Table A6-1. Example of Construction Equipment Data

Equipment	Horsepower	Load Factor	Usage Factor
Source: EPA, NONROAD2008b, 2013, http://www.epa.gov/otaq/models/nonrdmdl/nonrdmdl2005/420r05013.pdf. Note: cfm = cubic feet per minute.			

A6.2.4 Fugitive Emissions

The construction emissions inventories for fugitive dust sources should be calculated using emission factors within EPA's AP-42, *Compilation of Air Pollutant Emission Factors,*[45] and other publications. Fugitive dust emissions can result from the following activities: grading, moving soil, and digging, loading/unloading of trucks, movement of trucks on unpaved surfaces, and wind erosion of stockpiles. A fugitive dust emission factor of 1.2 tons per acre disturbed per month during construction should be used, consistent with AP-42, assuming that 25 percent of the construction project area would be disturbed per construction month. $PM_{2.5}$ is assumed to be 10 percent of PM_{10}. A dust control efficiency of 75 percent due to daily watering and other measures can also be estimated. **Equations A6-3** (*Fugitive Dust Construction PM_{10} Emissions*) and **A6-4** (*Fugitive Dust Construction $PM_{2.5}$ Emissions*) are used to obtain emission estimates for fugitive dust sources:

Fugitive Dust PM_{10} Emission Rate (tons/year) = Total Area Disturbed (acre) x 0.25 x 1.2 tons/acre Disturbed/Month x 12 month/year x (1-0.75) control efficiency

Equation A6-3. Fugitive Dust Construction PM_{10} Emissions

Fugitive Dust $PM_{2.5}$ Emission Rate (tons/year) = Fugitive Dust PM_{10} Emission Rate (tons/year) x 0.10 $PM_{2.5}$ to PM_{10} ratio

Equation A6-4. Fugitive Dust Construction $PM_{2.5}$ Emissions

Evaporative VOC emissions associated with the application of hot mix asphalt on areas requiring paving (e.g., roadways, parking lots, and taxiways) should be estimated using raw materials quantities, as well as an emission factor of 0.053 tons of VOC per acre of asphalt material laid.[46]

If the acreage of asphalt placed is known, than the area can be determined based on the amount of asphalt used and the assumption of six inches of thickness. **Equation A6-5** (*Fugitive Asphalt VOC Construction Emissions*) is used to obtain fugitive asphalt VOC emission estimates:

Asphalt VOC Emission Rate (tons/year) = 0.053 tons/acre of asphalt placed x acres of asphalt placed per year

Equation A6-5. Fugitive Asphalt VOC Construction Emissions

[45] EPA, AP-42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, http://www.epa.gov/ttnchie1/ap42/.

[46] EPA, *Emission Inventory Improvement Program*, Asphalt Paving, Chapter 17, Volume III, April 2001, http://www.epa.gov/ttn/chief/eiip/techreport/volume03/iii17_apr2001.pdf.