

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

May 6, 2015

PERMIT TO INSTALL
160-06J

ISSUED TO
Great Lakes Aggregates LLC

LOCATED AT
Portable

IN THE COUNTY OF
Monroe

STATE REGISTRATION NUMBER
N7618

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: March 23, 2015	
DATE PERMIT TO INSTALL APPROVED: May 6, 2015	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 EUPROCESS	6
Special Conditions for EUTRUCKTRAFFIC	8
Special Conditions for EUSTORAGE	10
Special Conditions for FGFACILITY	12
Appendix A.....	14
Appendix B.....	15
Appendix C.....	16
Appendix D.....	17

Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (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)	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.	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 336.1290.		

FLEXIBLE GROUP SUMMARY TABLE

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	EUPROCESS, EUTRUCKTRAFFIC, EUSTORAGE

The following conditions apply to: EUPROCESS

DESCRIPTION: 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.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Control methods include equipment enclosures or enclosed within a building, water sprays, drop chutes and/or pant legs for transfer points.

I. EMISSION LIMITS

1. Visible emissions from the drop point and transfer point portions of EUPROCESS shall not exceed 10 percent opacity. **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 60.670)**

II. MATERIAL LIMITS

1. The permittee shall not process any asbestos tailing or asbestos containing waste materials in EUPROCESS pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **(40 CFR Part 61 Subpart M)**

III. PROCESS/OPERATIONAL RESTRICTIONS

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, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d), 40 CFR 60.670)**
2. The permittee shall not operate EUPROCESS unless the fugitive dust control plan 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)**
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 PARAMETERS

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 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
2. The permittee shall not locate EUPROCESS within 500 feet of a residential or commercial establishment or a place of public assembly. **(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 maximum production rate, but not later than 180 days after commencement of trial operation, the permittee shall evaluate visible emissions from EUPROCESS, at owner's expense, in accordance with federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subparts A and OOO. The permittee must have prior approval from the AQD for visible emission observation procedures. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD within 45 days following the last date of the evaluation. **(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 keep daily and monthly records of the amount of material processed through EUPROCESS. The permittee shall keep records of the amount of material processed on file and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
2. The permittee shall keep, in a satisfactory manner, records of all visible emission readings for EUPROCESS. At a minimum, records shall include the date, time, name or observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1301, R 336.1303, 40 CFR 52.21(j), 40 CFR 60.42a(b))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

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. The permittee shall operate EUPROCESS at any location in Chesterfield Township, Michigan subject to the terms of Appendix C.

The following conditions apply to: EUTRUCKTRAFFIC

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: In accordance with the fugitive dust control program specified in Appendix B.

I. EMISSION LIMITS

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, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUTRUCKTRAFFIC unless the fugitive dust control plan 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, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: EUSTORAGE

DESCRIPTION: Open area stock piles of various material sizes and product types.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Water spray of material products are used when necessary for material storage piles.

I. EMISSION LIMITS

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, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EUSTORAGE unless the fugitive dust control plan 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, Act 451 324.5524)**

IV. DESIGN/EQUIPMENT PARAMETERS

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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

The following conditions apply to: FG FACILITY

DESCRIPTION: EUPROCESS, EUTRUCKTRAFFIC, and EUSTORAGE.

POLLUTION CONTROL EQUIPMENT: In accordance with the fugitive dust control program specified in Appendix B. Also, control methods include equipment enclosures or enclosed within a building, water sprays, drop chutes and/or pant legs for transfer points.

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall not relocate FGFACILITY to any new geographical site located in Chesterfield Township, Michigan unless the following criteria are met:
 - a) FGFACILITY shall not have any outstanding unresolved violations of any of the MDEQ Air Pollution Control rules, order, or permits; or federal air quality regulations.
 - b) The installation of FGFACILITY 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 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. The permittee shall clearly identify all residential or commercial establishments and places of public assembly within 1,000 feet of the proposed site of FGFACILITY on the proposed site plan.
 - d) The permittee shall clearly post or maintain on site a copy of this approved permit and permit conditions in the operator's office or work station.
 - e) The Department's Delegation of Authority does not authorize us to approve any site where there is a known unresolved objection without providing public notice including an opportunity for public comment and public meeting. **(Act 451 324.5511(3), R336.1901)**
2. The permittee shall not operate FGFACILITY in Chesterfield Township, Michigan unless the preventive maintenance plan specified in Appendix C has been implemented and is maintained. **[R336.1205, R336.1301, R 336.1303, R 336.1331, R 336.1910]**
3. The permittee shall conduct a visible emissions observation of FGFACILITY within 3 days of relocation to a site in Chesterfield Township, Michigan. At a minimum, records of this observation shall include the date, time, name of observer/reader, whether the reader is certified, and status of visible emissions. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1301, R336.1901, 40 CFR 52.21 (c) & (d)]**
4. When operating within Chesterfield Township, Michigan, the permittee shall make and record a daily inspection of the operating conditions of FGFACILITY. At a minimum, the records shall contain the date, time, name of observer, temperature, weather conditions and the method used to comply with the applicable opacity limits. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **[R336.1301, R336.1901, 40 CFR 52.21 (c) & (d)]**

APPENDIX A

Equipment Description Summary Table

Equipment Description	ID Number	Opacity Limit (Percent)	Control Device
Masaba 100' stacker	R-30	10	Residual Moisture ¹
Masaba 100' stacker	R-31	10	Residual Moisture ¹
Terex Cedarapids TSH6203 screen	R-24	10	Water Spray
Superstacker 120' stacker	R-18	10	Residual Moisture ¹
Terex TrakPactor crusher	R-20	15	Water Spray
100' stacker	R-46	10	Residual Moisture ¹
Terex Cedarapids crusher	R-64	15	Water Spray
60' stacker	R-47	10	Residual Moisture ¹
Masaba 100' stacker	R-26	10	Residual Moisture ¹

¹ This equipment is not equipped with water suppression; residual moisture is present from upstream water suppression.

APPENDIX B Fugitive Dust Control Plan

I. Plant

The drop distance at each transfer point throughout the plant shall be reduced to the minimum the equipment can achieve.

II. 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 six inches of the top of any sideboard, side panel or tailgate, otherwise, the truck shall be tarped.

III. Site Roadways and the 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 an opacity limit of five percent.
- (b) All paved roadways and the plant yards shall be swept as needed between applications of dust suppressants.
- (c) Any material spillage on roads shall be cleaned up immediately.
- (d) A record of all applications of dust suppressants and roadway and the plant yard sweepings shall be kept on file for the most recent five-year period and be made available to the AQD upon request.

IV. 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 an opacity limit of five 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.
- (c) A record of all watering shall be kept on file for the most recent five-year period and be made available to the AQD upon request.

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 the permitted opacity limits are not being met.

APPENDIX C

(Note: The following plan applies to the facility only when it operates in
Chesterfield Township, Michigan)

Preventive Maintenance Plan

To ensure proper operation of the particulate and dust emission control equipment especially when operating within Chesterfield Township, Michigan, the permittee shall institute the following preventive maintenance program at the facility.

Water Sprays

Water sprays will be installed so as to minimize possible damage from processed material.

Repairs due to damage will take place immediately.

The water spray system will be inspected weekly. Routine repairs and/or maintenance will be made as needed.

A record will be kept for the inspections and repairs made to the water spray system.

All records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request.

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

APPENDIX D

Schedule of Operations for Chesterfield Township Location(s)

The permittee shall only operate EUPROCESS during the following calendar dates:

January 1 through April 15

June 15 through August 25

October 1 through December 31

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