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

February 8, 2023

PERMIT TO INSTALL
26-23

ISSUED TO
Graymont (MI) LLC

LOCATED AT
Trout Lake Road
Rexton, Michigan 49762

IN THE COUNTY OF
Mackinac

STATE REGISTRATION NUMBER
P1097

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: **September 1, 2022**	
DATE PERMIT TO INSTALL APPROVED: **February 8, 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_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
g	Grams
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUKILN1	A natural gas fueled vertical two-shaft, parallel flow, regenerative lime kiln used for manufacturing lime from High Calcium (HICAL) and Dolomitic (DOLO) limestone material. The nominal production capacity is 600 tons per day (tpd). The kiln will be equipped with a Low NOx Burner (LNB) and dust collection baghouse (ID: 321 PDC 096).	TBD	FGKILNS
EUKILN2	A natural gas fueled vertical two-shaft, parallel flow, regenerative lime kiln used for manufacturing lime from HICAL and DOLO limestone material. The nominal production capacity is 600 tpd. The kiln will be equipped with a LNB and dust collection baghouse (ID: 322 PDC 096).	TBD	FGKILNS
EUKILN3	A natural gas fueled vertical two-shaft, parallel flow, regenerative lime kiln used for manufacturing lime from HICAL and DOLO limestone material. The nominal production capacity is 600 tpd. The kiln will be equipped with a LNB and dust collection baghouse (ID: 323 PDC 096).	TBD	FGKILNS
EUEMGRICE1	A diesel fueled emergency reciprocating internal combustion engine (RICE) used to power the cooling blower for EUKILN1 if power to the plant is disrupted. The RICE is nominally rated at 75 HP (56 kW) and manufactured in 2011 or later.	TBD	FGEMGRICE
EUEMGRICE2	A diesel fueled emergency RICE used to power the cooling blower for EUKILN2 if power to the plant is disrupted. The RICE is nominally rated at 75 HP (56 kW) and manufactured in 2011 or later.	TBD	FGEMGRICE
EUEMGRICE3	A diesel fueled emergency RICE used to power the cooling blower for EUKILN3 if power to the plant is disrupted. The RICE is nominally rated at 75 HP (56 kW) and manufactured in 2011 or later.	TBD	FGEMGRICE
EUHEATER	A natural gas fueled water bath heater used to heat the natural gas line to prevent condensation of moisture within the system. Nominally rated at 1.25 MMBTU/hr.	TBD	NA
EUSCREENDC	Dust Collector – Stone Dressing Screen (ID: 305 PDC 126)	TBD	FGBGHSE

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EULKDSILODC1	Dust Collector – Lime Kiln Dust Silo 1 (ID: 321 PDC 122)	TBD	FGBGHSE
EULKDSILODC2	Dust Collector – Lime Kiln Dust Silo 2 (ID: 322 PDC 122)	TBD	FGBGHSE
EULKDSILODC3	Dust Collector – Lime Kiln Dust Silo 3 (ID: 323 PDC 122)	TBD	FGBGHSE
EUSTONEHAND2	Dust Collector – Kiln 2 Limestone Handling (ID: 305 PDC 138)	TBD	FGBGHSE
EULIMEHAND500	Dust Collector - HICAL Lime Crushing / Handling 500 (ID: 345 PDC 500)	TBD	FGBGHSE
EUSTONEHAND3	Dust Collector – Kiln 3 Limestone Handling (ID: 305 PDC 324)	TBD	FGBGHSE
EULIMEHAND510	Dust Collector - HICAL Lime Crushing / Handling 510 (ID: 345 PDC 510)	TBD	FGBGHSE
EULIMEHAND520	Dust Collector - HICAL Lime Crushing / Handling 520 (ID: 345 PDC 520)	TBD	FGBGHSE
EURLHICAL	Dust Collector – HICAL Rail Loadouts / Lime Kiln Dust (ID: 345 PDC 540)	TBD	FGBGHSE
EUTLHICAL126	EP16 Dust Collector – HICAL Truck loadout 126 (ID: 345 PDC 126)	TBD	FGBGHSE
EUTLHICAL152	Dust Collector – HICAL Truck loadout 152 (ID: 345 PDC 152)	TBD	FGBGHSE
EULIMEHAND530	Dust Collector – HICAL Lime Crushing / Handling 530 (ID: 345 PDC 530)	TBD	FGBGHSE
EUTLHICAL176	Dust Collector – HICAL Truck loadout 176 (ID: 345 PDC 176)	TBD	FGBGHSE
EUFINESHAND	Dust Collector – Limestone Fines Handling (ID: 305 PDC 329)	TBD	FGBGHSE
EUCOREBIN	Core Bin (ID: 345 PDC 550)	TBD	FGBGHSE
EULIMEHAND610	Dust Collector – DOLO Lime Handling 610 (ID: 345 PDC 610)	TBD	FGBGHSE
EULIMEHAND620	Dust Collector – DOLO Lime Handling 620 (ID: 345 PDC 620)	TBD	FGBGHSE
EULIMEHAND630	Dust Collector – DOLO Lime Handling 630 (ID: 345 PDC 630)	TBD	FGBGHSE
EUFINESLOAD	Limestone Fines Loadout (ID: 305 PDC 336)	TBD	FGBGHSE
EUTLDOLO360	Dust Collector – DOLO Truck loadout 360 (ID: 345 PDC 360)	TBD	FGBGHSE
EUTLDOLO386	Dust Collector – DOLO Truck loadout 386 (ID: 345 PDC 386)	TBD	FGBGHSE
EUTLDOLO412	Dust Collector – DOLO Truck loadout 412 (ID: 345 PDC 412)	TBD	FGBGHSE

