FOR OHIO EPA USE
FACILITY ID: _____

EMISSIONS ACTIVITY CATEGORY FORM
LIME MANUFACTURING PLANTS

This form is to be completed for lime manufacturing operations conducted at this facility. State/Federal regulations which may apply to lime manufacturing are listed in the instructions. Note that there may be other regulations which apply to these operations which are not included in this list.

Note: This emissions activity category (EAC) form does not include roadways and parking areas, storage piles, material handling and mineral extraction operations at a lime plant which may be considered fugitive dust sources. Therefore, additional EAC forms for those emissions units may need to be submitted.)

1. Reason this form is being submitted (Check one)

❒ New Permit ❒ Renewal or Modification of Air Permit Number(s) (e.g. P001)_____

2. Maximum Operating Schedule: _____hours per day; _____days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Identify the types of processes at this facility:

Check Those Operations Present	Emissions Units	How many?
❒	Raw material crushing and screening (primary)	_____
❒	Raw material crushing and screening (secondary)	_____
❒	Lime kiln (s)	_____
❒	Lime crushing and screening	_____
❒	Lime packaging and shipping	_____
❒	Lime loading: Storage bins into trucks	_____
❒	Other (describe):	
	_____	_____
	_____	_____

4. Grade of limestone used:

❒ high calcium or calcite (< 5% $MgCO_3$) ❒ magnesium limestone (5 to 50% $MgCO_3$)
❒ dolomitic limestone (30 to 40% $MgCO_3$) ❒ other (describe)_____

5. Kiln processing data:

Kiln ID(s)	Type of kiln (e.g. rotary, vertical (shaft), other (describe)	Fuel(s) used (e.g. coal, natural gas, oil)	Annual fuel usage (e.g. tons/yr, gallons/yr, MMCF/yr, etc.)	Maximum production of kiln (tons/hour)	Maximum production of kiln (tons/year)

6. Processing equipment data:

ID		Manufacturer	Date installed	Maximum design input capacity (tons/hour)	Maximum processing rate (tons/hour)	Maximum annual processing rate (tons/year)
A	Primary crushing and screening					
B	Secondary crushing and screening					
C	Lime kiln(s)					
D	Lime crushing and screening					
E	Lime packaging and shipping					
F	Lime loading: storage bins into trucks					
G	Other:_____ _____					

7. Control methods to be used for emissions from lime manufacturing plants:

ID		Capture Method	Capture Efficiency	Control Method	Control Efficiency
A	Primary crushing and screening				
B	Secondary crushing and screening				
C	Lime kiln(s)				
D	Lime crushing and screening				
E	Lime packaging and shipping				
F	Lime loading: storage bins into trucks				
G	Other:_____ _____ _____				

INSTRUCTIONS FOR COMPLETION OF THE EMISSIONS ACTIVITY CATEGORY FORM FOR LIME PLANTS

GENERAL INSTRUCTIONS:

Provide complete responses to all applicable questions. If an item does not apply to the emissions unit, write in "Not Applicable" or "NA." If the answer is not known, write in "Not Known" or "NK." If you need assistance in understanding a question after reading the instructions below, contact your Ohio EPA District Office or Local Air Agency for assistance. Submittal of an incomplete application will delay application review and processing. In addition, the application may be returned as incomplete if all applicable questions are not answered appropriately.

APPLICABLE REGULATIONS:

The following State and Federal Regulations may be applicable to lime plants. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

Federal: 40 CFR 60, (NSPS) Subpart A, Subpart HH
40 CFR 63, (MACT) Subpart A, Subpart AAAAA

State: OAC 3745-31-02 (Permit to Install)
OAC 3745-35-02 (Permit to Operate)
OAC 3745-17-07, 17-08, 17-11(Particulate Matter rules)

If you would like a copy of these regulations, contact your Ohio EPA District Office or Local Air Agency. State regulations may also be viewed and downloaded from the Ohio EPA website at http://www.epa.state.oh.us/dapc/regs/regs.html. Federal regulations may be viewed and downloaded at http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-C.htm.

CALCULATING EMISSIONS:

Manufacturers of some types of emissions units and most types of control equipment develop emissions estimates or have stack test data which you can request. Stack testing of the emissions may be done. Emissions unit sampling test data may be either for this emissions unit or a similar one located at the facility or elsewhere. You may develop your own emission factors by mass balance or other knowledge of your process, if you can quantify inputs and outputs accurately. You may be able to do this on a small scale or over a short period of time, if it is not practical during regular production. If you have control equipment, you may be able to quantify the amount of pollutants collected over a known time period or production amount.

USEPA has developed emission factors for many types of emissions units and published them in a document titled "Compilation of Air Pollutant Emission Factors, AP-42", available from the following website: http://www.epa.gov/ttn/chief/ap42/index.html See Chapter 11.17 (Lime Manufacturing). Any emission factor calculation should include a reference to the origin of the emission factor or control efficiency.

SPECIFIC INSTRUCTIONS:

This emissions activity category (EAC) form is to be used for certain operations at lime plants which emit fugitive dust and for lime kilns. Typical emissions units to be included on this form are listed in item #3. Other EAC forms may need to be completed for emissions units at lime plants. For example, the following EAC forms must be completed for the following emissions units:

EAC Forms	Emissions Units
roadways and parking areas	all roadways and parking areas
storage piles	all open limestone storage piles
mineral extraction	all limestone extraction operations
material handling	limestone unloading and limestone conveying and transfer
fuel burning operations	lime kiln

Any other fugitive dust emission unit at a lime plant that is not specifically listed in item #3 and does not have an EAC form prepared for it should be entered on this form.

Paragraph (B)(6) of OAC Rule 3745-17-01 defines "fugitive dust" as "...particulate matter which is, or was prior to the installation of control equipment, emitted from any source by means other than a stack." Several emissions units at lime manufacturing facilities emit particulate matter in such fashion, and the requirements of OAC Rules 3745-17-07(B) (Visible particulate emission limitations for fugitive dust) and 3745-17-08 (Restriction of emissions of fugitive dust) may be applicable.

1. Indicate whether this is an application for a new permit or an application for permit renewal. If applying for a permit renewal, provide the 4-character OEPA emissions unit identification number.

2. Provide the maximum number of hours per day and days per year the lime plant is expected to operate. The following are examples of why the maximum number of hours per day may be less than 24 or the maximum number of days per year may be less than 365 (this list is not all-inclusive):

    - The facility can only operate during daylight hours.
    - The process can only operate within a certain range of ambient temperatures.
    - The process is limited by another operation (i.e., a bottleneck).

3. Identify the emissions units at the facility by placing a check mark in the appropriate block adjacent to the respective emissions unit type. If there are other emissions units at the facility which were not specifically listed in item #3 and do not have other EAC forms prepared for them, please identify such emissions unit(s) in the section marked "Other (describe)" and list the equipment included.

5. Complete items in the table which describe the type, capacity, and fuel used in each lime kiln at the facility.

6. Complete the table describing the process equipment used for the various processes. “Maximum design input capacity” refers to the manufacturer’s rated maximum capacity of the equipment.

7. For each operation identified elsewhere in this form, describe how the emissions are captured and estimate the percentage of emissions which are captured and express this as a percentage. Also describe how the captured emissions are controlled and estimate the percentage of reduction (control efficiency) attained. Efficiencies may be determined, in order of preference, by testing, design, published estimation methods or best engineering judgement. For multiple methods, enter them in the blank separated by a slash (/) and do the same for the efficiency.