

Source Category:	Fugitive Dust from Mining and Quarrying
SCC Code:	2325000000
Pollutants of Concern:	PM-2.5, PM-10
How is the PM National Emission Inventory developed for this category?	
Current Methodology (see also the link to the NEI Methodology Description):	
<ul style="list-style-type: none"> • Total PM₁₀ and PM_{2.5} for mining and rock quarrying is the sum of emissions from metallic ore, nonmetallic ore, and surface coal mining activities. • Four specific operations are included: overburden removal, drilling and blasting, loading and unloading, and overburden replacement. Not included are transfer and conveyance operations, crushing and screening operations, and storage. • A particulate size fraction of 0.2, based on measurement data, is used to estimate PM_{2.5} from PM₁₀. • Specific emission calculations for the three processes are shown in the National Air Pollutant Emissions Trends Procedures Document. 	
Current Variables/Assumptions Used:	
<ul style="list-style-type: none"> • Total metallic crude ore handled [<i>U.S. Geologic Survey</i>] • Total non-metallic crude ore handled [<i>U.S. Geologic Survey</i>] • Total coal production from surface mine [<i>U.S. Geologic Survey</i>] 	
Uncertainties / Shortcomings of Current Methods:	
<ul style="list-style-type: none"> • Assumption of PM₁₀ emission values are based on a limited amount of source data. • Assumption is that the ratio of overburden material handled is equal to 10 times the product mined. • The emission factors used to calculate the PM₁₀ emissions from western surface coal mining (see AP-42, Section 11.9) are used for all mining activities. • PM₁₀ percentage of TSP is assumed to be numerical constants for the county (e.g., Overburden PM₁₀ is 35 percent of TSP). • Some state-level estimates of ore handling are adjusted from historical data. • Regional estimates of total emissions are allocated equally to all counties in the region. • There may be over/under coverage of small quarries since some are included as point sources. 	
How can State, Local, and Tribal agencies improve upon this methodology?	
<ul style="list-style-type: none"> • Local or state information on the amount of mine or quarry product removed that is not covered in the point source inventory. 	

- Obtain local mining information on overburden/product removal.
- Review mine and quarry permits.
- Identify the mines and quarries by counties

NOTE: Emissions from these activities are location specific. State, local and tribal agencies should review the base inventories to determine if improvements for this category are considered a high priority.

Where can I find Additional Information and Guidance?

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AP-42, Section 11.9	http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s09.pdf
Area Source Emissions Model	http://www.epa.gov/ttn/chief/software/asem/index.html
County Level Emission Density Maps for this Source Category	http://www.epa.gov/ttn/chief/eip/pm25inventory/densitymaps.pdf
National Air Pollutant Emission Trends Procedures Document for 1900-1999	http://www.epa.gov/ttn/chief/trends/procedures/neiproc_99.pdf