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EURLDOLO	Dust Collector – DOLO Rail Loadouts / Lime Kiln Dust (ID: 345 PDC 640)	TBD	FGBGHSE
EULIMEHAND1	Dust Collector – Lime Handling 1 (ID: 321 PDC 136)	TBD	FGBGHSE
EULIMEHAND2	Dust Collector – Kiln 2 Lime Handling 2 (ID: 322 PDC 136)	TBD	FGBGHSE
EULIMEHAND3	Dust Collector – Kiln 3 Lime Handling 3 (ID: 323 PDC 136)	TBD	FGBGHSE
EUTANK191	12,000 Gallon #2 Fuel Oil Tank	TBD	FGTANKS
EUTANK113	1,000 Gallon #2 Fuel Oil Tank	TBD	FGTANKS
EUTANKK1	66 Gallon #2 Fuel Oil Tank	TBD	FGTANKS
EUTANKK2	66 Gallon #2 Fuel Oil Tank	TBD	FGTANKS
EUTANKK3	66 Gallon #2 Fuel Oil Tank	TBD	FGTANKS
EUTANK103	211 Gallon Hydraulic Fluid Tank	TBD	FGTANKS
EUTANK104	211 Gallon Hydraulic Fluid Tank	TBD	FGTANKS
EUTANK105	211 Gallon Hydraulic Fluid Tank	TBD	FGTANKS
EUTANK302	550 Gallon Gasoline (RVP 11) Tank	TBD	FGTANKS
EUROADWAYS	Fugitive emissions from vehicle traffic in the plant area.	NA	FGQUARRY
EUSTOCKPILES	Fugitive emissions from raw limestone unloading to a stacking conveyor and stockpiled. Stone is then reclaimed by vibrating under pile feeders and moved by conveyor belt to a screen. Screened stone is then conveyed to the kiln via conveyor belt. Limestone pile fugitive dust emissions are included.	NA	FGQUARRY
EUCONVEY	HICAL and DOLO radial stacker over stockpile and conveyor discharge over stacker conveyor.	TBD	FGQUARRY
EUCRUSHER1	Crusher used for crushing limestone.	TBD	FGQUARRY
EUCRUSHER2	Crusher used for crushing limestone.	TBD	FGQUARRY

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.

EUHEATER
EMISSION UNIT CONDITIONS

DESCRIPTION

A natural gas fueled water bath heater used to heat the natural gas line to prevent condensation of moisture within the system. Nominally rated at 1.25 MMBTU/hr.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. There shall be no visible emissions from EUHEATER. **(R 336.1224, R 336.1225, R 336.1205(1)(a) & (b), R 336.1301, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810)**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only natural gas in EUHEATER. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for EUHEATER shall not exceed 1.25 MMBTU/hr (HHV) on a fuel heat input basis. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

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 keep manufacturer documentation showing the maximum heat input for EUHEATER. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVHEATER*	13.0	18.0	R 336.1225, R 336.2803, R 336.2804

*Stack has a raincap.

IX. OTHER REQUIREMENT(S)

NA

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
FGKILNS	Three (3) natural gas fueled vertical two-shaft, parallel flow, regenerative lime kilns used for manufacturing lime from HICAL and DOLO limestone material. Each kiln has a nominal heat input capacity of 97.5 MMBTU/hr and a nominal production capacity of 600 tpd. Each kiln will be equipped with LNB and a baghouse.	EUKILN1, EUKILN2, EUKILN3
FGEMGRICE	Three (3) diesel fueled emergency RICE used to power the cooling blowers for each kiln if power to the plant is disrupted. Each RICE is nominally rated at 75 HP (56 kW) and manufactured in 2011 or later.	EUEMGRICE1, EUEMGRICE2, EUEMGRICE3
FGBGHSE	Baghouse for HICAL and DOLO limestone material handling, product distribution, rail loading, and truck loadout.	EUSCREENDC, EUEUSTONEHAND2, EUSTONEHAND3, EUFINESHAND, EULKDSILODC1, EULKDSILODC2, EULKDSILODC3, EULIMEHAND1, EULIMEHAND2, EULIMEHAND3, EULIMEHAND610, EULIMEHAND620, EULIMEHAND630, EURLDOLO, EUFINESLOAD, EUTLHICAL126, EUTLHICAL152, EUTLHICAL176, EUTLDOLO360, EUTLDOLO386, EUTLDOLO412, EULIMEHAND500, EULIMEHAND510, EULIMEHAND520, EULIMEHAND530, EURLHICAL, EUCOREBIN
FGTANKS	Hydraulic fluid, #2 fuel oil, and gasoline tanks.	EUTANK1, EUTANK2, EUTANK3, EUTANK191, EUTANK113, EUTANK103, EUTANK104, EUTANK105, EUTANK302
FGQUARRY	Blasting, drilling, and primary crushing, and handling of limestone. material.	EUROADWAYS, EUSTOCKPILES, EUCONVEY, EUCRUSHER1, EUCRUSHER2

FGKILNS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three (3) natural gas fueled vertical two-shaft, parallel flow, regenerative lime kilns used for manufacturing lime from HICAL and DOLO limestone material. Each kiln will be equipped with LNB system and dust collection baghouse.

Emission Unit: EUKILN1, EUKILN2, EUKILN3

POLLUTION CONTROL EQUIPMENT

LNB system for NOx emissions control.
Dust collection baghouses for PM, PM10, and PM2.5 emissions control:

