EMISSIONS ACTIVITY CATEGORY FORM
MATERIAL HANDLING: FUGITIVE DUST EMISSIONS

This form is to be completed for any material handling operation with fugitive dust emissions. State/Federal regulations which may apply to material handling operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

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

    ❏ New Permit   ❏ Renewal or Modification of Air Permit Number(s) (e.g. F001)_____

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. What is the material being handled? _____

4. Mean wind speed at or near facility _____ miles per hour

5. Complete the following table for all unloading operations.

ID	Type of Unloading (see examples below)	Material Unloaded	Annual Quantity Unloaded (tons/yr)	Hourly Maximum Unloading Rate (tons/hr)	Avg. Moisture Content, as Unloaded (%)
A	Truck: ❏ dump ❏ pneumatic Vessel: ❏ clamshell ❏ bucket ladder Rail car: ❏ side dump ❏ bottom dump ❏ rotary dump ❏ pneumatic Other:				
B	Truck: ❏ dump ❏ pneumatic Vessel: ❏ clamshell ❏ bucket ladder Rail car: ❏ side dump ❏ bottom dump ❏ rotary dump ❏ pneumatic Other:				

ID					
C	Truck: ❐ dump ❐ pneumatic Vessel: ❐ clamshell ❐ bucket ladder Rail car: ❐ side dump ❐ bottom dump ❐ rotary dump ❐ pneumatic Other:				
D	Truck: ❐ dump ❐ pneumatic Vessel: ❐ clamshell ❐ bucket ladder Rail car: ❐ side dump ❐ bottom dump ❐ rotary dump ❐ pneumatic Other:				

6. Complete the following table for all loading operations.

ID	Type of Loading (see examples below)	Material Loaded	Annual Quantity Loaded (tons/yr)	Hourly Maximum Loading Rate (tons/hr)	Avg. Moisture Content, as Loaded (%)
E	❐ front end loader ❐ under pile load out ❐ bucket well reclaimer ❐ rake reclaimer ❐ other:				
F	❐ front end loader ❐ under pile load out ❐ bucket well reclaimer ❐ rake reclaimer ❐ other:				
G	❐ front end loader ❐ under pile load out ❐ bucket well reclaimer ❐ rake reclaimer ❐ other:				
H	❐ front end loader ❐ under pile load out ❐ bucket well reclaimer ❐ rake reclaimer ❐ other:				

7. Complete the following table for all transfer operations.

ID	Type of Transfer Point (see examples below)	Number of Such Points	Type of Material Handled	Max. Transfer Rate (tons/hr)
I	❐ Load/unload conveyor: ❐ vibrating ❐ belt ❐ screw ❐ bucket elevator ❐ belt conveyor to belt conveyor Other:			
J	❐ Load/unload conveyor: ❐ vibrating ❐ belt ❐ screw ❐ bucket elevator ❐ belt conveyor to belt conveyor Other:			

K	❏ Load/unload conveyor: ❏ vibrating ❏ belt ❏ screw ❏ bucket elevator ❏ belt conveyor to belt conveyor Other:			
L	❏ Load/unload conveyor: ❏ vibrating ❏ belt ❏ screw ❏ bucket elevator ❏ belt conveyor to belt conveyor Other:			
M	❏ Load/unload conveyor: ❏ vibrating ❏ belt ❏ screw ❏ bucket elevator ❏ belt conveyor to belt conveyor Other:			
N	❏ Load/unload conveyor: ❏ vibrating ❏ belt ❏ screw ❏ bucket elevator ❏ belt conveyor to belt conveyor Other:			
O	❏ Load/unload conveyor: ❏ vibrating ❏ belt ❏ screw ❏ bucket elevator ❏ belt conveyor to belt conveyor Other:			

8. Summarize the material handling operations covered in items 5 through 7 above and identify the applicable control method(s) from available options. Complete the remaining table based upon the selected control method(s).

