

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS 2
POLLUTANT / MEASUREMENT ABBREVIATIONS..... 3
GENERAL CONDITIONS 4
EMISSION UNIT SPECIAL CONDITIONS..... 6
 EMISSION UNIT SUMMARY TABLE 6
FLEXIBLE GROUP SPECIAL CONDITIONS..... 7
 FLEXIBLE GROUP SUMMARY TABLE 7
FG-LIME 8
FG-MACT-AAAAA..... 15

COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal 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
EUKILNNUMBER1	Horizontal rotary lime kiln identified as Kiln No. 1. The kiln is 300 feet long with a 10.6 ft diameter. Emissions from EUKILNNUMBER1 and EUKILNNUMBER2 are controlled by a shared jet pulse baghouse and exhausted to a shared stack. The lime cooler air is drawn through the kiln and exhausted through the same baghouse and stack.	1/1/1968	FG-LIME FG-MACT-AAAAA
EUKILNNUMBER2	Horizontal rotary lime kiln identified as Kiln No. 2. The kiln is 300 feet long with a 10.6 ft diameter. Emissions from EUKILNNUMBER1 and EUKILNNUMBER2 are controlled by a shared jet pulse baghouse and exhausted to a shared stack. The lime cooler air is drawn through the kiln and exhausted through the same baghouse and stack.	1/1/1968	FG-LIME 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-LIME 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 336.1291.

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-LIME	Lime production process consisting of two horizontal rotary lime kilns and processed stone handling equipment.	EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE
FG-MACT-AAAAA	The affected source is each existing or new lime kiln(s) and their associated cooler(s) and processed stone handling (PSH) operations system(s) located at a lime manufacturing plant (LMP) that is a major source of hazardous air pollutant (HAP) emissions. The lime kilns and PSH are considered existing because they did not begin construction or reconstruction after December 20, 2002.	EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE

**FG-LIME
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Lime production process consisting of two horizontal rotary lime kilns and processed stone handling equipment.

Emission Unit: EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE

POLLUTION CONTROL EQUIPMENT

Emissions from EUKILNNUMBER1 and EUKILNNUMBER2 are controlled by a jet pulse baghouse.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.12 pounds per ton of stone feed (lb/tsf) ^a	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.2	R 336.1331(1)(a), Consent Order SIP No. 22-1993, Exhibit B
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. SO ₂	300 ppm in exhaust gas corrected to 50% excess oxygen ^b	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1, SC V.2	R 336.1402(1)
5. SO ₂	2.4 pounds per MMBTU of heat input when coal is used as a fuel	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1, SC V.2	R 336.1402(1)
6. SO ₂	470 pounds per hour ^c	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1, SC V.2, SC VI.7, SC VI.9, SC VI.11, SC VI.13, SC VI.14	40 CFR 52.21(d), Section 110 CAA
7. SO ₂	0.842 pounds per 1,000 scf of coke oven gas	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1, SC V.2	40 CFR 52.21 (c) & (d)
8. SO ₂	0.66 pounds per 1,000 scf of coke oven gas	Calendar month average	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1, SC V.2, SC VI.13	R336.1205 (1)(a)(ii) & (3), 40 CFR 52.21 (c) & (d)

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

^b Compliance with this SO₂ limit shall be considered compliance with the limits of R 336.1402(3) using coal, which has been subsumed under this streamlined requirement.

^c The permittee shall compile hourly SO₂ emission rate calculations. The emission rate shall be determined on a 1-hour average, starting on the hour for each clock-hour, by applying an emission factor to the limestone feed rate. See method below:

$$\text{SO}_2 \text{ Emission Rate (pph)} = \text{[(EUKILNNUMBER1 + EUKILNNUMBER2 total Limestone Feed Rate (tons/hr)) x SO}_2 \text{ Emission Factor (lbs SO}_2\text{/ton limestone feed)]}$$

Where:

Limestone Feed Rate (tons/hr) = recorded hourly limestone feed rate to both kilns

SO₂ Emission Factor (lbs/ton) = emission factor based on the most recent SO₂ stack test results.