- EUKILN1 – 321 PDC 096
- EUKILN2 – 322 PDC 096
- EUKILN3 – 323 PDC 096

Dry Sorbent Injection (DSI) for HCl emissions control.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Opacity	10 percent	6-minute block average	Each Kiln in FGKILNS	SC VI.3, SC VI.11	R 336.1301(c), R 336.2810
2. NOx	9.36 pph	30-day rolling average, as determined each calendar day the kiln operates	Each Kiln in FGKILNS	SC VI.2, SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
3. NOx	30 pph, includes Startup and Shutdown (SUSD)	Hourly	Each Kiln in FGKILNS	SC VI.2, SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
4. CO	8.32 pph	30-day rolling average, as determined each calendar day the kiln operates	Each Kiln in FGKILNS	SC VI.2, SC VI.11	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810
5. CO	59 pph, includes SUSD	Hourly	Each Kiln in FGKILNS	SC VI.2, SC VI.11	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
6. PM	0.08 lb/ton limestone feed	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.2810
7. PM	0.004 gr/dscf	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.1331, R 336.2810
8. PM10	0.065 lb/ton of limestone feed	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.2810
9. PM10	3.32 pph	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
10. PM2.5	0.06 lb/ton of limestone feed	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.2810
11. PM2.5	3.0 pph	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.9, SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
12. VOC	2.5 pph	Hourly	Each Kiln in FGKILNS	SC V.1, SC VI.11	R 336.1205(1)(a) & (b), R 336.1702(a)
13. VOC	32.85 tpy	12-month rolling time period as determined at the end of each calendar month	FGKILNS	SC VI.6, SC. VI.11	R 336.1205(1)(a) & (b), R 336.1702(a)
14. SO_2	13.72 tpy	12-month rolling time period as determined at the end of each calendar month	FGKILNS	SC VI.5, SC VI.11	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804
15. HCl	9.95 tpy	12-month rolling time period as determined at the end of each calendar month	FGKILNS	SC VI.7 or SC VI.10, SC VI.11	R 336.1205(1)(a) & (b), R 336.1224, R 336.1225

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
16. GHG as CO_2e	630,117 tpy	12-month rolling time period as determined at the end of each calendar month	FGKILNS	SC VI.4, SC VI.11	R 336.1205(1)(a) & (b), 40 CFR 52.21(j)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Limestone Feed	448,950 tpy	12-month rolling time period as determined at the end of each calendar month	Each kiln of FGKILNS	SC VI.9	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

2. The permittee shall burn only natural gas in FGKILNS, with a total sulfur content of less than 20 grains of sulfur per 100 standard cubic feet of gas. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.2803, R 336.2804)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any unit in FGKILNS unless a MAP as described in Rule 911(2), has been submitted within 180 days after trial operation, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 60 days after such an event occurs. The permittee shall also amend the MAP within 60 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 60 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

2. Within 180 days after trial operation, the permittee shall submit a plan to the AQD District Supervisor for approval, that describes how emissions will be minimized during startups, shutdowns, and malfunctions. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices, and shall describe the demonstrated percent of design capacity, or demonstrated

steady state level. Unless notified by the District Supervisor within 30 business days after plan submittal, the plan shall be deemed approved. **(R 336.1911)**

3. The permittee shall operate and maintain FGKILNS, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including startup, shutdown, and malfunction. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The nominal heat input capacity for each kiln of FGKILNS shall not exceed, on a fuel heat input basis, 97.5 MMBTU/hr (HHV). **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 228.2810, 40 CFR 52.21(j))**

2. The permittee shall not operate EUKILN1, EUKILN2, or EUKILN3 of FGKILNS unless each respective LNB system is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for FGKILNS as required in SC III.1. **(R 336.1205(1)(a) & (b), R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall not operate EUKILN1, EUKILN2, or EUKILN3 of FGKILNS unless each respective fabric filter collection system is installed, maintained, and operated in a satisfactory manner. Bypassing of the collection system will only be allowed during startup with no limestone feed to the kiln. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1910, R 336.2803, R 336.2804, R 336.2810)**

4. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the NO_x and CO content of the exhaust gas from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. The permittee shall install and operate the Continuous Emission Monitoring System (CEMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the opacity of the exhaust gas from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. The permittee shall install and operate the Continuous Opacity Monitoring System (COMS) to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b), R 336.1301, R 336.2803, R 336.2804, R 336.2810)**

6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the natural gas flow rate from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

7. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the amount of limestone feed from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

8. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the amount of lime produced from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

9. If the permittee elects to install a DSI system on each kiln, the permittee shall not operate any kiln of FGKILNS unless the DSI system is installed, maintained, and operated in a satisfactory manner and on a continuous basis. Satisfactory manner includes operating and maintaining the DSI system in accordance with an approved MAP for FGKILNS as required in SC III.1. **(R 336.1205(1)(a) & (b), R 336.1910)**

10. If the permittee elects to install a DSI system on each kiln, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the HCl content of the exhaust gas from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis. The permittee shall install and operate the CEMS to meet the timelines, requirements and reporting detailed in Appendix A. **(R 336.1205(1)(a) & (b))**

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 no later than after 180 days after commencement of initial startup, the permittee shall verify PM, PM10, PM2.5, VOC, and HCl (if CEMS is not installed) emission rates from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS, by testing at the owner's expense, in accordance with Department requirements. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Testing shall be performed by using an approved EPA Method listed:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M
VOC	40 CFR Part 60, Appendix A; or Method 320 of Appendix A of 40 CFR Part 63
Hydrogen Chloride	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall monitor and record the NO_x, and CO emissions and volumetric flow of the exhaust gases from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis with a CEM system. The permittee shall maintain a QA/QC program as specified in Appendix F of 40 CFR Part 60 and to comply with the requirements as specified in Appendix A of this PTI. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.13)**

3. The permittee shall monitor and record the opacity of the exhaust gases from EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on a continuous basis with a COM system. The permittee shall maintain a QA/QC program as specified in Appendix F of 40 CFR Part 60 and to comply with the requirements as specified in Appendix A of this PTI. **(R 336.1205(1)(a) & (b), R 336.1301, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.13)**

4. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS. The calculations shall be performed using the method included in Appendix B unless a new method is approved by the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

5. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling SO_2 mass emissions for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS. The permittee shall use the most recent results of the sulfur concentration in the natural gas, to estimate SO_2 emissions subject to the approval of the AQD. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2810)**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling VOC mass emissions for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS. The permittee shall use the most recent stack test results to estimate VOC emissions subject to the approval of the AQD. In the event that stack test results do not exist, the permittee shall use the applicable emission factor listed in the Emission Limit Table or as approved by the AQD District Supervisor, to estimate the emissions. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1702, R 336.2810)**

7. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling HCl mass emissions for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS. The permittee shall use the most recent stack test results to estimate HCl emissions subject to the approval of the AQD. In the event that stack test results do not exist, the permittee shall use the applicable emission factor, as approved by the AQD District Supervisor, to estimate the emissions. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225)**