ID	Enclosure, Control Equipment (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Control Efficiency
A		❏ water ❏ dust suppressant ❏ other:			
B		❏ water ❏ dust suppressant ❏ other:			
C		❏ water ❏ dust suppressant ❏ other:			

D		☐ water ☐ dust suppressant ☐ other:			
E		☐ water ☐ dust suppressant ☐ other:			
F		☐ water ☐ dust suppressant ☐ other:			
G		☐ water ☐ dust suppressant ☐ other:			
H		☐ water ☐ dust suppressant ☐ other:			
I		☐ water ☐ dust suppressant ☐ other:			
J		☐ water ☐ dust suppressant ☐ other:			
K		☐ water ☐ dust suppressant ☐ other:			
L		☐ water ☐ dust suppressant ☐ other:			
M		☐ water ☐ dust suppressant ☐ other:			
N		☐ water ☐ dust suppressant ☐ other:			
O		☐ water ☐ dust suppressant ☐ other:			

INSTRUCTIONS FOR COMPLETION OF THE
EMISSIONS ACTIVITY CATEGORY FORM FOR
MATERIAL HANDLING

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 material handling. 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)

State: OAC rule 3745-31-02 (Permit to Install)
                 OAC rule 3745-35-02 (Permit to Operate)
                 OAC rule 3745-15-07 (Air Pollution Nuisances)
                 OAC rule 3745-17-07 (Visible Particulate Emissions)
                 OAC rule 3745-17-08 (Restrictions of Emission of Fugitive Dust)
                 OAC 3745-31-05 (Best Available Technology (BAT) Requirements)

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:

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

In addition, manufacturers of some types of material handling equipment and most types of control equipment develop emissions estimates or have stack test data which you can request.

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. Any emission factor calculation should include a reference to the origin of the emission factor or control efficiency.

SPECIFIC INSTRUCTIONS:

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 material handling operation 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).

4.   Enter the annual mean wind speed, in miles per hour, at the site of the material handling operation. Actual on-site monitoring data is preferable; however, data from a nearby airport or the National Weather Service is acceptable. If such data is not available through the above sources, a default value from the following table may be entered:

City	Mean Wind Speed (miles per hour)
Akron	9.9
Cincinnati	9.1
Cleveland	10.8
Columbus	8.7
Dayton	10.2
Mansfield	11.0
Toledo	9.5
Youngstown	10.0

5.   Indicate each type of unloading performed at the subject facility. Select from the provided list or create an entry if any material handling operation is not on the list. Indicate the types of material(s) unloaded using the subject unloading type and provide an average moisture content, maximum hourly unloading rate in tons per hour, and an expected annual quantity unloaded in tons per year.

The average moisture content for soil, rock, and soil-aggregate mixtures is determined using ASTM D2216. Moisture content measurement methods for other materials are available in the literature. If measured data are not available, typical moisture content values for several common materials are given in Table 13.2.4-1 on page 13.2.4-2 (January, 1995 version) of Compilation of Air Pollutant Emission Factors, AP-42, Volume I.

6. Indicate each type of loading performed at the subject facility. Select from the provided list or create an entry if any material handling operation is not on the list. Indicate the type of material loaded using the subject loading type and provide an average moisture content, maximum hourly loading rate in tons per hour, and an expected annual quantity loaded in tons per year.

8. The purpose of this table is to identify control methods for the material handling operations previously identified in items 6 through 9. Check the basic operation and re-enter your identified specific material handling type. Only relevant data columns have to be completed. Associated control equipment information should be provided in the permit application form so it has been omitted from this EAC form. All relevant control equipment should be considered when determining the overall control efficiency, however.

    For the estimated control efficiency, enter the estimated or tested particulate emission control efficiency for each control method. Particulate emission refers to "total suspended particulate" or particles with a diameter of 30 microns or less. If actual test data are not available, control efficiencies may be estimated from information obtained in Compilation of Air Pollutant Emission Factors, AP-42, Volume I; Ohio EPA's Reasonably Available Control Measures for Fugitive Dust Sources; Control of Open Fugitive Dust Sources, EPA-450/3-88-008 (September, 1988); and others.