

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

April 25, 2018

PERMIT TO INSTALL  
128-17

ISSUED TO  
Carmeuse Lime & Stone

LOCATED AT  
25 Marion Avenue  
River Rouge, Michigan

IN THE COUNTY OF  
Wayne

STATE REGISTRATION NUMBER  
B2169

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:

**August 28, 2017**

DATE PERMIT TO INSTALL APPROVED:

**April 25, 2018**

SIGNATURE:

*MaryAnn Doolittle*

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

## PERMIT TO INSTALL

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO <sub>2e</sub>	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM <sub>10</sub>	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM <sub>2.5</sub>	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO <sub>2</sub>	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
  
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
  
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EUKILNNUMBER1	Horizontal rotary lime kiln identified as Kiln No. 1. The kiln is 300 feet long with a 10.6 foot diameter. Exhaust from the kiln is vented through a positive pressure reverse air baghouse with a monovent-type ambient discharge. The monovent-type ambient discharge will be replaced with a 120 ft stack venting both EUKILNNUMBER1 and EUKILNNUMBER2 pursuant to the requirements of PTI No. 193-14A.	1/1/1968	FG-MACT-AAAAA
EUKILNNUMBER2	Horizontal rotary lime kiln identified as Kiln No. 2. The kiln is 300 feet long with a 10.6 foot diameter. Exhaust from the kiln is vented through a positive pressure reverse air baghouse with a monovent-type ambient discharge. The monovent-type ambient discharge will be replaced with a 120 ft stack venting both EUKILNNUMBER1 and EUKILNNUMBER2 pursuant to the requirements of PTI No. 193-14A.	1/1/1968	FG-MACT-AAAAA -
EUPSHFUGITIVE	Equipment for handling of stone after the stone bin and prior to introduction to the lime kilns. The processed stone handling (PSH) equipment includes all conveyors prior to the lime kilns for which the only emissions are fugitive dust emissions.	1/1/1968	FG-MACT-AAAAA -
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

**FLEXIBLE GROUP SUMMARY TABLE**

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

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FG-MACT-AAAAA	The affected source is an existing lime manufacturing plant (LMP), that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. The kilns have historically been fired using pulverized coal and natural gas. Some alternate fuels have been approved for use: syngas and glycerin. These alternate fuels were proposed for use at the facility to offset a portion of the coal burned by the kilns and their use was approved under PTI No. 330-07D. PTI 128-17 is for the combustion of used oil as an additional alternate fuel and a 90 day trial burn using Processed Biosolids fuel.	EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE

**The following conditions apply to: FG-MACT-AAAAA**

**DESCRIPTION:**

The affected source is an existing lime manufacturing plant (LMP), that is (or is part of) a major source of hazardous air pollutant (HAP) emissions. The kilns have historically been fired using pulverized coal and natural gas. Some alternate fuels have been approved for use: syngas and glycerin. These alternate fuels were proposed for use at the facility to offset a portion of the coal burned by the kilns and their use was approved under PTI No. 330-07D.

PTI 128-17 is for the combustion of used oil as an additional alternate fuel and a 90 day trial burn using Processed Biosolids fuel.

**Emission Units:** EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE

**POLLUTION CONTROL EQUIPMENT:** Emissions from EUKILNNUMBER1 and EUKILNNUMBER2 are controlled by a positive pressure reverse air baghouse.