8. The permittee shall monitor and record, in a satisfactory manner, the natural gas usage for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on an hourly and monthly basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

9. The permittee shall monitor and record, in a satisfactory manner, the limestone feed rate for EUKILN1, EUKILN2, and EUKILN3 of FGKILNS on an hourly and monthly basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

10. If the permittee elects to install a DSI system on each kiln for control of HCl, the permittee shall monitor and record the HCl emissions and volumetric flow of the exhaust gases from each kiln of FGKILNS on a continuous basis with a CEMS. The permittee shall maintain a QA/QC program as specified in Appendix F of 40 CFR Part 60 and to comply with the requirements as specified in Appendix A of this PTI. **(R 336.1205(1)(a) & (b), 40 CFR 60.13)**

11. The permittee shall maintain records of all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit for each unit in FGKILNS. This information shall include, but shall not be limited to the following:
    a) Compliance tests and any testing required under the special conditions of this permit.
    b) Monitoring data.
    c) Verification of the total sulfur content of the natural gas.
    d) Verification of heat input capacity.
    e) All calculations necessary to show compliance with the limits contained in this permit.
    f) All records related to, or as required by, the MAP and the startup and shutdown plan.

    All of the above information shall be stored in a format acceptable to the AQD District Supervisor and shall be consistent with the requirements of 40 CFR 60.7(f). **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702, R 336.1912, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

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 each kiln in FGKILNS. **(R 336.1201(7)(a))**

2. If the permittee elects to install a DSI system and HCl CEMS for FGKILNS, the permittee shall notify the AQD District Supervisor, in writing, of the start date of installation. If the date of which 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, the permittee will be required to obtain a new permit for the DSI system installation. **(R 336.1201(4))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVKILN1	54	176.5	R 336.1225, R 336.2803, R 336.2804
2. SVKILN2	54	175.0	R 336.1225, R 336.2803, R 336.2804
3. SVKILN3	54	176.5	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

NA

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

FGEMGRICE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three (3) diesel fueled emergency RICE used to power the cooling blowers for each kiln if power to the plant is disrupted. Each RICE is nominally rated at 56 kW (75 HP) with a displacement of 0.725 liters/cylinder and manufactured in 2011 or later.

Emission Unit: EUEMGRICE1, EUEMGRICE2, EUEMGRICE3

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NMHC +NO_x	4.7 g/kW-hr	Hourly	Each engine in FGEMGRICE	SC V.1, SC VI.2, SC VI.3	R 336.1205(1)(a) & (b), R 336.1702(b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4205(b)[A]
2. CO	5.0 g/kW-hr	Hourly	Each engine in FGEMGRICE	SC V.1, SC VI.2, SC VI.3	R 336.1205(1)(a) & (b), R 336.2804, R 336.2810, 40 CFR 60.4205(b)[A]
3. PM	0.40 g/kW-hr	Hourly	Each engine in FGEMGRICE	SC V.1, SC VI.2, SC VI.3	R 336.1205(1)(a) & (b), R 336.1331(1)(c) 40 CFR 60.4205(b)[A]
4. PM10	0.04 pph	Hourly	Each engine in FGEMGRICE	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM2.5	0.04 pph	Hourly	Each engine in FGEMGRICE	SC V.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. GHGs as CO_2e	1,129 tpy	12-month rolling time period as determined at the end of each calendar month	FGEMGRICE	SC VI.1, SC VI.6	R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j)

[A] These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c). Using the NTE limits does not apply to demonstrating compliance with BACT.

II. MATERIAL LIMITS

1. The permittee shall burn only ultra-low sulfur diesel fuel, in FGEMGRICE, with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum Cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (b), 40 CFR 60.4207(b), 40 CFR 1090.305)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate each engine in FGEMGRICE for more than 500 hours per year based on a 12-month rolling time period as determined at the end of each calendar month. The 500 hours includes the hours for the purpose of maintenance checks and readiness testing, as described in SC III.2. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R336.2810, 40 CFR 52.21(j))**

2. The permittee may operate each engine in FGEMGRICE for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. **(40 CFR 60.4211(f)(2))**

3. The permittee may operate each engine in FGEMGRICE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted as part of the 100 hours per calendar year provided for maintenance and testing as provided in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f)(3))**

4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year and maximum engine power, the permittee shall meet the following requirements for each engine in FGEMGRICE:

   a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,

   b) Change only those emission-related settings that are permitted by the manufacturer, and

   c) Meet the requirements as specified in 40 CFR 1068, as they apply to the engine.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.4211(a) & (c), 40 CFR 52.21(j))**

5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for FGEMGRICE and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211(g))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall equip and maintain each engine in FGEMGRICE with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4209)**

2. The nameplate capacity of each engine in FGEMGRICE shall not exceed 75 HP. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702, R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

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

1. The permittee shall conduct an initial performance test for each engine in FGEMGRICE within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engine has been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60 Subpart IIII. If a performance test is required, the performance tests shall be conducted according to

40 CFR 60.4212, and the hourly emission rates shall be determined by the average of the acceptable three test runs. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 60.4211, 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

2. Upon request from the AQD District Supervisor, the permittee shall verify PM10 and PM2.5 emission rates from each engine in FGEMGRICE, by testing at owner's expense, in accordance with Department requirements. The hourly emission rates shall be determined by the average of three acceptable test runs per the applicable method requirements. Testing shall be performed using an approved EPA Method listed:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

2. The permittee shall keep, in a satisfactory manner, the following records for each engine in FGEMGRICE:

   a) For each certified engine: The permittee shall keep records of the manufacturer certification documentation.

   b) For each uncertified engine: The permittee shall keep records of testing required in SC V.1.

   The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1702(a), R 336.2803, R 336.2804, R 336.2810, 40 CFR 52.21(j), 40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for each engine in FGEMGRICE:

   a. For each certified engine: The permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.4.

   b. For each uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.5, and maintenance activities.

