

## Emissions Inventory Help Sheet for Sand and Gravel Plants

### What do I need to report?

Use a separate General Process Form to report information on each source of emissions at your plant. Give each process a unique Process ID number. Include:

- all applicable sources from the list below (each on a separate form),
- vehicles moving on unpaved areas on-site (see Help Sheet for Vehicle Travel on Unpaved Roads),
- gasoline storage (in tanks with capacity of 250-gallon or more, see Help Sheet for Fuel Storage and Handling), and
- internal combustion engines (not emergency backup engines that operated a total of less than 200 hours, nor vehicle engines).

Refer to the “Instructions for Reporting 2015 Annual Air Pollution Emissions”, particularly page 6 (“Assigning ID numbers”) and pages 11–14 (the General Process Form, with examples for engines and unpaved travel). For the processes listed below, determine the total tons of material supplied to each. Remember that some material goes through some processes more than once. For example, if 50 tons of rock is sent through a crusher three times, the total material supplied to the crusher is 150 tons. Do not include wet processes at a wet plant. **For the processes below, report only PM<sub>10</sub> emissions.**

<u>General Process Form: Line 2</u>	<u>Line 4</u>	<u>Line 5</u>	<u>Line 9</u>	<u>Line 13</u>	<u>Columns 16 &amp; 17</u>	<u>Column 18</u>	
Process Description	Tier Code	SCC Code	Emissions based on: (examples: ‘rock,’ ‘sand’)	Unit of Measure	Emission Factor (EF)	EF Unit	Controlled?
Mining/plant feed, handling	070503	30502505	(name of material)	tons	0.00055 <sup>1</sup>	lb/ton	Yes
Surge pile forming, handling	070503	30502505	(name of material)	tons	0.00055 <sup>1</sup>	lb/ton	Yes
Crushing with watering (primary, secondary & tertiary)	070503	30502510	(name of material)	tons	0.0001 <sup>1</sup>	lb/ton	Yes
Screening with watering	070503	30502511	(name of material)	tons	0.00035 <sup>1</sup>	lb/ton	Yes
Conveyor transfer point	see note 2	30502503	(name of material)	tons	0.000045 <sup>1</sup>	lb/ton	Yes
Pile forming, handling	see note 2	30502505	(name of material)	tons	0.00055	lb/ton	Yes
Load out, handling WITH watering	see note 2	30502505	(name of material)	tons	0.00055	lb/ton	Yes

The above emission factors reflect a level of watering that results in a moisture content of 4%, as required by County Rule 316. No further capture or control efficiencies may be claimed for these processes. Use the information below for loadout ***without*** watering.

Load out, handling WITHOUT watering	see note 2	30502506	(name of material)	tons	0.0024 <sup>3</sup>	lb/ton	No
Stockpiles, raw material and product storage	see note 2	30502507	Average # acres	acres	630 <sup>4</sup>	lbs/acre-yr	No

<sup>1</sup> Reference: U.S. EPA, “Compilation of Air Pollutant Emission Factors: Volume I: Stationary Point and Area Sources” (AP-42), fifth ed. Section 13.2.4, Aggregate Handling and Storage Piles, Eq. 1:  $E = k(0.0032) \times [(U/5)^{1.3} / (M/2)^{1.4}]$ , where  $k = 0.35$ ,  $U = 6.1$  mph, and  $M = 4.0\%$ .

<sup>2</sup> Use **070503** for processes associated with any rock mining or processing. Use **091102** for other processes, such as a concrete batch plant.

<sup>3</sup> Reference: US EPA’s WebFIRE database. Available at: <http://cfpub.epa.gov/webfire/>.

<sup>4</sup> The stockpile emission factor above is uncontrolled. You may account for dust control efforts on stockpiles and unpaved travel if you use water or other dust suppressants and if you are in full compliance with the record keeping requirements in Rule 310, Fugitive Dust Sources and/or Rule 316, Nonmetallic Mineral Mining and Processing. Show capture efficiency (in column 20) = 100%. Control efficiency of 90% is allowed for regular watering or use of a chemical palliatives (dust suppressants).