

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

August 1, 2023

PERMIT TO INSTALL
181-20D

ISSUED TO
Iron City Enterprises, Inc.

LOCATED AT
N2404 Highway 41
Menominee, Michigan 49858

IN THE COUNTY OF
Menominee

STATE REGISTRATION NUMBER
P1155

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: July 18, 2023	
DATE PERMIT TO INSTALL APPROVED: August 1, 2023	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS2
POLLUTANT / MEASUREMENT ABBREVIATIONS.....3
GENERAL CONDITIONS4
EMISSION UNIT SPECIAL CONDITIONS.....6
 EMISSION UNIT SUMMARY TABLE6
FLEXIBLE GROUP SPECIAL CONDITIONS.....7
 FLEXIBLE GROUP SUMMARY TABLE7
 FGCRUSHING.....8
APPENDIX A 11
APPENDIX B..... 12

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. The permittee shall not operate this equipment in a manner that causes or permits the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, 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 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))	Flexible Group ID
EUPROCESS	A combination of process equipment (screens, crushers, feeders, conveyors, etc.) 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.	FGCRUSHING
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.	FGCRUSHING
EUSTORAGE	Open area stockpiles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.	FGCRUSHING

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

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCRUSHING	A nonmetallic mineral crushing operation 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. Operation of the control equipment is required only when necessary to meet applicable emission limits.	EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

**FGCRUSHING
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

A nonmetallic mineral crushing operation 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. Operation of the control equipment is required only when necessary to meet applicable emission limits.

Emission Unit: EUPROCESS, EUTRUCKTRAFFICE, EUSTORAGE

POLLUTION CONTROL EQUIPMENT

Water Sprays

I. EMISSION LIMIT(S)

1. Visible emissions from FGCRUSHING shall not exceed the limits in the following table: **(R 336.1205, R 336.1301, 40 CFR 60.670)**

	Equipment	Opacity Limit (%)
1.2a	Any equipment enclosed within a building	No visible emissions
1.2b	All crushers	15
1.2c	Screens	7
1.2d	Rock drills	5
1.2e	Conveyors/Transfer points	10
1.2f	Wash screens and all subsequent equipment downstream up to the next crusher or storage bin	No visible emissions
1.2g	Wheel loaders and truck traffic	5
1.2h	Material storage piles	5
1.2i	Any other process equipment which is part of the nonmetallic mineral crushing facility or related processes	7

II. MATERIAL LIMIT(S)

1. The permittee shall not process more than 1,000,000 tons of material through FGCRUSHING per year. **(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 61.141)**
3. The annual production limit of 1,000,000 tons per year per site shall not apply if FGCRUSHING is operated at a location that is covered by a site-specific air use permit. At such a location, the annual material processed shall be in conjunction with the production limit contained in the permit for that location. All other conditions and restrictions of this permit shall apply when operating at such location. **(R 336.1201, R 336.1205)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any portion of FGCRUSHING unless each portion of FGCRUSHING meets the specific opacity limit listed in Appendix A of this permit. **(R 336.1301, 40 CFR 52.21 (c) & (d), 40 CFR 60.670)**

2. 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 B has been implemented and is maintained. **(R 336.1371, R 336.1372, R 336.1901, Act 451 324.5524)**
3. 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 PARAMETER(S)

1. Each crusher and screen shall be equipped with a water spray. The control equipment shall be properly operated as necessary to comply with all emission limits. **(R 336.1205, R 336.1301, R 336.1303, R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 60 days after achieving maximum production rate, verification of visible emission rates from all equipment that is required to be tested that has not previously been tested, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and OOO, will be required. No less than 7 days prior to the anticipated test date, visible emission observation procedures must be approved by the District Supervisor. Also, no less than 7 days prior to the anticipated test date, the permittee shall notify the District Supervisor of the test date. If after the anticipated test date has been submitted to the District Supervisor, there is a delay in conducting the test, the permittee shall submit to the District Supervisor notice of the new test date. This notification shall be done a minimum of 3 days prior to the rescheduled test taking place. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD within 30 days following the last date of the test. **(R 336.1301, R 336.2001, 40 CFR Part 60 Subparts A & OOO)**