The SO₂ emission factor (lbs SO₂/ton limestone feed) shall be updated using the most recent stack results as required in SC V.1 and SC V.2, after approval by AQD, and the limestone feed rate shall be monitored and recorded hourly.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Glycerin	2.5 tons per hour ^a	Calendar day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.8	R336.1205(1)(a)(i)
2. Glycerin	21,900 tons per year ^a	12-month rolling time period as determined at the end of each calendar month	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.8	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.9	R 336.1205(1)(a)(ii), R 336.1205(3), 40 CFR 52.21(c) & (d)
4. Glycerin	4.25% ash content, on a dry basis	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.9	R 336.1205(1)(a)(ii), R 336.1205(3), 40 CFR 52.21(c)&(d)
5. Syngas	24.9 MMBTU per hour ^a	Calendar day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.10	R 336.1205(1)(a)(ii)
6. Syngas	218,124 MMBTU per year ^a	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)
7. Syngas	0.14% sulfur, by weight	Instantaneous	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.11	R 336.1205(1)(a)(ii), R 336.1205(3), 40 CFR 52.21(c) & (d)
8. Used Oil fuel	1,838 gallons per hour ^a	Calendar day	EUKILNNUMBER1, EUKILNNUMBER2	SC VI.6	R 336.1205(1)(a)(ii), R 336.1205(3), 40 CFR 52.21(c) & (d)
9. Coke Oven Gas	2,250,000 MMBTU/year ^a	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), 40 CFR 52.21(c) & (d)

^a This limit applies to the combined fuel usage for EUKILNNUMBER1 and EUKILNNUMBER2.

10. The permittee shall not combust fuels other than coal, natural gas, syngas, glycerin, non-waste used oil, and/or coke oven gas in EUKILNNUMBER1 and EUKILNNUMBER2. **(R 336.1205(1)(a)(ii)(D), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.2010)**
11. The permittee shall not combust any waste material in EUKILNNUMBER1 or EUKILNNUMBER2. **(R 336.1205(1)(a)(ii)(D), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.2010)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUKILNNUMBER1 and EUKILNNUMBER2 unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(R 336.1205, R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1910, 40 CFR 52.21(c) & (d), Act 451, Part 55 324.5524, Consent Order SIP No.22-1993, Exhibit B)**

V. TESTING/SAMPLING

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

1. Upon request of the AQD District Supervisor, the permittee shall verify PM₁₀, PM_{2.5} and SO₂ emission rates from FG-LIME by testing at owner's expense, in accordance with the Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM ₁₀ / PM _{2.5}	40 CFR Part 51, Appendix M
NO _x	40 CFR Part 60, Appendix A
SO ₂	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 and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. 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 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. Within 180 days after the initial use of coke oven gas as fuel, and upon request of the AQD District Supervisor thereafter, the permittee shall verify PM, PM₁₀, PM_{2.5}, NO_x and SO₂ emission rates from EUKILNNUMBER1 and EUKILNNUMBER2 while using coke oven gas as fuel by testing at owner's expense, in accordance with the 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
PM ₁₀ / PM _{2.5}	40 CFR Part 51, Appendix M
NO _x	40 CFR Part 60, Appendix A
SO ₂	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 and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. 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, R 336.1224, R 336.1225, R 336.1402(1), R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