   The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

4. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for each engine in FGEMGRICE, on a daily, monthly, calendar year, and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation for each engine in FGEMGRICE, including what classified the operation as emergency and how many hours are spent for non-emergency operation. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, R336.2810, 40 CFR 52.21(j), 40 CFR 60.4211, 40 CFR 60.4214)**

5. The permittee shall keep, in a satisfactory manner, diesel fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in FGEMGRICE, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the fuel oil and either the Cetane index or aromatic content. **(R 336.1205(1)(a) & (b), R 336.2803, R336.2804, 40 CFR 60.4207(b))**

6. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total CO_2e mass emissions for FGEMGRICE, as required by SC I.6. The permittee shall keep all records on file and make them available to the Department upon request. The calculations shall be performed according to Appendix B, or an alternate method approved by the District Supervisor. **(R 336.1205(1)(a) & (b), R 336.2810, 40 CFR 52.21(j))**

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 each engine in FGEMGRICE. **(R 336.1201(7)(a))**

2. The permittee shall submit a notification specifying whether each engine of FGEMGRICE will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60, Subpart IIII)**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVEMGRICE1	4	35.4	R 336.1225, R 336.2803, R 336.2804
2. SV EMGRICE2	4	35.4	R 336.1225, R 336.2803, R 336.2804
3. SV EMGRICE3	4	35.4	R 336.1225, R 336.2803, R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII, as they apply to FGEMGRICE. **(40 CFR Part 60 Subparts A & IIII)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to FGEMGRICE, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ)**

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

FGBAGHSE
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Baghouse dust collectors located throughout the facility are used to capture dust generated by the limestone material handling from various conveyors, elevators, screens, crushers, feeders, rail loading, and truck loadout.

Emission Unit: EUSCREENDC, EUSTONEHAND2, EUSTONEHAND3, EUFINESHAND, EULKDSILODC1, EULKDSILODC2, EULKDSILODC3, EULIMEHAND1, EULIMEHAND2, EULIMEHAND3, EULIMEHAND610, EULIMEHAND620, EULIMEHAND630, EURLDOLO, EUFINESLOAD, EUTLHICAL126, EUTLHICAL152, EUTLHICAL176, EUTLDOLO360, EUTLDOLO386, EUTLDOLO412, EULIMEHAND500, EULIMEHAND510, EULIMEHAND520, EULIMEHAND530, EURLHICAL, EUCOREBIN

POLLUTION CONTROL EQUIPMENT

Fabric filter dust collectors for control of particulate emissions.

Control Equipment ID:
EUSCREENDC - 305 PDC 126
EUSTONEHAND2 - 305 PDC 138
EUSTONEHAND3 - 305 PDC 324
EUFINESHAND - 305 PDC 329

EULKDSILODC1 - 321 PDC 122
EULKDSILODC2 - 322 PDC 122
EULKDSILODC3 - 323 PDC 122

EULIMEHAND1 - 321 PDC 136
EULIMEHAND2 - 322 PDC 136
EULIMEHAND3 - 323 PDC 136
EULIMEHAND610 - 345 PDC 610
EULIMEHAND620 - 345 PDC 620
EULIMEHAND630 - 345 PDC 630
EURLDOLO - 345 PDC 640

EUFINESLOAD - 305 PDC 336
EUTLHICAL126 - 345 PDC 126
EUTLHICAL152 - 345 PDC 152
EUTLHICAL176 - 345 PDC 176
EUTLDOLO360 - 345 PDC 360
EUTLDOLO386 - 345 PDC 386
EUTLDOLO412 - 345 PDC 412

EULIMEHAND500 - 345 PDC 500
EULIMEHAND510 - 345 PDC 510
EULIMEHAND520 - 345 PDC 520
EULIMEHAND530 - 345 PDC 530
EURLHICAL - 345 PDC 540
EUCOREBIN - 345 PDC 550

I. EMISSION LIMIT(S)

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Opacity	7 percent	6-minute average per hour	Each dust collector in FGBAGHSE	SC V.1, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1301, R 336.2810, 40 CFR 60.672
2. PM	0.004 gr/dscf of exhaust gas, on a dry gas basis	Hourly	Each dust collector in FGBAGHSE	SC V.1, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.1331, R 336.2810, 40 CFR 60.672
3. PM	0.21 pph	Hourly	Each dust collector: EUSCREENDC, EUSTONEHAND2, EUSTONEHAND3, EUFINESHAND	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
4. PM	0.08 pph	Hourly	Each dust collector: EULKDSILODC1, EULKDSILODC2, EULKDSILODC3	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
5. PM	0.29 pph	Hourly	Each dust collector: EULIMEHAND1, EULIMEHAND2, EULIMEHAND3, EULIMEHAND610, EURLDOLO	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
6. PM	0.06 pph	Hourly	Each dust collector: EUFINESLOAD, EUTLHICAL126, EUTLHICAL152, EUTLHICAL176, EUTLDOLO360, EUTLDOLO386, EUTLDOLO412	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
7. PM	0.49 pph	Hourly	Each dust collector: EULIMEHAND500, EULIMEHAND510, EULIMEHAND510, EULIMEHAND620	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
8. PM	0.58 pph	Hourly	Each dust collector: EULIMEHAND530, EULIMEHAND630	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
9. PM	0.39 pph	Hourly	EURLHICAL	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
10. PM	0.10 pph	Hourly	EUCOREBIN	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
11. PM10	0.003 gr/dscf of exhaust gas, on a dry gas basis	Hourly	Each dust collector in FGBAGHSE	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810
12. PM10	0.15 pph	Hourly	Each dust collector: EUSCREENDC, EUSTONEHAND2, EUSTONEHAND3, EUFINESHAND	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
13. PM10	0.06 pph	Hourly	Each dust collector: EULKDSILODC1, EULKDSILODC2, EULKDSILODC3	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
14. PM10	0.22 pph	Hourly	Each dust collector: EULIMEHAND1, EULIMEHAND2, EULIMEHAND3, EULIMEHAND610, EURLDOLO	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
15. PM10	0.05 pph	Hourly	Each dust collector: EUFINESLOAD, EUTLHICAL126, EUTLHICAL152, EUTLHICAL176, EUTLDOLO360, EUTLDOLO386, EUTLDOLO412	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
16. PM10	0.37 pph	Hourly	Each dust collector: EULIMEHAND500, EULIMEHAND510, EULIMEHAND510, EULIMEHAND620	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
17. PM10	0.44 pph	Hourly	Each dust collector: EULIMEHAND530, EULIMEHAND630	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
18. PM10	0.29 pph	Hourly	EURLHICAL	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
19. PM10	0.07 pph	Hourly	EUCOREBIN	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
20. PM2.5	0.002 gr/dscf of exhaust gas, on a dry gas basis	Hourly	Each dust collector in FGBAGHSE	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2810

