

EMISSIONS ACTIVITY CATEGORY FORM STORAGE PILES

This form is to be completed for each storage pile. State/Federal regulations which may apply to storage piles 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. Meteorological data at or near storage pile area:

- a. mean number of days per year in which >0.01 inch of precipitation occurred: _____ days
- b. percentage of time wind speed exceeds 12 miles per hour: _____%
- c. mean wind speed: _____ miles per hour
- d. source of meteorological data: (a) _____
 (b) _____
 (c) _____

4. Description of storage pile activities:

ID	Type of Material Stored	Method of Load-in (check one or more)	Method of Load-out (check one or more)
A		<input type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe):	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input type="checkbox"/> front-end loader <input type="checkbox"/> other:
B		<input type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe):	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input type="checkbox"/> front-end loader <input type="checkbox"/> other:
C		<input type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe):	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input type="checkbox"/> front-end loader <input type="checkbox"/> other:
D		<input type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe):	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input type="checkbox"/> front-end loader <input type="checkbox"/> other:

E		<input type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe):	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> front-end loader	<input type="checkbox"/> under pile feed <input type="checkbox"/> pan scraper <input type="checkbox"/> other:
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5. STORAGE PILE ACTIVITIES:

ID	Number of Separate Piles	Average Silt Content (wt %)	Average Moisture Content (wt %)	Average Pile Surface Area (acres)	Max. Load-in Rate (tons/hr)	Max. Load-in Rate (tons/yr)	Max. Load-out Rate (tons/hr)	Max. Load-out Rate (tons/yr)
A								
B								
C								
D								
E								

6. WIND EROSION CONTROL METHODS

ID	Enclosure, Covering, and/or Operating Practices (describe)	Chemical Stabilization (check one or more)	Application Frequency	Overall Control Eff. (%)	Basis for Overall Wind Erosion Control Efficiency
A		<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other:			
B		<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other:			
C		<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other:			
D		<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other:			

E		<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other:			
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7. LOAD-IN CONTROL METHODS

ID	Enclosure and/or Operating Practices (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Load-in Control Efficiency
A		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
B		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
C		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
D		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
E		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			

8. LOAD-OUT CONTROL METHODS

ID	Enclosure and/or Operating Practices (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Load-out Control Efficiency
A		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
B		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
C		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			

D		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			
E		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other:			

INSTRUCTIONS FOR COMPLETION OF THE EMISSIONS ACTIVITY CATEGORY FORM FOR STORAGE PILES

GENERAL INSTRUCTIONS:

Complete this form for storage pile activities which include load-in to pile, wind erosion from the surface of the pile, and load-out from the pile. Vehicular traffic associated with these activities should be covered by the form "Roadways and Parking Areas." Also, any transfer of material prior to loading into the pile or after loading out of the pile should be covered by the form "Material Handling."

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 storage piles. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

Federal: none

State: Ohio Administrative Code (OAC) Rules:

- 3745-31-02 (Permits to install)
- 3745-35-02 (Permits to operate)
- 3745-17-07 (Control of visible particulate emissions from stationary sources)
- 3745-17-08 (Restrictions of emission of fugitive dust)
- 3745-15-07 (Nuisances Prohibited)

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:

The emissions from the storage pile activities may be estimated using the information from sections 13.2.4 and 13.2.5 of AP-42, Compilation of Air Pollutant Emission Factors, Fifth Edition, Volume I, available from the following website: <http://www.epa.gov/ttn/chief/ap42/index.html>.

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 storage pile activities are 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).

- 3a. Enter the mean number of days per year for the area where the storage pile(s) are located in which greater than 0.01 inch of precipitation occurred. This may be obtained from Figure 13.2.2-1 on page 13.2.2-7 (September, 1998 version) of Compilation of Air Pollutant Emission Factors, AP-42, Volume I or from the Climatic Atlas of the United States. The number of days in which less than 0.01 inch of precipitation occurred may be obtained from Figure 2.1.2-2 on page 2-36 of Ohio EPA's Reasonably Available Control Measures for Fugitive Dust Sources. Remember to subtract the values from this reference from 365 days to obtain the number of wet days. If none of these references are available, a default value of 140 may be used.
- 3b. Enter the percent of time that the unobstructed wind speed at the facility exceeds 12 miles per hour at the mean pile height. Actual on-site monitoring data is preferable; however, data from a nearby airport or from the National Weather Service is acceptable. If this information is unavailable, a default value of 30 percent may be used.
- 3c. Enter the annual mean wind speed in miles per hour at the mean pile height for the last available calendar year. Actual on-site monitoring 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:

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

- 3d. Enter the source of the information given in items 3a. through 3c. Indicate "default" if the source of any information is from an Ohio EPA default value.
4. On a separate line, identify or describe the types of materials stored (e.g., limestone, coal and sand, etc.). For each material entry, complete the subsequent, corresponding columns.

For the materials identified, complete the subsequent, corresponding columns regarding load-in and load-out methods. This table has an identifier (ID column) for each type of storage pile. Be sure to use this identifier consistently in the tables in questions 5 - 8. For example, if row "A" is a coal pile in question 4, row "A" in question 5 should also give information for that same coal pile.

5. Enter the average material silt content, in percent by weight, for each type of material stored. Silt refers to particles that have a diameter equal to or less than 75 microns. The silt content is determined by measuring the portion of dry aggregate material that passes through a 200 mesh screen, using ASTM-C-136 method. If measured data are not available, typical silt 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.

Enter the average material moisture content, in percent by weight, for each type of material stored. Moisture content for soil, rock, and soil-aggregate mixtures is determined by using ASTM Standard D2216. 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.

Enter the average surface area of all storage piles that contain the same material stored, in acres. This is the area of the pile(s) exposed to wind erosion and not the area underneath the pile(s). The surface area of a conical pile may be calculated by using the equation $\pi r (h^2 + r^2)^{0.5}$, where r is the radius of the base and h is the pile height. Remember to convert your final value to units of acres. (1 acre = 43,560 ft²)

- 6.-8. Control Methods for Wind Erosion, Load-in and Load-out: For each type of storage pile, as identified in the table in question 4 (A, B, C, etc.), describe any enclosure and/or operating practice used to minimize fugitive dust emissions. Identify the appropriate control methods, control efficiencies and the basis (e.g., AP-42, Ohio EPA RACM guide, or other source) for the efficiencies. Complete the remainder of the control method section with details of control methods used, as requested.

If further assistance in completing this form is needed, contact the Ohio EPA District Office or Local Air Agency with jurisdiction in the area the emissions unit will be or is operating.