(R 336.1213(3))**
- The permittee shall calculate and maintain records of the tons of metal charged on a 12-month rolling time period as determined at the end of each month.² **(R 336.1213(3))**
- The permittee shall record the process hours of operation on a production day basis when the cupola is in operation and melting metal. **(R 336.1213(3))**
- The permittee shall calculate and maintain records of CO, PM10 and SO₂ emission rates on a 12-month rolling time period as determined at the end of each calendar month, using emission factors derived from the most recent stack testing and approved by the AQD District Supervisor. The calculations shall be completed by no later than the 30th day of each calendar month for the previous month. **(R 336.1213(3))**
- The permittee shall monitor and record the temperature of the cupola off-gas on a continuous basis in a manner and with instrumentation acceptable to the AQD.² **(R 336.1213(3), 40 CFR 64.6(c)(iii))**
- The permittee shall use the afterburner temperature to assure compliance with the carbon monoxide limit. An excursion for carbon monoxide shall be the temperature of the afterburner falling below 1300 degrees Fahrenheit. **(40 CFR 64.6(c)(2))**
- The permittee shall continuously measure and record the pressure drop as an indicator of proper operation of the baghouse. The indicator is 1.0 inch minimum water column. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i, ii and iii))**
- The permittee shall use the pressure drop on the baghouses to assure compliance with the particulate matter limits. An excursion for particulate matter shall be a pressure drop reading outside of the set point. **(40 CFR 64.6(c)(2))**
- The permittee shall continuously monitor and record the amperage of the emission control system fan during production operations. Proper operation includes fan amperage between 115 and 281 amperes. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i & ii))**

10. The permittee shall use the emission control system fan amperage to assure compliance with the particulate matter limits. An excursion for particulate matter shall be a reading outside of the set point. **(40 CFR 64.6(c)(2))**
11. Verification of visible emissions from EU-009 CUPOLA, shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
12. The permittee shall utilize visible emissions observations to determine proper operation of the baghouse. Proper operation is no visible emissions from the baghouse. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
13. The permittee shall use visible emissions observations from the baghouse to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
14. 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 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))**
15. 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 emission 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))**
16. The permittee shall, at all times, maintain the afterburner temperature monitoring and recording device, baghouse pressure monitor and recording device, and emissions control system fan amperage monitoring and recording device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
17. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written Quality Improvement Plan (QIP) and any activities undertaken to implement a QIP, 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. Each semiannual report of monitoring and 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))**
6. Each semiannual report of monitoring and 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))**
7. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period. If a QIP has been completed, the report shall include documentation that the QIP has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

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-S009-301164	12 inches ²	33 feet ²	R 336.1201(3)
2. SV-S009-324644	300 x 750 inches ²	58 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 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 Compliance Assurance Monitoring (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))**
4. The permittee shall submit a QIP if 5 excursions occur in any 3- month period. **(40 CFR 64.8(a))**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b). This includes special conditions that were established in a Consent Order pursuant to Rules 224, 225, and 901.
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P011 SHELL CORE
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process represents the production of phenolic resin (shell) cores. The cores are produced on 21 natural gas heated core machines. Emissions from the core machines are vented into the indoors, and subsequently the core area is vented by fans located on the roof. The sand used is pre-coated with a resin prior to purchase; therefore, no mixing of sand and resin is required.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 pounds per 1000 pounds of exhaust gases, calculated on a dry gas basis. ²	Hourly	EU-P011 SHELL CORE	SC V 1 SC III.1	R 336.1331 Table 31

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan instituted at the facility. The Operation and Maintenance Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions.² **(R 336.1201(3))**

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. Upon request from the AQD District Supervisor permittee shall verify PM emission rates from EU-P011 SHELL CORE 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 and 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit

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

2. 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))**

NA

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))**

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-S011-324564	48 inches ²	30 feet ²	R 336.1201(3)
2. SV-S011-324568	48 inches ²	30 feet ²	R 336.1201(3)
3. SV-S011-324572	48 inches ²	30 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**EU-P012 MAIN PLANT SAND SYSTEM
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process includes activities associated with collection and distribution of mold sand used in the Main Plant. The Main Plant Sand System is controlled by the Large Wet Dust Collector.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Large Wet Dust Collector

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.005 pound per 1000 pounds of exhaust gases. ²	Hourly	EU-P012 MAIN PLANT SAND SYSTEM	SC V 1 SC III.1, SC VI.1, VI.4, VI.6	R 336.1331
2. PM10	1.27 pph ²	Hourly	EU-P012 MAIN PLANT SAND SYSTEM and EU-P032 MODULE PLANT SAND SYSTEM	SC V 1 SC III.1 SC VI.1, VI.4, VI.6	R 336.1331
3. PM10	5.56 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P012 MAIN PLANT SAND SYSTEM and EU-P032 MODULE PLANT SAND SYSTEM	SC V 1 SC III.1, SC VI.1 VI.4, VI.6, VI.13	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1331, 40 CFR 52.21 (c) and (d))**
- The O & M Plan shall, at a minimum, specify the following for the Large Wet Dust Collector associated with EU-P012 MAIN PLANT SAND SYSTEM:

- a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip the Large Wet Dust Collector associated with EU-P012 MAIN PLANT SAND SYSTEM with a differential pressure gauge. **(R 336.1331, 40 CFR 52.21 (c) and (d))**

V. TESTING/SAMPLING

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

1. Upon request from the AQD District Supervisor permittee shall verify PM and PM10 emission rates from EU-P012 MAIN PLANT SAND SYSTEM by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. 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 utilize pressure drop to determine proper operation of the Large Wet Dust Collector. Proper operation includes a pressure drop range of 2 - 4 inches. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
2. The permittee shall use the pressure drop on the Large Wet Dust Collector to assure compliance with the particulate matter limits. An excursion shall be a pressure drop reading out of the established range. **(40 CFR 64.6(c)(2))**