**I. EMISSION LIMITS**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period/ Operating Scenario</b>	<b>Equipment</b>	<b>Testing / Monitoring Method</b>	<b>Underlying Applicable Requirements</b>
1. PM	0.12 pounds per ton of stone feed (lb/tsf)*	Hourly	EUKILNNUMBER1, EUKILNNUMBER2***	SC V.1, SC V.2	40 CFR 63.7090(a)
2. PM10	23.45 pph	Hourly	EUKILNNUMBER1, EUKILNNUMBER2***	SC V.1, SC V.2	40 CFR 52.21(c)&(d)
3. PM2.5	23.45 pph	Hourly	EUKILNNUMBER1, EUKILNNUMBER2***	SC V.1, SC V.2	40 CFR 52.21(c)&(d)
4. PM	0.05 grams per dry standard cubic meter	Hourly	Stack or building vent emissions from EUPSHFUGITIVE	SC V.1, SC V.2	40 CFR 63.7090(a)
5. VE	7 percent opacity	Six-minute average	Stack or building vent emissions from EUPSHFUGITIVE	SC VI.6	40 CFR 63.7090(a)
6. VE	10 percent opacity	Six-minute average	Fugitive emissions from operations associated with EUPSHFUGITIVE that are not enclosed in a building.	SC VI.6	40 CFR 63.7090(a)
7. VE	No visible emissions, or zero percent opacity	Instantaneous	Fugitive emissions from the building containing operations associated with EUPSHFUGITIVE, except for emissions from a vent.	SC VI.6	40 CFR 63.7090(a)
8. SO <sub>2</sub>	300 ppm in exhaust gas corrected to 50% excess oxygen**	Hourly	EUKILNNUMBER1, EUKILNNUMBER2***	SC V.1, SC V.2	R 336.1402(1)
9. SO <sub>2</sub>	2.4 pounds per million BTU of heat input when coal is used as a fuel	Hourly	EUKILNNUMBER1, EUKILNNUMBER2***	SC V.1, SC V.2	R 336.1402(1)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
10. VE	15% opacity	6 minute average opacity for any 6 minute block period when a bag leak detection system (BLDS) or particulate matter (PM) detector is not used	EUKILNNUMBER1, EUKILNNUMBER2***	40 CFR 63.7113(f) and SC VI.1.	40 CFR 63.7090(b)

\* Compliance with this particulate matter limit shall be considered compliance with the limits of R 336.1331(1)(a) using coal and also the limits of Consent Order SIP No. 22-1993, Exhibit B specifying 0.5 lb/tsf, both of which have been subsumed under this streamlined requirement.

\*\* Compliance with this limit shall be considered compliance with the limits of R 336.1402(3) using coal, which has been subsumed under this streamlined requirement.

\*\*\*Compliance with this limit shall be determined for the combined emissions from EUKILNNUMBER1 and EUKILNNUMBER2 after the completion of the installation of SVKILN1&2, on and after October 1, 2018 or earlier if construction is completed.

## II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Glycerin	2.5 tons per hour*	Calendar day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.10	R 336.1205(1)(a)(ii)
2. Glycerin	21,900 tons per year*	12-month rolling time period as determined at the end of each calendar month	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.10	R 336.1205(1)(a)(ii), R 336.1205(3)
3. Glycerin	0.24% sulfur, by weight, on a dry basis	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.11	R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
4. Glycerin	4.25% ash content, on a dry basis	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.11	R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
5. Syngas	24.9 MMBTU per hour*	Calendar day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.12	R 336.1205(1)(a)(ii)
6. Syngas	218,124 MMBTU per year*	12-month rolling time period as determined at the end of each calendar month	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.12	R 336.1205(1)(a)(ii), R 336.1205(3)



Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
7. Syngas	0.14% sulfur, by weight	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.13	R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
8. Used Oil fuel	1,838 gallons per hour*	Calendar Day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.15	R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)
9. Allowed fuels**	No waste material or fuel shall be combusted	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.9, 10, 12, 14, 15, 17	R 336.1205(1)(a)(ii)(D), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d), 40 CFR 60.2010
10. Processed Biosolids fuel	13,750 pounds per hour*	Calendar Day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.17	R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d)

\* This limit applies to the combined total fuel usage for EUKILNNUMBER1 and EUKILNNUMBER2.  
 \*\* Allowed fuels are limited to Coal, Natural Gas, Glycerin, Syngas, Used Oil fuel, and Processed Biosolids fuel.