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
21. PM2.5	0.10 pph	Hourly	Each dust collector: EUSCREENDC, EUSTONEHAND2, EUSTONEHAND3, EUFINESHAND	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
22. PM2.5	0.04 pph	Hourly	Each dust collector: EULKDSILODC1, EULKDSILODC2, EULKDSILODC3	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
23. PM2.5	0.15 pph	Hourly	Each dust collector: EULIMEHAND1, EULIMEHAND2, EULIMEHAND3, EULIMEHAND610, EURLDOLO	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
24. PM2.5	0.03 pph	Hourly	Each dust collector: EUFINESLOAD, EUTLHICAL126, EUTLHICAL152, EUTLHICAL176, EUTLDOLO360, EUTLDOLO386, EUTLDOLO412	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
25. PM2.5	0.24 pph	Hourly	Each dust collector: EULIMEHAND500, EULIMEHAND510, EULIMEHAND510, EULIMEHAND620	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
26. PM2.5	0.29 pph	Hourly	Each dust collector: EULIMEHAND530, EULIMEHAND630	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
27. PM2.5	0.19 pph	Hourly	EURLHICAL	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

Pollutant	Limit*	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
28. PM2.5	0.05 pph	Hourly	EUCOREBIN	SC V.2, SC V.3, SC VI.2, SC VI.3, SC VI.4, SC VI.5	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
*Particulate limits are for filterable portion only.					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGBAGHSE unless a program for continuous fugitive emissions control for all material handling operations, approved by the AQD District Supervisor, has been implemented and is maintained. **(R 336.1371, R 336.1901)**

2. The permittee shall not operate any unit in FGBAGHSE unless a MAP as described in Rule 911(2), has been submitted within 180 days after trial operation, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 60 days after such an event occurs. The permittee shall also amend the MAP within 60 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 60 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

3. The permittee shall not operate any dust collector of FGBAGHSE unless the fabric filter with broken bag leak detectors or an alternative monitoring method approved in writing by the AQD District Supervisor is installed and/or implemented, maintained and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device and/or implementing each alternative monitoring method in accordance with a MAP, approvable by the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.1901, R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup of FGBAGHSE, the permittee shall verify PM and visible emission rates from each dust collector in FGBAHSE by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
Visible Emission	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B;

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.8, 40 CFR 60.11, 40 CFR 60.675, Tables 2 & 3 to Subpart OOO of Part 60)**

2. Within 60 days after achieving the maximum production rate, but no later than after 180 days after commencement of initial startup, the permittee shall verify PM, PM10, and PM2.5 emission rates from each dust collector in FGBAGHSE by testing at owner's expense, in accordance with Department requirements. The permittee shall complete the testing once every five years, thereafter, unless an alternate testing schedule is approved by the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed:

Pollutant	**Test Method Reference**
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of all preventative maintenance as described in the MAP for FGBAGHSE. The permittee shall make all records available to the AQD upon request. **(R 336.1205(1)(a) & (b), R 336.1301, R 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall read and record the differential pressure drop across each dust collector of FGBAGHSE, on a daily basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall perform monitoring of each dust collector of FGBAGHSE according to 40 CFR 60.674(c), (d), or (e). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.674(c), (d), or (e))**

4. The permittee shall record each periodic inspection for FGBAGHSE required under SC VI.3, including date of each inspection and any corrective actions taken, in a logbook (in written or electronic format). If the permittee is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays. The permittee shall keep all records

on file and make them available to the Department upon request. **(40 CFR 60.674(b)(2), 40 CFR 60.676(b)(1))**

5. The permittee shall perform and document non-certified visible emissions observations on a daily basis for when each baghouse of FGBAGHSE is operating. If during the observation there are any visible emissions detected from an emission point, a Method 9D certified visible emissions observation shall be conducted for a minimum of 15 minutes to determine the actual opacity from that emission point. Records of the non-certified visible emissions observations, Method 9D observations that are performed, the reason for any visible emissions observed and any corrective actions taken shall be kept on file and in a format acceptable to the AQD. **(R 336.1371, R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810, Act 451 324.5524)**

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 FGBAGHSE. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. EUSCREENDC	19	85.1	R 336.2803, R 336.2804
2. EUSTONEHAND2	19	87.6	R 336.2803, R 336.2804
3. EUSTONEHAND3	19	59.2	R 336.2803, R 336.2804
4. EUFINESHAND	18	90.1	R 336.2803, R 336.2804
5. EULKDSILODC1	12	86.5	R 336.2803, R 336.2804
6. EULKDSILODC2	12	88	R 336.2803, R 336.2804
7. EULKDSILODC3	12	87.4	R 336.2803, R 336.2804
8. EULIMEHAND1	25	65.7	R 336.2803, R 336.2804
9. EULIMEHAND2	25	65.7	R 336.2803, R 336.2804
10. EULIMEHAND3	25	65.7	R 336.2803, R 336.2804
11. EULIMEHAND610	24	153.2	R 336.2803, R 336.2804
12. EURLDOLO	24	102.5	R 336.2803, R 336.2804
13. EUFINESLOAD	9	72.2	R 336.2803, R 336.2804
14. EUTLHICAL126	9	70.4	R 336.2803, R 336.2804
15. EUTLHICAL152	9	69.9	R 336.2803, R 336.2804

