

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

March 23, 2022

**PERMIT TO INSTALL
28-22**

**ISSUED TO
Grede Foundries, Inc.**

**LOCATED AT
801 South Carpenter Avenue
Kingsford, Michigan 49802**

**IN THE COUNTY OF
Dickinson**

**STATE REGISTRATION NUMBER
B1577**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: January 3, 2022	
DATE PERMIT TO INSTALL APPROVED: March 23, 2022	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

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

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-P012	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.	1978 1979	NA
EU-P016	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.	1978 1994	FG-MACT EEEEE
EU-P018	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).	1977 1979 2016 2019	NA

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EU-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	Hourly	EU-P012 MAIN PLANT SAND SYSTEM	SC V.1	R 336.1331
2. PM10	1.27 pph	Hourly	EU-P012 MAIN PLANT SAND SYSTEM and EU-P032 MODULE PLANT SAND SYSTEM	SC V.1	R 336.1331
3. PM10	5.56 tpy	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 VI.8	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))**

2. 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 336.1201(3))**

1. Upon request from the AQD District Supervisor, the 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 shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. 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 of water column. **(R 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**
2. The permittee shall use the pressure drop on the Large Wet Dust Collector to assure compliance with the particulate matter limits. **(R 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**

- 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 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**
- 4. 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 336.1301, R 336.1331)**
 - a) Color of the emissions.
 - b) The cause of the emissions.
 - c) Duration of emission incident.
 - d) Corrective actions taken.
- 5. 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. **(R 336.1910)**
- 6. 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. **(R 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**
- 7. 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. **(R 336.1331, R 336.1910, 40 CFR 52.21 (c) and (d))**
- 8. The permittee shall maintain records of PM10 emissions on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1331)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-S012-324172	48	37	R 336.1201(3) 40 CFR 52.21(c) and (d)
2. SV-S012-324476	6	31	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).

**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 furnace 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	Hourly	EU-P016 MAIN PLANT POURING AND COOLING and EU-P036 MODULE POURING AND COOLING	SC V.1	R 336.1331
2. PM10	39.42 tpy	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 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. **(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 336.1201(3))**

1. Upon request of the AQD District Supervisor, the 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 shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall maintain records of PM10 emissions on a monthly and 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1331)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-S016-324636	24	27	R 336.1201(3)
2. SV-S016-324632	24	37	R 336.1201(3)
3. SV-S016-324662	30	36	R 336.1201(3)
4. SV-S016-324678	36	29	R 336.1201(3)
5. SV-S016-324682	40	41	R 336.1201(3)
6. SV-S016-324844	24	41	R 336.1201(3)
7. SV-S016-324484	30	40	R 336.1201(3)
8. SV-S016-324848	24	41	R 336.1201(3)
9. SV-S016-324666	34	27	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).

**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).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Two fabric filter baghouses (Torit Baghouse #1 and Linsmeyer) control shakeout.

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.	Hourly	EU-P018 MAIN PLANT SHAKEOUT	SC V.1	R 336.1331
2. PM10	1.03 pph	Hourly	EU-P018 MAIN PLANT SHAKEOUT and EU-P038 MODULE SHAKEOUT SV-S032-334100	SC V.1	R 336.1331
3. PM10	4.51 tpy	12-month rolling time period as determined at the end of each calendar month	EU-P018 MAIN PLANT SHAKEOUT and EU-P038 MODULE SHAKEOUT SV-S032-334100	SC VI.7	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 and Linsmeyer fabric filter 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 336.1201(3))**

- 1. Upon request from the AQD District Supervisor, the permittee shall verify PM and PM10 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 shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1331, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

- 1. 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. 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))**
4. 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)**
 - a) Color of the emissions.
 - b) The cause of the emissions.
 - c) Duration of emission incident.
 - d) Corrective actions taken.
5. 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)**
6. 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))**
7. 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 336.1331)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-S018-324372-A (Torit Baghouse)	51	37	R 336.1201(3)
2. SV-S018-324372-B (Linsmeyer Baghouse)	48	30	R 336.1201(3)
3. SV-S018-324296	48	30	R 336.1201(3)
4. SV-S018-324300	48	28	R 336.1201(3)
5. SV-S018-324640	48	29	R 336.1201(3)
6. SV-S018-324304	60	30	R 336.1201(3)
7. SV-S018-324308	60	30	R 336.1201(3)
8. SV-S018-324312	30	28	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).