3. The permittee shall continuously monitor and record the amperage of the Large Wet Dust Collector fan once per day during production operations. Proper operation includes fan amperage between 122 and 137 amperes. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i, ii & iii))**
4. The permittee shall use the Large Wet Dust Collector fan amperage to assure compliance with the particulate matter limits. An excursion shall be a reading out of the established amperage range between 122 and 137 amperes. **(40 CFR 64.6(c)(2))**
5. Verification of visible emissions from the Large Wet Dust Collector shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
6. The permittee shall utilize visible emissions observations to determine proper operation of the Large Wet Dust Collector. Proper operation is no visible emissions from the dust collector. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
7. The permittee shall use visible emissions observations to assure compliance with the particulate matter limits. An excursion shall be the observation of visible emissions from the dust collector. **(40 CFR 64.6(c)(2))**
8. 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 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))**
9. 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 emission 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))**
10. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring and recording device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
11. 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))**
12. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. The permittee shall submit any performance test reports, including RATA 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))**

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-S012-324172	48 inches ²	37 feet ²	R 336.1201(3) 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

1. 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 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P014 MAIN PLANT FINISHING
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process is defined as the collection of dust from all activities associated with metal finishing conducted in the Main Plant. These activities include grinding, chipping, and tumbling (Wheelabrators). The process exhaust is collected by three pulse-jet baghouses.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

East Fuller Baghouse
 West Fuller Baghouse
 Steelcraft Baghouse

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.01 pound per 1,000 pounds of gases ²	Hourly	EU-P014 MAIN PLANT FINISHING	SC V 1 SC VI.1, VI.2 VI.4, VI.6	R 336.1331
2. PM10	0.33 pph ²	Hourly	EU-P014 MAIN PLANT FINISHING and EU-P034 MODULE FINISHING	SC V 1 SC VI.1, VI.2 VI.4, VI.6	R 336.1331
3. PM10	1.45 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P014 MAIN PLANT FINISHING and EU-P034 MODULE FINISHING	SC V 1 SC VI.1, VI.2 VI.4, VI.6, VI.13	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1331, 40 CFR 52.21 (c) and (d))**
2. The O & M Plan shall, at a minimum, specify the following for the East Fuller, West Fuller, and the Steelcraft pulse-jet baghouses associated with EU-P014 MAIN PLANT FINISHING:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.

- b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

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. Upon request from the AQD District Supervisor permittee shall verify PM and PM10 emission rates from EU-P014 MAIN PLANT FINISHING by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

- 2. 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 continuously monitor and record the pressure drop across each baghouse once per day during production operations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
- 2. The permittee shall utilize pressure drop to determine proper operation of the baghouses. Proper operation includes a pressure drop across each baghouse in the following ranges: **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
 - 5.0" - 7.0" (inches) water column for West Fuller Baghouse
 - 5.0" - 7.0" (inches) water column for East Fuller Baghouse
 - 3.5" - 5.5" (inches) water column for Steelcraft Baghouse

3. The permittee shall use the pressure drop on each baghouse to assure compliance with the particulate matter limits. An excursion shall be a pressure drop reading outside the established range. **(40 CFR 64.6(c)(2))**
4. The permittee shall continuously monitor and record the amperage of each baghouse fan once per day during production operations. Proper operation includes a fan amperage for each baghouse in the following ranges: **(R 336.1213(3), 40 CFR 64.6(c)(1)(i & ii))**
 - 120 – 140 amperes for West Fuller Baghouse
 - 100 - 120 amperes for East Fuller Baghouse
 - 145 - 165 amperes for Steelcraft Baghouse
5. The permittee shall use baghouse fan amperage to assure compliance with the particulate matter limits. An excursion shall be an amperage reading outside the established range. **(40 CFR 64.6(c)(2))**
6. Verification of visible emissions from the West Fuller, East Fuller and Steelcraft baghouses shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
7. The permittee shall utilize visible emissions observations to determine proper operation of the baghouses. Proper operation is no visible emissions from the baghouses. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
8. The permittee shall use visible emissions observations from the baghouses to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
9. Upon detecting an excursion or exceedance, the permittee shall restore operation of the baghouse collectors to normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Records of the actions taken shall be kept and made available to the AQD upon request. **(40 CFR 64.6(c)(2) & (3), 40 CFR 64.7(c) & (d))**
10. 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 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))**
11. 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 emission 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))**
12. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**

- The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month.

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 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))**
- 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))**
- Each semiannual report of monitoring and 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))**
- Each semiannual report of monitoring and 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))**
- The permittee shall submit any performance test reports, including RATA 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))**

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-S014-324128	44 inches ²	27 feet ²	R 336.1201(3)
2. SV-S014-324132	44 inches ²	27 feet ²	R 336.1201(3)
3. SV-S014-324376	36 x 60 inches ²	44 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

- 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 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))**
- The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P016 MAIN PLANT POURING AND COOLING
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process includes all activities associated with the pouring and cooling of molten iron on six mold lines in the Main Plant. Molten iron is supplied by a 20 ton Brown Boveri holding furnaces that receives molten iron from the cupola. There is no emission control equipment associated with this emission unit.