### III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall comply with the emission limits and operating limits put forth in 40 CFR Part 63 Subpart AAAAA, at all times, except during periods of startup, shutdown, or malfunction. **(40 CFR 63.7100(a))**
2. The permittee shall operate FG-MACT-AAAAA in compliance with the opacity and visible emission limits in 40 CFR Part 63 Subpart AAAAA during the times specified in 40 CFR Part 63.6(h)(1). **(40 CFR 63.6(h)(1), 40 CFR 63.7100(b))**
3. The permittee shall submit to the AQD District Supervisor, for review and approval, a written operations, maintenance and monitoring (OM&M) plan for the facility. Any subsequent changes to the plan must be submitted to the AQD District Supervisor for review and approval. The plan shall contain the following information:
  - a. Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit. **(40 CFR 63.7100(d)(1))**
  - b. A monitoring schedule for each emission unit. **(40 CFR 63.7100(d)(2))**
  - c. Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1 and 2 of 40 CFR, Part 63 Subpart AAAAA, respectively. **(40 CFR 63.7100(d)(3))**
  - d. Procedures for the proper installation, operation and maintenance of monitoring devices or systems used to determine compliance, including:
    - i. Calibration and certification of accuracy of each measuring device.
    - ii. Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems.
    - iii. Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (3) and (4)(ii).
    - iv. Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d). **(40 CFR 63.7100(d)(4))**
  - e. Procedures for monitoring process and control device parameters. **(40 CFR 63.7100(d)(5))**
  - f. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 2 of 40 CFR, Part 63 Subpart AAAAA, including:

- i. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended.
- ii. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.

**(40 CFR 63.7100(d)(6))**

- g. A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

**(40 CFR 63.7100(d)(7))**

4. The permittee shall develop and implement a written startup, shutdown and malfunction plan (SSMP) in accordance with 40 CFR 63.6(e)(3). **(40 CFR 63.7100(e), 40 CFR 63.6(e)(3))**
5. Except as allowed in SC III.6, the permittee shall only fire coal, natural gas, syngas, glycerin and/or non-waste used oil as fuels in EUKILNNUMBER1 and EUKILNNUMBER2. **(R 336.1205(1)(a)(ii)(D) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 60.2010)**
6. In addition to the fuels in Special Condition III.5, the permittee shall burn non-waste Processed Biosolids fuel for a period up to 90 calendar days following completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install as defined in SC VII.2 for purposes of Biosolids fuel. **(R 336.1205(1)(a)(ii)(D), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d), 40 CFR 60.2010)**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EUKILNNUMBER1 and/or EUKILNNUMBER2 unless the baghouses are installed, maintained, and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d), 40 CFR Part 63, Act 451, Part 55 324.5524, Consent Order SIP No.22-1993, Exhibit B)**
2. For each emission unit equipped with an add-on air pollution control device, such as the positive pressure reverse air baghouses associated with EUKILNNUMBER1 and EUKILNNUMBER2, the permittee shall do the following:
  - a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to the baghouses.
  - b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan in Special Condition III.3.  
**(40 FR 63.7090(b))**

**V. TESTING/SAMPLING**

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

1. Within 180 days after commencement of initial startup using used oil fuel, the permittee shall verify PM, PM10, PM2.5, and SO<sub>2</sub> emission rates from FG-MACT-AAAAA by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the Reference Test Method Table. Compliance with the hourly emission limits shall be based on three 1 hour test runs.

**Reference Test Method Table**

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules Table 4 to Subpart AAAAA requires Method 5D for compliance with this limit.
PM10/PM2.5	40 CFR Part 51, Appendix M
SO <sub>2</sub>	40 CFR Part 60, 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, R 336.1224, R 336.1225, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. Within 50 days after the notification date specified in SC VII.2 for the initial use of Processed Biosolids fuel in EUKILNNUMBER1 or EUKILNNUMBER2, the permittee shall verify PM, PM10, PM2.5, SO<sub>2</sub>, NO<sub>2</sub>, CO, and VOC emission rates from FG-MACT-AAAAA by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the Reference Test Method Table. Compliance with the hourly emission limits shall be based on three 1 hour test runs.

