

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

July 27, 2017

PERMIT TO INSTALL
108-17

ISSUED TO
Revolution Onsite Crushing

LOCATED AT
40677 County Road 388
Bloomington, Michigan

IN THE COUNTY OF
Van Buren

STATE REGISTRATION NUMBER
P0411

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. 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: July 20, 2017	
DATE PERMIT TO INSTALL APPROVED: July 27, 2017	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms	2
General Conditions	3
Special Conditions	5
Emission Unit Summary Table.....	5
Flexible Group Summary Table	5
Special Conditions for FGCRUSHING.....	6
Appendix A.....	8

Common Abbreviations / Acronyms

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 _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
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.

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 Environmental Quality, 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 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 R 336.1219 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(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 conditions 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 R 336.1301, 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 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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

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 (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUPROCESS	A combination of process equipment (screens, crushers, feeders, conveyors, etc.) located at 40677 CR388, Bloomingdale, Michigan, used to reduce larger materials down to smaller sizes, classify and sort materials into various product types, material handling and transporting of material to storage areas. Control methods include equipment enclosures or enclosed within a building, water sprays, drop chutes and/or pant legs for transfer points.		
EUTRUCKTRAFFIC	Truck traffic for delivery of material products to customers; truck traffic from quarry pit to processing area and loader traffic associated with processing equipment, storage pile handling and loading delivery trucks. All commercial truck areas and unpaved road portions from the quarry pit to the process area.		
EUSTORAGE	Open area stock piles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.		
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 336.1290.			

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
FGCRUSHING	A nonmetallic mineral crushing facility located at 40677 CR388, Bloomingdale, Michigan, consisting of crusher(s) and associated process equipment including grinding mills, drills, screening operations, bucket elevators, belt conveyors, loading and bagging operations, storage bins, enclosed truck or railcar loading stations and any other material handling equipment operated at the site. Each crusher and screen shall be equipped with a water spray. A baghouse dust collector may alternatively be installed in lieu of water spray for any particular piece of equipment. Operation of the control equipment is required only when necessary to meet applicable emission limits.	EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

The following conditions apply to: FGCRUSHING

DESCRIPTION: A nonmetallic mineral crushing facility located at 40677 CR388, Bloomingdale, Michigan, consisting of crusher(s) and associated process equipment including grinding mills, drills, screening operations, bucket elevators, belt conveyors, loading and bagging operations, storage bins, enclosed truck or railcar loading stations and any other material handling equipment operated at the site. Each crusher and screen shall be equipped with a water spray. A baghouse dust collector may alternatively be installed in lieu of water spray for any particular piece of equipment. Operation of the control equipment is required only when necessary to meet applicable emission limits.

Emission Units: EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

POLLUTION CONTROL EQUIPMENT: Water Sprays

I. EMISSION LIMITS

1. Visible emissions from FGCRUSHING shall not exceed the limits in the following table: **(R 336.1301, 40 CFR 52.21 (c) & (d), 40 CFR 60.670)**

	Equipment	Opacity Limit (%)
1.2a	Any equipment enclosed within a building	No visible emissions
1.2b	All crushers	12
1.2c	Screens	7
1.2d	Rock drills	5
1.2e	Conveyors/Transfer points	7
1.2f	Wash screens and all subsequent equipment downstream up to the next crusher or storage bin	No visible emissions
1.2g	All equipment controlled by a baghouse dust collector	7
1.2h	Wheel loaders and truck traffic	5
1.2i	Material storage piles	5
1.2j	Any other process equipment which is part of the nonmetallic mineral crushing facility or related processes	7

II. MATERIAL LIMITS

1. The permittee shall not process more than 6,000 tons of material through FGCRUSHING. **(R 336.1205, 40 CFR 52.21 (c) & (d))**
2. The permittee shall not crush any asbestos tailings or asbestos containing waste materials, as defined by the National Emission Standard for Hazardous Air Pollutants regulations, in FGCRUSHING. **(40 CFR Part 61 Subpart M)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FGCRUSHING unless the program for continuous fugitive emissions control for all facility roadways, the facility yard, all storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371)**
2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and OOO, as they apply to FGCRUSHING. **(40 CFR Part 60 Subparts A & OOO)**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any portion of FGCRUSHING unless the water sprays for each crusher and each screen are installed, maintained and operated in a satisfactory manner to comply with all emission limits. **(R 336.1910, 40 CFR 52.21 (c) & (d))**
2. The permittee shall install and maintain a belt scale(s) on the transfer conveyor(s) portion of FGCRUSHING which continuously shows the daily throughput rate for the conveyor(s). **(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))**

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(40 CFR 52.21 (c) & (d))**
2. The permittee shall keep monthly records of the amount of material processed through FGCRUSHING. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(40 CFR 52.21 (c) & (d))**
3. The permittee shall not operate FGCRUSHING unless the nuisance minimization plan for fugitive dust for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371)**
4. The permittee shall keep records of all watering/dust suppressant applications for the site roadways, plant yard and stockpiles as required by Appendix A. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1371)**

VII. REPORTING

1. The permittee shall notify the AQD District Supervisor upon startup of FGCRUSHING at 40677 CR388, Bloomington, Michigan. **(R 336.1201)**
2. The permittee shall submit notification to the AQD at least 10 days prior to relocating FGCRUSHING to this site. **(Act 451 324.5505, 40 CFR 52.21 (c) & (d))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. This permit shall be terminated on or before August 31, 2017. **(R 336.1201(3))**

Footnotes:

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

APPENDIX A
Nuisance Minimization Plan
Fugitive Dust

I. Site Roadways / Plant Yard

- A. The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet all applicable emission limits. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.
- B. All paved roadways and the plant yards shall be swept as needed between applications.
- C. Any material spillage on roads shall be cleaned up immediately.

II. Plant

The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve. The transfer point from the re-circulating belt to the feed belt shall be equipped with an enclosed chute.

III. Storage Piles

- A. Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.
- B. Stockpiles shall be watered on an as needed basis in order to meet the opacity limit of 5 percent. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

IV. Truck Traffic

On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any side board, side panel or tailgate. Otherwise, the truck shall be tarped.

V. AQD/MDEQ Inspection

The provisions and procedures of this plan are subject to adjustment by written notification from the AQD if, following an inspection, the AQD finds the fugitive dust requirements and/or permitted emission limits are not being met.