Flexible Group ID: FG-MACT EEEEE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM10	9.0 pph ²	Hourly	EU-P016 MAIN PLANT POURING AND COOLING and EU-P036 MODULE POURING AND COOLING	SC V 1 SC III.1	R 336.1331
2. PM10	39.42 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P016 MAIN PLANT POURING AND COOLING and EU-P036 MODULE POURING AND COOLING	SC V 1 SC III.1 SC VI.1	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Inspection and Preventative Maintenance Program instituted at the facility. The Inspection and Preventative Maintenance Program will be subject to change based upon the need to provide a safe working environment and to minimize emissions.² (R 336.1201(3))

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. Upon request of the AQD District Supervisor permittee shall verify PM10 emission rates from EU-P016 MAIN PLANT POURING AND COOLING 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 51, Appendix M. 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
2. 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 records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month.

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, including RATA 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))**

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-S016-324308	60 inches ²	30 feet ²	R 336.1201(3)
2. SV-S016-324636	24 inches ²	27 feet ²	R 336.1201(3)
3. SV-S016-324632	24 inches ²	37 feet ²	R 336.1201(3)
4. SV-S016-324176	30 inches ²	37 feet ²	R 336.1201(3)
5. SV-S016-324188	30 inches ²	37 feet ²	R 336.1201(3)
6. SV-S016-324196	30 inches ²	28 feet ²	R 336.1201(3)
7. SV-S016-324204	30 inches ²	30 feet ²	R 336.1201(3)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
8. SV-S016-324662	30 inches ²	36 feet ²	R 336.1201(3)
9. SV-S016-324452	30 inches ²	27 feet ²	R 336.1201(3)
10. SV-S016-324678	36 inches ²	29 feet ²	R 336.1201(3)
11. SV-S016-324682	40 inches ²	41 feet ²	R 336.1201(3)
12. SV-S016-324476	6 inches ²	31 feet ²	R 336.1201(3)
13. SV-S016-324484	30 inches ²	40 feet ²	R 336.1201(3)
14. SV-S016-324848	24 inches ²	NA	R 336.1201(3)
15. SV-S016-324304	60 inches ²	30 feet ²	R 336.1201(3)
16. SV-S016-324312	30 inches ²	28 feet ²	R 336.1201(3)
17. SV-S016-324640	48 inches ²	29 feet ²	R 336.1201(3)
18. SV-S016-324296	48 inches ²	30 feet ²	R 336.1201(3)
19. SV-S016-324300	48 inches ²	28 feet ²	R 336.1201(3)
20. SV-S016-324666	34 inches ²	27 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**EU-P018 MAIN PLANT SHAKEOUT
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Castings, gates, risers, and sand are mechanically separated by shaking in the Main Plant. The shakeout receives the materials from the end of the dump conveyor. The Main Plant Shakeout process is controlled with two fabric filter baghouses (Torit and Linsmeyer). Fugitive emissions in the Main Plant Shakeout area are also controlled by a fabric filter baghouse (Hermann).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Two fabric filter baghouses (Torit Baghouse #1 and Linsmeyer) control shakeout. Fugitive emissions in the Main Plant Shakeout area are also controlled by a cartridge filter baghouse (Hermann).

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.013 pounds per 1,000 pounds of exhaust gases. ²	Hourly	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-A and SV-S018-324372-B	SC V.1	R 336.1331
2. PM10	1.03 pph ²	Hourly	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-A and SV-S018-324372-B and EU-P038 MODULE SHAKEOUT SV-S032-334100	SC V.1	R 336.1331
3. PM10	4.51 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-A and SV-S018-324372-B and EU-P038 MODULE SHAKEOUT SV-S032-334100	SC V.1 SC VI.12	R 336.1331
4. PM	0.8 pph ²	Hourly	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-C	SC V.1	R 336.1205 R 336.1331 40 CFR 52.21 (c) & (d)
5. PM10 ²	0.6 pph ²	Hourly	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-C	SC V.1	R 336.1205 40 CFR 52.21 (c) & (d)
6. PM2.5 ²	0.6 pph ²	Hourly	EU-P018 MAIN PLANT SHAKEOUT SV-S018-324372-C	SC V.1	R 336.1205 40 CFR 52.21 (c) & (d)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Torit and Linsmeyer fabric filter baghouses and the Hermann cartridge filter baghouse associated with EU-P018 MAIN PLANT SHAKEOUT:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-P018 MAIN PLANT SHAKEOUT unless the fabric filter baghouses are installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall equip all baghouses associated with EU-P018 MAIN PLANT SHAKEOUT with differential pressure gauges. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

1. Upon request from the AQD District Supervisor permittee shall verify PM, PM10, and/or PM2.5 emission rates from EU-P018 MAIN PLANT SHAKEOUT, by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. 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 continuously monitor the differential pressures on all baghouses associated with EU-P018 and record the differential pressure readings once per day during production operations. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall utilize pressure drop to determine proper operation of all baghouses associated with EU-P018. The compliant differential pressure range shall be established based on manufacturer's specifications and in a manner consistent with good environmental engineering practice and included in the AQD approved Operation and Maintenance Plan. **(R 336.1205, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**
3. An excursion is a departure outside the differential pressure range of:
 - 1" to 6" (inches) water column for Torit Baghouse #1 (Model RFWPH 484-12)
 - 3" to 7" (inches) water column for Linsmeyer custom-built fabric filter baghouse
 - 2" to 10" (inches) water column for Hermann cartridge filter baghouse
4. The permittee shall continuously monitor and record the amperage of the fans on all baghouses associated with EU-P018 once per day during production operations. The compliant fan amperage range shall be established based on manufacturer's specifications and in a manner consistent with good environmental engineering practice and included in the AQD approved O & M Plan. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
5. An excursion is a departure outside the amperage range of:
 - 175 - 210 amperes for Torit Model RFWPH 484-12 baghouse
 - 55 - 85 amperes for Linsmeyer custom-built baghouse
 - 160 - 210 amperes for Hermann baghouse
6. Verification of visible emissions from all baghouses associated with EU-P018 shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1301, R 336.1331, R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
7. The permittee shall utilize visible emissions observations to determine proper operation of the three fabric filter baghouses. Proper operation is no visible emissions from the three fabric filter baghouses. **(R 336.1910)**
8. 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). See Appendix 3 for the corrective action plan. **(40 CFR 64.7(d))**