**Reference Test Method Table**

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules Table 4 to Subpart AAAAA requires Method 5D for compliance with this limit.
PM10/PM2.5	40 CFR Part 51, Appendix M
SO <sub>2</sub>	40 CFR Part 60, Appendix A
NO <sub>2</sub>	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, 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, R 336.1224, R 336.1225, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

**VI. MONITORING/RECORDKEEPING**

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

1. For each emission unit equipped with an add-on air pollution control device, the permittee shall inspect each capture/collection and closed vent system, at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in Special Condition III.3 and record the results of each inspection. **(40 CFR 63.7113(f))**
2. The permittee shall keep the following records:
  - a. A copy of each notification and report that was submitted to comply with 40 CFR Part 63 Subpart AAAAA, including all documentation supporting and Initial Notification or Notification of Compliance Status that was submitted in accordance with the requirements of 40 CFR 63.10(b)(2)(xiv).
  - b. Records in accordance with 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown and malfunction.
  - c. Records of performance tests, performance evaluations, and opacity and visible emission observations as required in 40 CFR 63.10(b)(2)(viii).
  - d. Records of visible emission observations as required by 40 CFR 63.6(h)(6).
  - e. Records required by Tables 5 and 6 of 40 CFR Part 63 Subpart AAAAA that demonstrate continuous compliance of FG-MACT AAAAA-LIMEMANUFACTURING PLANTS with each applicable emission limitation in Subpart AAAAA.
  - f. Records which document the basis for the initial applicability determination as required by 40 CFR 63.7081.

All of these records shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record, and each record must be kept onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report or record in accordance with 40 CFR 63.10(b)(1). **(40 CFR 63.7132, 40 CFR 63.7133)**

3. The permittee must install, operate and maintain each continuous parameter monitoring system (CPMS) according to the OM&M plan required by 40 CFR 63.7100(d) and 40 CFR 63.7113(a). **(40 CFR 63.7113(a))**
4. For each flow measurement device, the permittee must meet the requirements in paragraphs (a)(1) through (5) and (b)(1) through (4) of 40 CFR 63.7113. **(40 CFR 63.7113(b))**
5. For each pressure measurement device, the permittee must meet the requirements in paragraphs (a)(1) through (5) and (c)(1) through (7) of 40 CFR 63.7113. **(40 CFR 63.7113(c))**
6. For each processed stone handling (PSH) operation subject to an opacity limit as specified in 40 CFR Part 63 Subpart AAAAA, and any vents from buildings at the facility subject to an opacity limit, the permittee must conduct a visible emissions check according to Item 1 of Table 6 of Subpart AAAAA, and as follows :
  - a. Conduct visible inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are visible emissions, other than condensed water vapor.
  - b. Select a position at least 15 but not more than 1,320 feet from the affected emission point with the sun or other light source generally at your back.
  - c. The observer conducting the visible emission checks need not be certified to conduct EPA Method 9 in appendix A to Part 60 of this chapter, but must meet the training requirements as described in EPA Method 22 of appendix A to 40 CFR Part 60.  
**(40 CFR 63.7121(e))**
7. The permittee shall continuously monitor and record, in a satisfactory manner, the daily limestone feed rate to EUKILNNUMBER1 and EUKILNNUMBER2. **(R 336.1331(1)(a), Consent Order SIP No. 22-1993, (Exhibit B) R 336.1205(1)(a)(ii), R 336.1205(3), R 336.2803, R 336.2804, 40 CFR 52.21(c)&(d))**
8. The permittee shall keep records of the determinations of the BTU/hr heat input rates of coal to EUKILNNUMBER1 and EUKILNNUMBER2. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, 40 CFR Part 63 Subpart AAAAA, R 336.1402(1))**
9. The permittee shall keep records of monthly coal consumption rates by EUKILNNUMBER1 and EUKILNNUMBER2. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1331(3))**
10. The permittee shall continuously monitor, in a satisfactory manner, the glycerin fuel usage rates for EUKILNNUMBER1 and EUKILNNUMBER2 using respective fuel flow meters on a daily, monthly and 12-month rolling time period basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3); R 336.1224; R 336.1225; R 336.1702(a); R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
11. The permittee shall keep records of the ash content and sulfur content, in percent by weight, of the glycerin fuels determined based on composite samples of all received glycerin fuels used in EUKILNNUMBER1 and EUKILNNUMBER2 with such composite samples analyzed no less frequent than monthly in months where glycerin fuels is used. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a)(ii) & (3); R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
12. The permittee shall continuously monitor, in a satisfactory manner, the syngas fuel usage rates for EUKILNNUMBER1 and EUKILNNUMBER2 using respective fuel flow meters on a daily, monthly and 12-month rolling time period basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3); R 336.1224; R 336.1225; R 336.1702(a); R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