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
16. EUTLHICAL176	9	70.3	R 336.2803, R 336.2804
17. EUTRDOLO360	9	69.1	R 336.2803, R 336.2804
18. EUTLDOLO386	9	70.2	R 336.2803, R 336.2804
19. EUTLDOLO412	9	70.3	R 336.2803, R 336.2804
20. EULIMEHAND500	26	107.2	R 336.2803, R 336.2804
21. EULIMEHAND510	30	154.4	R 336.2803, R 336.2804
22. EULIMEHAND520	12	91	R 336.2803, R 336.2804
23. EULIMEHAND620	26	84.8	R 336.2803, R 336.2804
24. EULIMEHAND530	32	165	R 336.2803, R 336.2804
25. EULIMEHAND630	32	162.9	R 336.2803, R 336.2804
26. EUCOREBIN	12	91	R 336.2803, R 336.2804
27. EURLHICAL	24	113.8	R 336.2803, R 336.2804

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for Non-Metallic Mineral Processing Plants as specified in 40 CFR Part 60 Subparts A and OOO, as they apply to FGBAGHSE. **(40 CFR Part 60 Subparts A & OOO)**

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

FGTANKS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Nine storage tanks for Hydraulic fluid, #2 fuel oil, and gasoline tanks.

Emission Unit: EUTANK191, EUTANK113, EUTANKK1, EUTANKK2, EUTANKK3, EUTANK103, EUTANK104, EUTANK105, EUTANK302

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate FGTANKS and handle organic materials in a manner that prevents vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
   a) Clean up spills as expeditiously as practicable.
   b) Cover all open organic material containers and all organic material storage tank fill-pipes with a gasketed seal when not in use.
   c) Storage tanks shall have pressure relief valves which are maintained in good operating condition.

   (R 336.1224, R 336.1225, R 336.1702(a))

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not fill any tank in FGTANKS unless the tank is equipped with submerged fill piping. **(R 336.1224, R 336.1225, R 336.1702(a))**

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

FGQUARRY
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

FGQUARRY encompasses the initial mining (blasting and drilling) and crushing of the raw material limestone and moving limestone to FGKILNS. Quarry fugitive emissions are created from mining the limestone and includes these fugitive dust sources: overburden removal, drilling, blasting and mining limestone, haul roads. Limestone is sent to the Primary Crusher via truck. The primary crushing breaks the limestone from refrigerator sized boulders to 12-inch sized rock and sends limestone to the Secondary Crusher via conveyor. Secondary crushing breaks the raw material limestone from 12-inch rock to 4-inch sized stone and sends limestone to the stockpiles via conveyor.

Emission Unit: EUCRUSHER1, EUCRUSHER2, EUROADWAYS, EUSTOCKPILES, EUCONVEY

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Opacity	7 percent	6-minute average per hour	Belt conveyors, drop points, and transfer points of FGQUARRY	SC V.1, SC V.2	R 336.1301, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.672(b) Table 3
2. Opacity	12 percent	6-minute average per hour	Each crusher in FGQUARRY	SC V.1, SC V.2	R 336.1301, R 336.2810, 40 CFR 60.672(b) Table 3
3. Opacity	5 percent	6-minute average per hour	EUROADWAYS, EUSTOCKPILES, EUCONVEY	SC V.1, SC V.2	R 336.1301, R 336.2803, R 336.2804, R 336.2810
4. PM	0.0007 lb/ton of limestone crushed*	Hourly	Each crusher in FGQUARRY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
5. PM10	0.00033 lb/ton of limestone crushed*	Hourly	Each crusher in FGQUARRY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
6. PM2.5	0.00005 lb/ton of limestone crushed*	Hourly	Each crusher in FGQUARRY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810
*Particulate limits are for filterable portion only.					

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Limestone	2,628,000 tpy	12-month rolling time period as determined at the end of each calendar month	Each crusher in FGQUARRY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only crush material in FGQUARRY that has been properly wetted to control fugitive emissions. **(R 336.1205(1)(a) & (b), R 336.1301)**

2. The permittee shall not operate FGQUARRY without installing and properly operating the appropriate dust suppression system, including water sprays to control fugitive emissions, or dust collector to control fugitive emissions. Proper operation includes operating the control equipment or implementing the dust control measures in accordance with the facility-wide nuisance management plan for fugitive dust control plan. **(R 336.1331, R 336.1301, R 336.1910, 40 CFR 60.672(a) & (b))**

3. The permittee shall not operate any unit in FGQUARRY unless a MAP as described in Rule 911(2), has been submitted within 180 days after trial operation, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

   If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 60 days after such an event occurs. The permittee shall also amend the MAP within 60 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 60 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1910, R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain above-ground sections of conveyor belts for FGQUARRY with covers and shall enclose above-ground transfer points. **(R 336.1301, R 336.1331, R 336.2803, R 336.2804, R 336.2810)**

V. TESTING/SAMPLING

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

1. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup of FGQUARRY, the permittee shall verify visible emissions from FGQUARRY by testing at

owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
Visible Emissions	40 CFR Part 51, Appendix M; 40 CFR Part 60, Appendix A and B;

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1)(a) & (b), R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.8, 40 CFR 60.11, 40 CFR 60.675, Table 3 to Subpart OOO of Part 60)**

2. The permittee shall perform and document non-certified visible emissions observations on a daily basis when FGQUARRY is operating. If during the observation there are any visible emissions detected from an emission point, a Method 9D certified visible emissions observation shall be conducted for a minimum of 15 minutes to determine the actual opacity from that emission point. Records of the non-certified visible emissions observations, Method 9D observations that are performed, the reason for any visible emissions observed and any corrective actions taken shall be kept on file and in a format acceptable to the AQD. **(R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810, Act 451 324.5524)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of all preventative maintenance as described in the MAP for FGQUARRY. The records shall be made available to the AQD upon request. **(R 336.1205(1)(a) & (b), R 336.1301, R 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, R 336.2810)**

2. The permittee shall record the amount (tons) of material processed by each crusher in FGQUARRY each month and 12-month rolling time period. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810)**