9. 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))**
10. The permittee shall, at all times, maintain the pressure drop monitoring devices and the fan amperage monitoring and recording devices, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
11. 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))**
12. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. The permittee shall submit any performance test reports, including RATA 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))**

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-S018-324372-A (Torit Baghouse)	51 inches	37 feet	R 336.1201(3)
2. SV-S018-324372-B (Linsmeyer Baghouse)	48 inches	30 feet	R 336.1201(3)
3. SV-S018-324372-C (Hermann Baghouse)	54 inches	60 feet	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 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))**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P021 ISOCURE
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Production of phenolic urethane coldbox (Isocure) cores in the Main Plant using dimethylethylamine. The facility does not use triethylamine in the Isocure processes. Sand and resin are mixed in three mullers prior to addition to core machines. The cores are produced on ten Isocure core machines. The Main Plant Isocure mullers and sand silo emissions are controlled by a baghouse. Emissions from the Main Plant Isocure core machines are controlled by a cartridge filter followed by an acid scrubber.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Mullers and sand silo: Flex-Kleen pulse-jet fabric filter baghouse
 Core Machines: Cartridge filter and Acid Scrubber

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. DMEA	0.14 pph ¹	Hourly	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2	R 336.1224 R 336.1225
2. DMEA	0.61 tpy ¹	12-month rolling time period as determined at the end of each calendar month	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2 SC VI.1	R 336.1224 R 336.1225
3. PM	0.005 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2	R 336.1331
4. PM	0.011 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P021 ISOCURE (mullers, silos, heater/cooler)	SC V 1 SC III.1, III.2	R 336.1331
5. PM10	0.02 pph ²	Hourly	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2	R 336.1331
6. PM10	0.09 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2 SC VI.1	R 336.1331
7. PM10	0.063 pph ²	Hourly	EU-P021 ISOCURE (mullers, silos, heater/cooler)	SC V 1 SC III.1, III.2	R 336.1331
8. PM10	0.28 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P021 ISOCURE (mullers, silos, heater/cooler)	SC V 1 SC III.1, III.2 SC VI.1	R 336.1331
9. VOC	4.8 pph ²	Hourly	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2	R 336.1702

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
10. VOC	21.02 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P021 ISOCURE (Core Machines)	SC V 1 SC III.1, III.2 SC VI.1	R 336.1702

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Acid Scrubber and Flex-Kleen pulse-jet fabric filter baghouse associated with EU-P021 ISOCURE:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

3. When operating EU-P021 ISOCURE process, the permittee shall maintain the Acid Scrubber liquid pH and flow rate within the parameters recommended by the manufacturer and record the actual pH and flow rate once per shift.² **(R 336.1225, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. Upon request from the AQD District Supervisor permittee shall verify DMEA, PM, PM10, and/or VOC emission rates from EU-P021 ISOCURE by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
DMEA	40 CFR Part 60, 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

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

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

- The permittee shall maintain records of DMEA, PM10, and VOC emissions on a 12-month rolling time period as determined at the end of each calendar month.
- The permittee shall maintain records of the actual pH and flow rate once per shift.² **(R 336.1225, R 336.1910)**

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 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))**
- 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))**
- The permittee shall submit any performance test reports, including RATA 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))**

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-S021-324596	10 x 12 inches ²	38 feet ²	R 336.1201(3)
2. SV-S021-324598	10 x 12 inches ²	38 feet ²	R 336.1201(3)
3. SV-S021-324687	15 inches ²	22 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**EU-P032 MODULE SAND SYSTEM
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process includes activities associated with the collection and distribution of mold sand used in the Module Plant. These activities include the Module Sand Muller, collection of spill sand, screening of used sand, and conveying sand. The Module Sand System is controlled by a Torit fabric filter baghouse collector.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Torit fabric filter baghouse collector.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 pound per 1,000 pounds of exhaust gases. ²	Hourly	EU-P032 MODULE SAND SYSTEM	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
2. PM10	1.27 pph ²	Hourly	EU-P032 MODULE SAND SYSTEM and EU-P012 MAIN PLANT SAND SYSTEM	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
3. PM10	5.56 tpy ²	12-month rolling time period as determined at the end of each calendar month	EU-P032 MODULE SAND SYSTEM and EU-P012 MAIN PLANT SAND SYSTEM	SC V 1 SC VI.1, VI.4, VI.6, VI.12	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. (R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))
- The O & M Plan shall, at a minimum, specify the following for the Torit fabric filter baghouse collector associated with EU-P032 MODULE SAND SYSTEM:

- a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

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. Upon request of the AQD District Supervisor permittee shall verify PM and/or PM10 emission rates from EU-P032 MODULE SAND SYSTEM by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. 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 continuously monitor and record the pressure drop across the Torit dry fabric filter baghouse collector once per day during production operations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
2. The permittee shall utilize pressure drop to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation includes a pressure drop between 1" – 6" (inches) water column. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**