13. The permittee shall keep records of the sulfur content, in percent by weight, of the syngas fuel used in EUKILNNUMBER1 and EUKILNNUMBER2. The permittee shall keep a separate record of the sulfur content of syngas fuel received no less frequent than monthly in months where syngas fuel is used. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3); R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
14. The permittee shall continuously monitor, in a satisfactory manner, the natural gas fuel usage rates for EUKILNNUMBER1 and EUKILNNUMBER2 on a monthly and 12-month rolling time period basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
15. The permittee shall continuously monitor, in a satisfactory manner, the used oil fuel usage rates for EUKILNNUMBER1 and EUKILNNUMBER2 using respective fuel flow meters on a daily, monthly and 12-month rolling time period basis. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**
16. The permittee shall keep records of the sulfur content (percent by weight) of the used oil fuels used in EUKILNNUMBER1 and EUKILNNUMBER2 determined based on composite samples of all received used oil fuels with such composite samples analyzed no less frequent than monthly in months where used oil fuels is used. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a)(ii) & (3); R 336.1224; R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**
17. The permittee shall calculate and keep records of the Processed Biosolids usage rate on a mass basis in EUKILNNUMBER1 and EUKILNNUMBER2 on a daily, monthly and 12-month rolling time period basis. **(R 336.1205(1)(a)(ii) & (3); R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

## **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 initial startup of FG-MACT-AAAAAA using Processed Biosolids fuel. **(R 336.1201(7)(a))**
2. Not less than 15 days prior to the initial use of Processed Biosolids fuel in EUKILNNUMBER1 or EUKILNNUMBER2, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the startup date. **(R 336.1201(7)(a))**

**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. SVKILN1&2 <sup>a</sup>	108	120	R 336.2804, 40 CFR 52.21(d), Section 110 CAA
2. SVAKG120 <sup>b</sup>	696 x 92.3	70.9	R 336.1201(3)
3. SVAKG220 <sup>b</sup>	696 x 92.3	70.9	R 336.1201(3)
<sup>a</sup> Required on and after October 1, 2018 or earlier if construction is completed. Test Date is April 1, 2019 but SO <sub>2</sub> records are required October 1, 2018 in PTI 193-14A			
<sup>b</sup> Not acceptable/authorized after October 1, 2018 or earlier if construction is completed on SVKILN1&2			

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart AAAAA for Lime Manufacturing Plants by the compliance date. **(40 CFR Part 63, Subparts A and AAAAA)**
2. Visible emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal associated with the equipment addressed by this Flexible Group shall not exceed 20 percent opacity, per the requirements specified in 40 CFR Part 60, Subpart Y (Standards of Performance for Coal Preparation and Processing Plants). **(40 CFR 60.254)**
3. The authorization of the use of processed biosolids as a fuel (SC II.10) in this permit shall be terminated 90 days after the date of initial startup as defined in SC VII.2 of this PTI. To continue combustion of Processed Biosolids fuel in FG-MACT AAAAA after the 90-day trial period, the permittee must apply for and receive a new Permit To Install. **(Act 451 324.5503(c))**