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 and annual records of the amount of material processed through FGCRUSHING. Furthermore, the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(R 336.1205, 40 CFR 52.21 (c) & (d))**
3. 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 336.1205, R 336.1371, R 336.1901)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUPROCESS. **(R 336.1201(7)(a))**
2. The permittee shall provide written notification of construction and operation to comply with the federal Standards of Performance for New Stationary Sources, 40 CFR 60.7. The permittee shall submit this notification to the AQD District Supervisor within the time frames specified in 40 CFR 60.7. **(40 CFR 60.7)**

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:

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall not relocate FGCRUSHING to any new geographical site in Michigan unless all of the following criteria are met:
 - a) FGCRUSHING shall not have any outstanding unresolved violations of any of the EGLE Air Pollution Control rules, order, or permits, or federal air quality regulations.
 - b) The installation of FGCRUSHING at the geographical site shall be of a temporary nature lasting not more than 12 consecutive months.
 - c) The permittee shall provide a notice of intent to relocate (pursuant Relocation Notice Form EQP5757) along with a proposed site plan to the AQD district office not less than 10 days prior to the scheduled relocation identifying the proposed new geographical site and the probable duration at the new site. However, if electronic notification is used, the notification shall be submitted at least 5 days before the change of location or 2 business days if the owner provided the AQD District Supervisor a list of anticipated operating locations for that calendar year at least 10 days before the change of location and if the proposed location is on that list. The permittee shall clearly identify all residential or commercial establishments and places of public assembly within 1,000 feet of the proposed site of FGCRUSHING on the proposed site plan.
 - d) The permittee shall not locate FGCRUSHING within 500 feet of a residential or commercial establishment or a place of public assembly.
 - e) The permittee shall clearly post a copy of this approved permit and permit conditions in the operator's office or workstation and shall post the permit number on the equipment where it is clearly visible from the operator's office or workstation.
 - f) The permittee shall not relocate FGCRUSHING to any geographical site for which there is a known controversy. **(Act 451 324.5505, R 336.1201, R 336.1205, 40 CFR 52.21 (c) & (d))**
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)**
3. The permittee shall label all equipment associated FGCRUSHING within 30 days of permit issuance according to the company IDs specified in the application (Form EQP5756). Labels shall be in a conspicuous location on the equipment. **(R 336.1201, 40 CFR 60.670)**

Footnotes:

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

APPENDIX A

Equipment Description	ID Number	Opacity Limit (Percent)	Control Device
Lippman Jaw Crusher 24 x 36	#101	15	Water Spray
Allis Jaw Crusher 24 x 48	#103	15	Water Spray
Lippman Second Finish Jaw Crusher	#104	15	Water Spray
Lippman Roll Crusher	#105	15	Water Spray
Cedar Rapids Roll Crusher	#106	15	Water Spray
Allis Jaw Crusher 30 x 42	#107	15	Water Spray
Allis Cone Crusher H-4000	#108	15	Water Spray
Allis Screen 6 x 20	#111	15	Water Spray
Shop Built Screen 4 x6	#112	15	Water Spray
Shop Built Screen 3 x 8	#113	15	Water Spray
Lippman Screen 4 x 12	#114	15	Water Spray
Shop Built Screen 4 x8	#115	15	Water Spray
Conveyor 30x35	#4	10	Residual Moisture
Conveyor 30x40	#5	10	Residual Moisture
Conveyor 30x50	#6	10	Residual Moisture
Conveyor 40x20	#7	10	Residual Moisture
Conveyor 24x30	#8	10	Residual Moisture
Conveyor 24x30	#9	10	Residual Moisture
Conveyor 24x30	#10	10	Residual Moisture
Conveyor 30x55	#11	10	Residual Moisture
Conveyor 24x113	#12	10	Residual Moisture
Conveyor 24x77	#13	10	Residual Moisture
Conveyor 30x50	#14	10	Residual Moisture
Conveyor 36x60	#15	10	Residual Moisture
Conveyor 24x18	#16	10	Residual Moisture
Conveyor 24x47	#17	10	Residual Moisture
Conveyor 30x60	#18	10	Residual Moisture
Conveyor 24x33	#19	10	Residual Moisture
Conveyor 24x33	#20	10	Residual Moisture
Conveyor 24x33	#21	10	Residual Moisture
Conveyor 24x33	#22	10	Residual Moisture
Conveyor 30x105	#23	10	Residual Moisture
Conveyor Kolberg 30x105	#24	10	Residual Moisture
Conveyor 30x60	#25	10	Residual Moisture
Conveyor 24x40	#27	10	Residual Moisture

APPENDIX B

Nuisance Minimization Plan for 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.

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/EGLE 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.