3. The permittee shall use the pressure drop on the Torit dry fabric filter baghouse collector to assure compliance with the particulate matter limits. An excursion shall be a pressure drop reading outside of the established range. **(40 CFR 64.6(c)(2))**
4. The permittee shall continuously monitor and record the amperage for the Torit dry fabric filter baghouse collector once per day during production operations. Proper operation includes an amperage range between -175 and -220 amperes for the Torit dry fabric filter baghouse collector. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i, ii & iii))**
5. The permittee shall use the Torit dry fabric filter baghouse collector fan amperage to assure compliance with the particulate matter limits. An excursion shall be a reading out of the established amperage ranges. **(40 CFR 64.6(c)(2))**
6. Verification of visible emissions from the Torit dry fabric filter baghouse collector shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
7. The permittee shall utilize visible emissions observations to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation is no visible emissions from the Torit dry fabric filter baghouse collector. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
8. The permittee shall use visible emissions observations to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
9. 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 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))**
10. 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 emission 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))**
11. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring and recording device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
12. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. The permittee shall submit any performance test reports, including RATA 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))**

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-S032-334100-A	51 inches	55 feet	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P034 MODULE FINISHING
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process is defined as the collection of dust from all activities associated with metal finishing conducted in the Module Plant. These activities include grinding, chipping, and hang blast (Wheelabrators). The Module Finishing Process is controlled by a Torit dry fabric filter baghouse collector.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Torit dry fabric filter baghouse collector

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 pound per 1,000 pounds of exhaust gases. ²	Hourly	EU-P034 MODULE FINISHING	SC V 1 SC VI.1, VI.3 VI.4	R 336.1331
2. PM10	0.33 pph ²	Hourly	EU-P034 MODULE FINSHING and EU-P014 MAIN PLANT FINISHING	SC V 1 SC VI.1, VI.3 VI.4	R 336.1331
3. PM10	1.45 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P034 MODULE FINSHING and EU-P014 MAIN PLANT FINISHING	SC V 1 SC VI.1, VI.3 VI.4, VI.11	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Torit dry fabric filter baghouse collector associated with EU-P034 MODULE FINISHING:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.

- b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

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. Upon request from the AQD District Supervisor permittee shall verify PM and PM10 emission rates from EU-P034 MODULE FINISHING by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

- 2. 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 continuously monitor and record the pressure drop across the Torit dry fabric filter baghouse collector once per day during production operations. **(R 336.1213(3))**
- 2. The permittee shall utilize pressure drop to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation includes a pressure drop between 1" – 6" (inches) water column. **(R 336.1213(3))**
- 3. The permittee shall continuously monitor and record the amperage for the Torit dry fabric filter baghouse collector once per day during production operations. Proper operation includes an amperage between 175 and 220 amperes for the Torit dry fabric filter baghouse collector. **(R 336.1213(3))**

4. The permittee shall use the Torit dry fabric filter baghouse collector fan amperage to assure compliance with the particulate matter limits. An excursion shall be a reading out of the established amperage ranges. **(40 CFR 64.6(c)(2))**
5. Verification of visible emissions from the Torit dry fabric filter baghouse collector shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
6. The permittee shall utilize visible emissions observations to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation is no visible emissions from the Torit dry fabric filter baghouse collector. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
7. The permittee shall use visible emissions observations to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
8. 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 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))**
9. 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 emission 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))**
10. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring and recording device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
11. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. The permittee shall submit any performance test reports, including RATA 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))**

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-S032-334100-A	51 inches	55 feet	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 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))**

Footnotes:

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

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

**EU-P036 MODULE POURING AND COOLING
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process includes all activities associated with the pouring and cooling of molten iron on one Hunter mold line in the Module Plant. Molten iron is supplied by a 20 ton Brown Boveri holding furnaces that receives molten iron from the cupola. There is no emission control equipment associated with this emission unit.

Flexible Group ID: FG-MACT EEEEE

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM10	9.0 pph ²	Hourly	EU-P036 MODULE POURING AND COOLING and EU-P016 MAIN PLANT POURING AND COOLING	SC V 1 SC III.1	R 336.1331
2. PM10	39.42 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P036 MODULE POURING AND COOLING and EU-P016 MAIN PLANT POURING AND COOLING	SC V 1 SC III.1 SC VI.1	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Inspection and Preventative Maintenance Program instituted at the facility. The Inspection and Preventative Maintenance Program will be subject to change based upon the need to provide a safe working environment and to minimize emissions.² (R 336.1201(3))

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. Upon request of the AQD District Supervisor permittee shall verify PM10 emission rates from EU-P036 MODULE POURING AND COOLING 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 51, Appendix M. 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**
2. 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 records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month.

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, including RATA 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))**

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-S036-334116	30 inches ²	38 feet ²	R 336.1201(3)
2. SV-S036-334128	30 inches ²	38 feet ²	R 336.1201(3)
3. SV-S036-334176	30 inches ²	38 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**EU-P038 MODULE SHAKEOUT
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Castings, gates, risers, and sand are mechanically separated by shaking in the Module Plant. The Module Shakeout process is controlled by a Torit dry fabric filter baghouse collector.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Torit dry fabric filter baghouse collector

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.02 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P038 MODULE SHAKEOUT	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
2. PM10	1.03 pph ²	Hourly	EU-P038 MODULE SHAKEOUT and EU-018 MAIN PLANT SHAKEOUT	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
3. PM10	4.51 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P038 MODULE SHAKEOUT and EU-018 MAIN PLANT SHAKEOUT	SC V 1 SC VI.1, VI.4 VI.6, VI.12	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Torit dry fabric filter baghouse collector associated with EU-P038 MODULE SHAKEOUT:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.

- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

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. Upon request of the AQD District Supervisor permittee shall verify PM and PM10 emission rates from EU-P038 MODULE SHAKEOUT by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

- 2. 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 continuously monitor and record the pressure drop across the Torit dry fabric filter baghouse collector once per day during production operations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
- 2. The permittee shall utilize pressure drop to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation includes a pressure drop between 1" – 6" (inches) water column. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
- 3. The permittee shall use the pressure drop on the Torit dry fabric filter baghouse collector to assure compliance with the particulate matter limits. An excursion shall be a pressure drop reading outside of the established range. **(40 CFR 64.6(c)(2))**
- 4. The permittee shall continuously monitor and record the amperage for the Torit dry fabric filter baghouse collector once per day during production operations. Proper operation includes an amperage between 175 and 220 amperes for the Torit dry fabric filter baghouse collector. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i, ii & iii))**

5. The permittee shall use the Torit dry fabric filter baghouse collector fan amperage to assure compliance with the particulate matter limits. An excursion shall be a reading out of the established amperage ranges. **(40 CFR 64.6(c)(2))**
6. Verification of visible emissions from the Torit dry fabric filter baghouse collector shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
7. The permittee shall utilize visible emissions observations to determine proper operation of the Torit dry fabric filter baghouse collector. Proper operation is no visible emissions from the Torit dry fabric filter baghouse collector. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
8. The permittee shall use visible emissions observations to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
9. 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 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))**
10. 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 emission 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))**
11. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring and recording device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
12. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a QIP during the reporting period (if appropriate). If a QIP has been completed the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**
7. The permittee shall submit any performance test reports, including RATA 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))**

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-S032-334100-A	51 inches	55 feet	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P040 SAND CONDITIONING SYSTEM
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process represents the activities associated with the conditioning of mold sand used in the Main Plant. The process cools hot sand to approximately 120 degrees Fahrenheit or less while maintaining grain distribution and bond addition. A Steelcraft baghouse collects the emissions from all of the sand handling activities which include screening operations, storage silos, cooling and mixing, and the cyclone separator.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Steelcraft pulse-jet fabric filter baghouse.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.03 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P040 SAND CONDITIONING SYSTEM	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
2. PM10	2.00 pph ²	Hourly	EU-P040 SAND CONDITIONING SYSTEM	SC V 1 SC VI.1, VI.4 VI.6	R 336.1331
3. PM10	8.76 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P040 SAND CONDITIONING SYSTEM	SC V 1 SC VI.1, VI.4 VI.6, VI.13	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Steelcraft pulse-jet fabric filter baghouse collector associated with EU-P0340 SAND CONDITIONING SYSTEM.
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.

- c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

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. Upon request of the AQD District Supervisor permittee shall verify PM and PM10 emission rates from EU-P040 SAND CONDITIONING SYSTEM by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

- 2. 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 continuously monitor and record the pressure drop across the Steelcraft baghouse once per day during production operations. **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
- 2. The permittee shall utilize pressure drop to determine proper operation of the baghouse. Proper operation includes a differential pressure of 3.5" – 5.5" (inches) water column. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
- 3. The permittee shall use the pressure drop on the baghouse to assure compliance with the particulate matter limits. An excursion shall be a pressure drop reading outside the established range. **(40 CFR 64.6(c)(2))**
- 4. The permittee shall continuously monitor and record the amperage of the baghouse fan once per day during production operations. Proper operation includes a fan amperage range of 110 – 160 amperes. **(R 336.1213(3), 40 CFR 64.6(c)(1)(i & ii))**

5. The permittee shall use baghouse fan amperage to assure compliance with the particulate matter limits. An excursion shall be an amperage reading outside the established range. **(40 CFR 64.6(c)(2))**
6. Verification of visible emissions from the Steelcraft baghouse shall be performed and documented once daily by non-certified visible emissions readings. If visible emissions are present, the following information must be recorded: **(R 336.1213(3), 40 CFR 64.6(c)(1)(iii))**
 - a. Color of the emissions.
 - b. The cause of the emissions.
 - c. Duration of emission incident.
 - d. Corrective actions taken.
7. The permittee shall utilize visible emissions observations to determine proper operation of the baghouse. Proper operation is no visible emissions from the baghouse. **(40 CFR 64.6(c)(1)(i & ii), R 336.1213(3))**
8. The permittee shall use visible emissions observations from the baghouse to assure compliance with the particulate matter limits. An excursion for particulate matter shall be the observation of visible emissions. **(40 CFR 64.6(c)(2))**
9. Upon detecting an excursion or exceedance, the permittee shall restore operation of the baghouse collectors to normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Records of the actions taken shall be kept and made available to the AQD upon request. **(40 CFR 64.6(c)(2) & (3), 40 CFR 64.7(c) & (d))**
10. 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 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))**
11. 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 emission 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))**
12. The permittee shall, at all times, maintain the pressure drop monitoring device and the fan amperage monitoring device, including, but not limited to, maintaining necessary parts for routine repairs of the equipment. **(40 CFR 64.7(b))**
13. The permittee shall maintain records of PM10 emissions on a 12-month rolling time period as determined at the end of each calendar month. **(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. Each semiannual report of monitoring and 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))**
5. Each semiannual report of monitoring and 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))**
6. The permittee shall submit any performance test reports, including RATA 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))**

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-S040-324728	72 x 36 inches ²	85 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

1. 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 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))**
2. The permittee shall comply with all requirements of 40 CFR Part 64. **(40 CFR Part 64)**

Footnotes:

¹ This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
² This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P041 MAIN PLANT BOND SILO
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process represents the loading of bond into the Main Plant Bond Silo, which is located external to the plant. The bond is used in the Main Plant. A Rumelin bin vent filter controls emissions generated during loading. Bin vent filter vents into the plant environment.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Bin vent filter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	0.10 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P041 MAIN PLANT BOND SILO	SC V 1 SC III.1	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Inspection and Preventative Maintenance Program instituted at the facility. The Inspection and Preventative Maintenance Program will be subject to change based upon the need to provide a safe working environment and to minimize emissions.² **(R 336.1201(3))**