3. Within 180 days after the initial use of the glycerin fuel, the permittee shall confirm the CO emission factor in pounds per ton of lime for glycerin [high Btu] fuel from either EUKILNNUMBER1 or EUKILNNUMBER2 when burning coal and glycerin [high Btu] fuels used at the rate proposed during the review of Permit to Install 330-07D, by testing, at owner's expense, in accordance with Department requirements. The permittee shall also determine CO emissions from the same kiln tested above when firing only coal fuel, by testing, at owner's expense, in accordance with Department requirements. The results of the stack test shall be used in the determination of the CO emission factor in pounds per ton of lime for glycerin [high Btu] fuel. In the event that the supply of the glycerin [high Btu] fuel as allowed per this permit is not available within 180 days the permittee shall be limited to the level under which the test was performed until adequate supplies become available and retesting within 180 days of the higher level of use is performed. Subsequent compliance testing of the alternate kiln shall be conducted no less frequently than every five (5) years; thereafter, the permittee shall alternate testing between EUKILNNUMBER1 and EUKILNNUMBER2. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of 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 336.2001, R 336.2003, R 336.2004)**
4. Within 180 days after the initial use of the syngas fuel, the permittee shall confirm the CO emission factor in pounds per ton of lime for syngas fuel from either EUKILNNUMBER1 or EUKILNNUMBER2 when burning coal and syngas fuels used at the rate proposed during the review of Permit to Install 330-07D, by testing, at owner's expense, in accordance with Department requirements. The permittee shall also determine CO emissions from the same kiln tested above when firing only coal fuel, by testing, at owner's expense, in accordance with Department requirements. The results of the stack test shall be used in the determination of the CO emission factor in pound, per ton of lime for syngas fuel. In the event that the supply of the syngas fuel as allowed per this permit is not available within 180 days permittee shall be limited to the level under which the test was performed until adequate supplies become available and retesting within 180 days of the higher level of use is performed. Subsequent compliance testing of the alternate kiln shall be conducted no less frequently than every five (5) years; thereafter, the permittee shall alternate testing between EUKILNNUMBER1 and EUKILNNUMBER2. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of 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 336.2001, R 336.2003, R 336.2004)**
5. The permittee shall analyze glycerin and syngas fuels annually, when in use for a given year, for carbon content. This analysis shall be used to determine CO_{2e} emissions as prescribed by USEPA in the Green House Gas Monitoring Rule Subpart C in 40 CFR Part 98.30. The permittee shall verify the CO_{2e} emission factors in pounds per ton of lime for glycerin and syngas fuels based on results of the most recent analysis. 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, 40 CFR Part 98.33)**
6. The permittee shall determine the BTU content of the coal fuel for EUKILNNUMBER1 and EUKILNNUMBER2 whenever a coal shipment is received. The method of calculation shall be in accordance with the ASTM Standard D5865. **(R 336.1402(1), R 336.1402(3))**

VI. MONITORING/RECORDKEEPING

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

1. 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), 40 CFR 52.21(c) & (d))**

2. The permittee shall continuously monitor and record, in a method acceptable to the department, the total hourly limestone feed rates to EUKILNNUMBER1 and EUKILNNUMBER2. The permittee shall keep the records on file at the facility for a period of five years, in a format acceptable to the AQD District Supervisor, and make them available to the department upon request. **(R 336.2804, 40 CFR 52.21 (d), Section 110 of CAA)**
3. 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, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205, R 336.1402(1))**
4. 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, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1331(3))**
5. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
6. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 (1)(a)(ii) & (3), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
7. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205(1)(a)(ii), R 336.1224, R 336.1225, 40 CFR 52.21 (c) & (d))**
8. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 (1)(a)(ii), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
9. 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 with such composite samples analyzed no less frequent than monthly in months where glycerin fuels is used. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205(1)(a)(ii), 40 CFR 52.21 (c) & (d))**
10. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 (1)(a)(ii), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
11. The permittee shall keep records of the sulfur content, in percent by weight, of the syngas fuel. 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. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R336.1205 (1)(a)(ii) & (3), 40 CFR 52.21 (c) & (d))**

12. The permittee shall continuously monitor and record, in a satisfactory manner, the coke oven gas fuel usage rates for EUKILNNUMBER1 and EUKILNNUMBER2 using respective fuel flow meters on a daily, monthly, and 12-month rolling time period basis. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R 336.1205 (1)(a)(ii), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
13. The permittee shall keep records of the monthly average pound per hour SO₂ emission rate from the use of coke oven gas as fuel in EUKILNNUMBER1 and EUKILNNUMBER2 using SO₂ continuous emission monitoring data and coke oven gas usage data provided by the coke oven gas supplier. The permittee shall keep all records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the Department upon request. **(R336.1205 (1)(a)(ii) & (3), 40 CFR 52.21 (c) & (d))**
14. The permittee shall calculate and record the average hourly SO₂ emission rate from EUKILNNUMBER1 and EUKILNNUMBER2, determined by applying the most current emission factor to the hourly limestone feed rate data. The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, and make them available to the department upon request. **(R 336.2804, 40 CFR 52.21 (d), Section 110 of CAA)**