3. The permittee shall perform monthly periodic inspections of FGQUARRY water sprays to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, R 336.2810, 40 CFR 60.674(b), Table 3 to Subpart OOO of Part 60)**

4. The permittee shall record each periodic inspection for FGQUARRY required under SC VI.3, including date of each inspection and any corrective actions taken, in a logbook (in written or electronic format). If the permittee is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.674(b)(2), 40 CFR 60.676(b)(1))**

5. The permittee shall record and keep records of daily visible emissions observations for FGQUARRY as required for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in the approved Management Plan for Fugitive Dust (MPFD). The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1371, R 336.1372)**

VII. REPORTING

1. Within 15 days after the initial startup of FGQUARRY, the permittee shall submit a notification to the AQD District Supervisor, in writing, of the actual date of initial startup. **(R 336.1201(7)(a), 40 CFR 60.676(i))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall label all equipment associated FGQUARRY within 45 days of initial startup. Labels shall be in a conspicuous location on the equipment. **(40 CFR 60.670)**

2. The permittee shall comply with all provisions of the federal Standards of Performance for Non-Metallic Mineral Processing Plants as specified in 40 CFR Part 60 Subparts A and OOO, as they apply to FGQUARRY. **(40 CFR Part 60 Subparts A & OOO)**

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

FGFACILITY CONDITIONS

DESCRIPTION

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGFACILTY unless the Management Plan for Fugitive Dust (MPFD) for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations has been implemented and is maintained. If at any time the MPFD fails to address or inadequately addresses fugitive emissions, the permittee shall amend the MPFD within 60 days after such an event occurs. The permittee shall also amend the MPFD within 60 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MPFD and any amendments to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 60 days of submittal, the MPFD or amended MPFD shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1371)**

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

APPENDIX A – CEMS / COMS Requirements

1. Within 30 calendar days after commencement of initial start-up, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.

2. Within 150 calendar days after commencement of initial start-up, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.

3. Within 180 calendar days after commencement of initial start-up, the permittee shall complete the installation and testing of the CEMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table:

Pollutant	Applicable PS*
Opacity	1
NO_x	2
CO	4
CO_2/O_2	3
HCl	18
*Or other PS as approved by the AQD.	

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 1, 2, 3, 4, and 6 (see No. 4 above) of Appendix B to 40 CFR Part 60 or 40 CFR Part 75, Appendices A and B, as applicable.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60 or 40 CFR Part 75, Appendix B. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F of 40 CFR Part 60).

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The summary report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the Emission Limits of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CEMS downtime and corrective action.
   c) A report of the total operating time of each emission unit during the reporting period.
   d) A report of any periods that the CEMS exceeds the instrument range.
   e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

9. The permittee shall keep all monitoring data on file for a period of at least five years and make them available to the AQD upon request.

APPENDIX B - CO_2e Emission Calculations

For each kiln in FGKILNS (fuel usage) and EUHEATER:

CO_2e emissions (tons/month) = [(Fuel Usage (MMscf/month) x Higher Heating Value (MMBTU/MMscf)) x (CO_2 EF (lb/MMBTU) x CO_2 GWP + CH_4 EF (lb/MMBTU) x CH_4 GWP + N_2O EF (lb/MMBTU) x N_2O GWP)] x 1/2000 (ton/lb)

Where:
Fuel Usage (MMscf/month) = monthly fuel usage data from fuel flow meter
Heat Content (MMBTU/MMscf) = standard value in AP-42 for natural gas, supplier data, or fuel sampling data if available
CO_2 EF (lb/MMBTU) = emission factor from equipment manufacturer or updated value based on CEMs data, or from the GHG Mandatory Reporting Rule (MRR) (40 CFR Part 98)
CH_4 EF (lb/MMBTU) = emission factor from equipment manufacturer, U.S. EPA AP-42 Ch. 3.1 (April 2000), or from the GHG MRR (40 CFR Part 98)
N_2O EF (lb/MMBTU) = emission factors from U.S. EPA AP-42 Ch. 3.1 (April 2000) or from the GHG MRR (40 CFR Part 98)
CO_2 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
CH_4 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
N_2O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)

For each kiln in FGKILNS (calcining):

CO_2e emissions (tons/month) = {Dolo (tons/month) * [(SRCaO * CaOi) + (SRMgO * MgOi)] + HiCal (tons/month) * [(SRCaO * CaOi) + (SRMgO * MgOi)]} * 2000/2205

Where:
Dolo (tons/month) = monthly production of Dolo limestone
HiCal (tons/month) = monthly production of HiCal limestone
SRCaO = Stoichiometric ratio of CO2 and CaO for calcium carbonate (metric tons CO2/metric tons CaO).
CaOi,n = Calcium oxide content for lime type i, determined according to §98.194(c) (metric tons CaO/metric ton lime).
SRMgO = Stoichiometric ratio of CO2 and MgO for magnesium carbonate (metric tons CO2/metric tons MgO).
MgOi,n = Magnesium oxide content for lime type i, determined according to §98.194(c) (metric tons MgO/metric ton lime).

For each engine in FGEMGRICE:

CO_2e emissions (tons/month) = [(Fuel Usage (gal/month) x Higher Heating Value (MMBTU/gal)) x (CO_2 EF (lb/MMBTU) x CO_2 GWP + CH_4 EF (kg/MMBTU) x 2.2046 (lb/kg) x CH_4 GWP + N_2O EF (kg/MMBTU) x 2.2046 (lb/kg) x N_2O GWP)] x 1/2000 (ton/lb)

Where:
Fuel Usage (gal/month) = monthly fuel usage data based on hours of operation
Heat Content (MMBTU/gal) = standard value in AP-42 for diesel or supplier data, if available
CO_2 EF (lb/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)
CH_4 EF (kg/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)
N_2O EF (kg/MMBTU) = emission factor from U.S. EPA AP-42 Ch. 3.3 or 3.4 (as they apply to each engine, October 1996) or from the GHG MRR (40 CFR Part 98)
CO_2 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
CH_4 GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)
N_2O GWP = global warming potential from GHG MRR (40 CFR 98, Subpart A, January 1, 2014)