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. Upon request of the AQD District Supervisor permittee shall verify PM emission rates from EU-P041 MAIN PLANT BOND SILO 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

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

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 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))**
- 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))**
- The permittee shall submit any performance test reports, including RATA 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))**

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-S041-324612	10 x 10 inches ²	62 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

¹This condition is state only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**EU-P042 MODULE BOND SILO
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Process represents the loading of bond into the Module Bond Silo. The bond is used in the Module Plant. A Flex Kleen bin vent filter controls emissions generated during loading.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Bin vent filter.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. PM	PM from the Module Bond Silo shall not exceed 0.10 pound per 1,000 pounds of exhaust gases. ²	Hourly	Module Plant Bond Silo	SC V 1 SC III.1	R 336.1331

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer's specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Inspection and Preventative Maintenance Program instituted at the facility. The Inspection and Preventative Maintenance Program will be subject to change based upon the need to provide a safe working environment and to minimize emissions.² (R 336.1201(3))

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. Upon request of the AQD District Supervisor permittee shall verify PM emission rates from EU-P041 MODULE BOND SILO 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit

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

2. 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))**

NA

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, including RATA 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))**

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-S042-334172	10 inches ²	60 feet ²	R 336.1201(3)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**EU-P043 MODULE ISOCURE
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Production of phenolic urethane cold box (Isocure) cores in the Module Plant using dimethylethylamine. The facility does not use triethylamine in the Isocure processes. Emissions from the Module Isocure process are controlled by a cartridge filter-acid scrubber system. The cores are produced on three core machines in the Module Plant. Sand and resin are mixed in a muller prior to addition to core machines. Exhaust from the Module Isocure silos and Module sand heater/cooler is ducted to and controlled by a Torit fabric filter baghouse.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Core machines: Cartridge filter and acid scrubber
 Silos and sand heater/cooler: Torit fabric filter baghouse

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. DMEA	0.04 pph ²	Hourly	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3	R 336.1224 R 336.1225
2. DMEA	0.18 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3 SC VI.2	R 336.1224 R 336.1225
3. PM	0.1 pound per 1,000 pounds of exhaust gases. ²	Hourly	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3	R 336.1331
4. PM	0.1 pound per 1,000 pounds of exhaust gases ²	Hourly	EU-P043 MODULE ISOCURE (silos and sand heater/cooler)	SC V 1 SC III.2 & 3	R 336.1331
5. PM10	0.01 pph ²	Hourly	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3	R 336.1331
6. PM10	0.04 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3 SC VI.2	R 336.1331
7. PM10	0.02 pph ²	Hourly	EU-P043 MODULE ISOCURE (silos and sand heater/cooler)	SC V 1 SC III.2 & 3	R 336.1331
8. PM10	0.09 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P043 MODULE ISOCURE (silos and sand heater/cooler)	SC V 1 SC III.2 & 3 SC VI.2	R 336.1331

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
9. VOC	1.2 pph ²	Hourly	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3	R 336.1702
10. VOC	5.26 tpy ²	12-month rolling time period as determine at the end of each calendar month	EU-P043 MODULE ISOCURE (core machines)	SC V 1 SC III.2 & 3 SC VI.2	R 336.1702

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate all processes and control equipment in accordance with manufacturer’s specifications and in a manner consistent with good environmental engineering practice. All process and control equipment shall be monitored, including the keeping of appropriate records, in accordance with the Operation and Maintenance Plan (O & M Plan) instituted at the facility. The O & M Plan will be subject to change based upon the need to provide a safe working environment and to minimize emissions. **(R 336.1205, R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**
2. The O & M Plan shall, at a minimum, specify the following for the Cartridge filter, acid scrubber, and Torit fabric filter baghouse associated with EU-P043:
 - a. A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b. An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the O & M 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 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. **(R 336.1331, R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d))**

3. When operating the Module Isocure process, the permittee shall maintain the acid scrubber liquid pH and flow rate within the parameters recommended by the manufacturer.² **(R 336.1225, R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip the Torit fabric filter baghouse associated with EU-P043 with a differential pressure gauge. **(R 336.1331, 40 CFR 52.21 (c) and (d))**

V. TESTING/SAMPLING

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

1. Upon request of the AQD District Supervisor permittee shall verify DMEA, PM, PM10, and VOC emission rates from EU-P043 MODULE ISOCURE by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved USEPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10/PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A
DMEA	40 CFR Part 60, 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 District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

2. 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 continuously monitor, and record the pressure drop across the Torit fabric filter baghouse associated with EU-P043 once per day during production operations. **(R 336.1331, 40 CFR 52.21 (c) and (d))**
2. The permittee shall maintain records of DMEA, PM10, and VOC emissions on a 12-month rolling time period as determined at the end of each calendar month.
3. The permittee shall record the actual pH and flow rate of the acid scrubber once per shift.² **(R 336.1225, R 336.1910)**

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, including RATA 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))**

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-S043-334180	12 inches	36.75 feet	R 336.1201(3)
2. SV-S032-334100-A	36 inches	55 feet	R 336.1201(3)
3. SV-S012-324172-A	51 inches	37 feet	40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

²This 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-MACT EEEEE	Processes subject to 40 CFR Part 63, Subpart EEEEE	EU-P009-CUPOLA, EU-P016 MAIN PLANT POURING AND COOLING, EU-P036 MODULE POURING AND COOLING
FG-COLDCLEANERS	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.	EU-SMLPARIWSHR

**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-P009 CUPOLA, EU-P016 MAIN PLANT POURING AND COOLING,
 EU-P036 MODULE POURING AND COOLING