VII. REPORTING

1. The permittee shall submit an excess emission report, for FG-LIME, in an acceptable format to the department, within 30 days following the end of each calendar 6-month period. The excess emission report shall include the following information: **(R 336.2804, 40 CFR 52.21(d), Section 110 CAA)**
 - a. A report of each exceedance above the SO₂ limitation. This includes the date, time, magnitude, cause and corrective actions for all occurrences during the reporting period.
 - b. A report of all periods of limestone feed rate monitoring system downtime and corrective action.
 - c. If no SO₂ limitation exceedances and no limestone feed rate monitoring system downtime occurred during the reporting period, the company shall report that fact.
2. Within 30 days after initially burning coke oven gas, as authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing. **(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. SVKILN1&2	108	120	R 336.1225, R 336.2804, 40 CFR 52.21(d), Section 110 CAA

IX. OTHER REQUIREMENT(S)

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)**

Footnotes:

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

**FG-MACT-AAAAA
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

The affected source is each existing or new lime kiln(s) and their associated cooler(s), and PSH operations system(s) located at an LMP that is a major source of HAP emissions. The lime kilns and PSH are considered existing because they did not begin construction or reconstruction after December 20, 2002.

Emission Unit: EUKILNNUMBER1, EUKILNNUMBER2, EUPSHFUGITIVE

POLLUTION CONTROL EQUIPMENT

Emissions from EUKILNNUMBER1 and EUKILNNUMBER2 are controlled by a jet pulse baghouse.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. PM	0.12 pounds per ton of stone feed (lb/tsf)	Hourly	EUKILNNUMBER1, EUKILNNUMBER2	SC V.1	40 CFR 63.7090(a), Table 1 to Subpart AAAAA of Part 63
2. PM	0.05 grams per dry standard cubic meter	Hourly	Stack or building vent emissions from EUPSHFUGITIVE	SC V.1	40 CFR 63.7090(a), Table 1 to Subpart AAAAA of Part 63
3. Visible emissions	7 percent opacity	Six-minute average	Stack or building vent emissions from EUPSHFUGITIVE	SC VI.4(d), VI.7	40 CFR 63.7090(a), Table 1 to Subpart AAAAA of Part 63
4. Visible emissions	10 percent opacity	Six-minute average	Fugitive emissions from operations associated with EUPSHFUGITIVE that are not enclosed in a building	SC VI.4(d), VI.7	40 CFR 63.7090(a), Table 1 to Subpart AAAAA of Part 63
5. Visible emissions	No visible emissions, or zero percent opacity	Instantaneous	Visible emissions from the building containing operations associated with EUPSHFUGITIVE, except for emissions from a stack or vent	SC VI.4(d), VI.7	40 CFR 63.7090(a), Table 1 to Subpart AAAAA of Part 63

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
6. Visible emissions during startup	15 percent opacity	Based on startup period block average	EUKILNNUMBER1, EUKILNNUMBER2	SC IV.4, SC VI.2	40 CFR 63.7090(c), Table 2 to Subpart AAAAA of Part 63
7. Visible emissions during shutdown	15 percent opacity	Based on 6-minute period block average	EUKILNNUMBER1, EUKILNNUMBER2	SC IV.4, SC VI.2	40 CFR 63.7090(c), Table 2 to Subpart AAAAA of Part 63
8. Visible emissions, except during startup and shutdown	15 percent opacity	6-minute average opacity for any 6-minute block time period, not including startup	EUKILNNUMBER1, EUKILNNUMBER2	SC IV.4, SC VI.3	40 CFR 63.7090(b) and (c), Tables 3 and 6 to Subpart AAAAA of Part 63

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. 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))**
2. 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, 2, and 3 of 40 CFR, Part 63 Subpart AAAAA, respectively. The OM&M plan must also address periods of startup and shutdown. **(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 63.7100(c) and 40 CFR 63.8(c)(1)(ii), (3) and (4)(ii).
 - iv. Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 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 3 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))

