

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

July 13, 2023

PERMIT TO INSTALL
87-23

ISSUED TO
Great Lakes Crushing

LOCATED AT
11586 Center Road
Traverse City, Michigan 48654

IN THE COUNTY OF
Ogemaw

STATE REGISTRATION NUMBER
P1311

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: June 27, 2023	
DATE PERMIT TO INSTALL APPROVED: July 13, 2023	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 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.) located at 11586 Center Road, Traverse City, 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.	NA
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.	NA
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.	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.

EUPROCESS EMISSION UNIT CONDITIONS

DESCRIPTION

A combination of process equipment (screens, crushers, feeders, conveyors, etc.) located at 11586 Center Road, Traverse City, 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.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Water sprays

I. EMISSION LIMIT(S)

1. Visible emissions from the drop point and transfer point portions of EUPROCESS shall not exceed a six-minute average of 7 percent opacity. **(R 336.1301, 40 CFR 52.21(c) & (d), 40 CFR 60.670)**

II. MATERIAL LIMIT(S)

1. The permittee shall not process any asbestos tailing or waste materials containing asbestos in EUPROCESS pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M. **(40 CFR Part 61 Subpart M)**
2. The permittee shall not process more than 10,000 tons of material through EUPROCESS per 12-month rolling time period as determined at the end of each calendar month. **(40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any portion of EUPROCESS unless each portion of EUPROCESS 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 EUPROCESS 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 336.1901)**
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 EUPROCESS. **(40 CFR Part 60 Subparts A & OOO)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any portion of EUPROCESS unless the equipment's specified control device is installed, maintained, and operated in a satisfactory manner as listed in Appendix A. **(R 336.1901, R 336.1910, 40 CFR 52.21(c) and (d))**
2. The permittee shall install and maintain a belt scale on the 90 foot McCloskey conveyor portion of EUPROCESS which continuously shows the daily throughput rate for the conveyor. **(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. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of trial operation, the permittee shall evaluate visible emissions from EUPROCESS, as required by federal Standards of Performance for New Stationary Sources, at owner's expense, in accordance 40 CFR Part 60 Subparts A and OOO. Visible emission observation procedures must have prior approval by the AQD Technical Programs Unit and District Office. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 45 days following the last date of the test. **(R 336.1301, 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, in a satisfactory manner, daily and monthly records of the amount of material processed through EUPROCESS. Further, 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. **(40 CFR 52.21 (c) & (d))**

VII. REPORTING

1. 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)**
2. The permittee shall submit notification to the AQD District Supervisor at least 10 days prior to relocating EUPROCESS to this site; however, if electronic notification is used, the notification shall be submitted at least five days before the change of location or two 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. **(Act 451 324.5505, 40 CFR 52.21 (c) & (d))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. Within 45 days of issuance of this permit, the permittee shall label all equipment using the company ID Numbers in Appendix A, according to a method acceptable to the AQD District Supervisor. Labels shall be in a conspicuous location on the equipment. Within seven days of completing the labeling, the permittee shall notify the AQD District Supervisor, in writing, as to the date the labeling was completed. **(R 336.1201)**
2. This permit shall be terminated on or before December 31, 2023. **(R 336.1201(3))**

Footnotes:

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

EUTRUCKTRAFFIC EMISSION UNIT CONDITIONS
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DESCRIPTION

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.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Visible emissions from all wheel loaders and all truck traffic, operated in conjunction with EUTRUCKTRAFFIC, shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, 40 CFR 52.21(c) & (d))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUTRUCKTRAFFIC 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 336.1901)**

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))**

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

EUSTORAGE EMISSION UNIT CONDITIONS

DESCRIPTION

Open area stock piles of various material sizes and product types. Water spray of material products are used when necessary for material storage piles.

Flexible Group ID: NA.

POLLUTION CONTROL EQUIPMENT

Include a description of control equipment if applicable. Use NA if no control equipment used.

I. EMISSION LIMIT(S)

1. Visible emissions from each of the material storage piles maintained under EUSTORAGE, shall not exceed five (5) percent opacity. Compliance shall be demonstrated using Test Method 9D as defined in Section 324.5525(j) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). **(R 336.1301, 40 CFR 52.21(c) & (d))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUSTORAGE 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 336.1901)**

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))**

NA

VI. MONITORING/RECORDKEEPING

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

NA

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

APPENDIX A

Equipment Description	ID Number/Serial Number	Opacity Limit (Percent)	Control Device
IRock TJ 2745 150 ton/hr jaw crusher	J45	12	Water sprays
Rubble Master S120 150 ton/hr impact crusher	I120	12	Water sprays
McCloskey ST180 150 ton/hr conveyor	84963	7	Residual moisture
McCloskey 36 x 100 V BIN 150 ton/hr conveyor	83198	7	Residual moisture
McCloskey I44 150 ton/hr impact crusher	01634	12	Water sprays
McCloskey J50V2 150 ton/hr jaw crusher	92268	12	Water sprays

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. 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/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.