POLLUTION CONTROL EQUIPMENT

EU-P009 CUPOLA: Afterburners, quench tank, totally enclosed treatment system, and positive pressure baghouse.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity (fugitive)	20 percent	6-min average, except for one 6-min average per hour that does not exceed 27 percent	Each Building or Structure Housing any Iron or Steel Foundry Emission Source at FGMACT-EEEE	SC III.1, III.3 III.4, SC V 1 & V 4 SC VI.1 – VI.9	40 CFR 63.7690(a)(7)
2. PM OR--- Total Metal HAP	0.006 gr/dscf or 0.10 pound per ton of metal charged ---OR--- 0.0005 gr/dscf or 0.008 pound per ton of metal charged	Continuous	EU-P009 CUPOLA	SC III.6, III.7 SC V.2, V.3, SC VI.1 VI.2, & VI.6	40 CFR 63.7690(a)(2)(i) or (ii) or (iii) or (iv)
3. Volatile Organic HAP (VOHAP)	20 ppmv corrected to 10 percent oxygen	Continuous	EU-P009 CUPOLA	SC III.6, III.7 SC V.2, V.3 SC VI.1, VI.2, VI.6	40 CFR 63.7690(a)(8)
4. PM ---OR--- Total Metal HAP	0.010 gr/dscf ---OR--- 0.0008 gr/dscf	Continuous	EU-P016 MAIN PLANT POURING AND COOLING	SC III.1, SC V.2, V.3, SC VI.6	40 CFR 63.7690(a)(5)(i) or (ii)
5. PM ---OR--- Total Metal HAP	0.010 gr/dscf ---OR--- 0.0008 gr/dscf	Continuous	EU-P036 MODULE POURING AND COOLING	SC III.1, SC V.2, V.3, SC VI.6	40 CFR 63.7690(a)(5)(i) or (ii)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall maintain 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 maintain a written Startup, Shutdown and Malfunction Plan (SSMP) in accordance with 40 CFR 63.6(e)(3). This SSMP 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. **(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))**
6. For each segregated scrap storage area, bin or pile, the permittee shall prepare and operate according to a written SSMP 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))**
7. For EU-P009 CUPOLA, the permittee shall maintain the 15-minute average combustion zone temperature at or above 1300 degrees Fahrenheit. Periods when the cupola is off-blast and for 15 minutes after going on-blast from an off-blast condition, are not included in the 15-minute average. **(40 63.7690(b)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate an emission source subject to an emission limit or standard for VOHAP or TEA unless the associated capture and control system is installed, operated and maintained in accordance with the approved O & M Plan. **(40 CFR 63.7690(b), 40 CFR 63.7710)**

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, Total Volatile Organic HAPs, and Total Metal HAPs emission rates from FG-MACT EEEEE 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 63.7732(b) & (h)
VOHAP	40 CFR 63.7732(e) & (f)
Opacity	40 CFR 63.7732(d)
Total Metal HAP	40 CFR 63.7732(c) & (h)

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 District Office. 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. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004) (40 CFR 63.7730(a), 40 CFR 63.7731(a))**

2. The permittee shall verify the PM, Total Volatile Organic HAP, and/or Total Metal HAP emission rates from FG-MACT EEEEE, 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) (40 CFR 63.7730(a), 40 CFR 63.7731(a))**
3. The permittee shall conduct a performance test to demonstrate compliance with the opacity limit in SC I.1 (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))**

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. For EU-P009 CUPOLA, the permittee shall install, operate, and maintain a continuous parameter monitoring system (CPMS) for each combustion device for emission units subject to the VOHAP or TEA emission limitations, to measure and record the combustion zone temperature according to the requirements in 40 CFR 63.7741(d). **(40 CFR 63.7740(a), 40 CFR 63.7740(d), 40 CFR 63.7741(d))**
2. For EU-P009 CUPOLA, the permittee shall install, operate and maintain a continuous parameter monitoring system (CPMS) for each capture system (wet scrubber, combustion device, or wet acid scrubber) subject to an operating limit in 40 CFR 63.7690(b)(1), according to the requirements in 40 CFR 63.7740(a)(1) and (2) and 40 CFR 63.7741(a). **(40 CFR 63.7740(a), 40 CFR 63.7741(a))**
3. The permittee shall operate each CPMS according to the requirements of 40 CFR 63.7741(f)(1) through (3). **(40 CFR 63.7741(f))**
4. The permittee shall keep records of the chemical composition of the catalyst binder formulation as specified in 40 CFR 63.7744(b). **(40 CFR 63.7744)**
5. 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))**
6. The permittee shall monitor and collect data to demonstrate continuous compliance in accordance with 40 CFR 63.7742. **(40 CFR 63.7742)**
7. The permittee shall demonstrate continuous compliance with all applicable emission limitations in accordance with 40 CFR 63.7743. **(40 CFR 63.7743)**

8. 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 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)**
5. 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) & (d))**
6. 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))**
7. The permittee shall submit any performance test reports, including RATA 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))**

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:

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

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

FG-COLD CLEANERS 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: EU-SMLPARIWSHR

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	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ e	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 ₂ 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 _x	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 ₂	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

Specific monitoring requirement procedures, methods or specifications 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 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

There are no specific testing requirement plans or procedures for this ROP. 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-B1577-2014. 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-B1577-2014a is being reissued as Source-Wide PTI No. MI-PTI-B1577-2020.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
68-19	202000003*	Installation of Hermann fabric filter baghouse as additional control to Main Plant Shakeout; previously these were fugitive emissions	EU-P018
65-17	NA	Installation of Module Torit fabric filter baghouse to control Module Sand System, Module Finishing, and Module Shakeout; replaced two wet collectors (East and West Module Wet Collectors)	EU-P032, EU-P034, EU-P038

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 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.