3. 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))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EUKILNNUMBER1 and EUKILNNUMBER2 unless the baghouse is installed, maintained, and operated in a satisfactory manner. **(40 CFR 63.7090(b))**
2. For each emission unit equipped with an add-on air pollution control device, such as the positive pressure reverse air baghouse associated with EUKILNNUMBER1 and EUKILNNUMBER2, the permittee shall do the following: **(40 CFR 63.7090(b), Table 3 to 40 CFR 63 Subpart AAAAA)**
 - 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 baghouse.
 - b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan required by SC III.2.
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. The permittee shall install, maintain, calibrate and operate a COMS at the outlet of the baghouse as required by 40 CFR Part 63, Subpart A, General Provisions and according to Performance Specification 1 of Appendix B to 40 CFR Part 60. **(40 CFR 63.7090(c), 40 CFR 63.7113(g), Tables 2 and 6 to 40 CFR 63 Subpart AAAAA)**

V. TESTING/SAMPLING

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

1. The permittee shall conduct a performance test within five (5) years of the date of the last performance test to demonstrate compliance with the particulate matter emissions limit in 40 CFR 63.7090(a), following the test methods and procedures in 40 CFR 63.7112. Subsequent compliance testing shall be conducted no less frequently than every five years. No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and the District Office. The AQD must approve the final plan prior to testing. **(40 CFR 63.7111, 40 CFR 63.7130(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 SC IV.2 and record the results of each inspection. **(40 CFR 63.7113(f), Table 3 to 40 CFR 63 Subpart AAAAA)**
2. For each startup period, the permittee shall collect the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent. **(40 CFR 63.7090(c), Table 2 to 40 CFR 63 Subpart AAAAA)**
3. Except during startup periods, the permittee shall collect the COMS data at a frequency of at least once every 15 seconds, determining block averages each 6-minute period and demonstrating for each 6-minute block

period the average opacity does not exceed 15 percent. **(40 CFR 63.7090(c), Tables 2 and 6 to 40 CFR 63 Subpart AAAAA)**

4. 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 for each startup period of the date, the time startup began, the time began producing on-specification lime product, and the time discharge from the kiln began for any affected source that is subject to a standard during startup that differs from the standard applicable at other times. Records of the date, time, cause and duration of each malfunction (as defined in 40 CFR 63.2) that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time, cause, and duration of the monitoring malfunction; the record must list the affected source or equipment; if there was a failure to meet a particulate matter emissions limit, an estimate of the volume of each regulated pollutant emitted over the limit, and a description of the method used to estimate the emissions.
- 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 6 and 7 of 40 CFR Part 63 Subpart AAAAA that demonstrate continuous compliance of FG-MACT-AAAAA 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)**

5. 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))**

6. 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))**

7. For each processed stone handling (PSH) operation subject to an opacity limit as specified in 40 CFR Part 63 Subpart AAAAA, and any buildings or vents from buildings at the facility subject to an opacity limit, the permittee must conduct a visible emissions check according to Table 7 to Subpart AAAAA, and as follows: **(40 CFR 63.7112(k), 40 CFR 63.7121(e), Table 5 to 40 CFR 63 Subpart AAAAA, Table 7 to 40 CFR 63 Subpart AAAAA)**

- a. Conduct visible inspections that consist of a visual survey of the building or 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 or building 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-7 to 40 CFR Part 60.

VII. REPORTING

1. The permittee shall meet the notification requirements in 40 CFR 63.7130 according to the schedule in 40 CFR 63.7130 and in subpart A of 40 CFR Part 63. **(40 CFR 63.7083(d), 40 CFR 63.7130)**

2. If a startup, shutdown, or malfunction occurs during the semiannual reporting period, that is not consistent with the SSMP, the permittee shall submit an immediate SSM report according to the requirements of 40 CFR 63.10(d)(5)(ii). **(40 CFR 63.10(d)(5)(ii), 40 CFR 63.7131(a))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

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)**

Footnotes:

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