

**Unpaved Road Fugitive Dust Emission Factor Calculation For Proposed GLE Facility Construction Phase**

USEPA AP-42 Section 13.2.2 Equation 1a  
Input Values

k 1.5  
a 0.9  
b 0.45  
s 0.6 %  
W 5 tons  
AP-42 PM<sub>10</sub> Emission Factor 0.1 lb/VMT

GLE access road length 1.5 miles  
GLE access road area 226,226 ft<sup>2</sup> 29.2009  
Total VMT 2,917 miles  
Number of days per year with at least 0.01 in of precipitation in Wilmington NC 118 days

Total Fugitive PM<sub>10</sub> emissions from vehicle traffic on GLE access road 371 lbs per work day 37 lbs per work hour  
1.64E-04 lb per ft<sup>2</sup> per work hour

Total Uncontrolled Fugitive PM<sub>10</sub> emissions from vehicle traffic on GLE access road with precipitation factor 1.11E-04 lb per ft<sup>2</sup> per work hour

Total Fugitive PM<sub>10</sub> emissions from vehicle traffic on GLE access road with water truck suppression factor 7.39E-05 lb per ft<sup>2</sup> per work hour

Vehicle Category	Representative Vehicles	Number of Wheels	Average Vehicle Weight (lb)	Average Number of trips along access road to site per day	Total Number of Wheels	Total Vehicle Weight
Automobile	Construction workers, GLE staff, visitors	4	3,000	840	3,360	2,520,000
	GLE staff and visitors	4	3,000	40	160	120,000
Light-duty truck	Pickup trucks/SUVs	4	6,000	40	160	240,000
Medium-duty truck	Delivery trucks	0	24,000	0	0	0
Heavy-duty construction trucks	Haul trucks (Concrete mixer, dump truck)	40	72,000	40	1,600	2,880,000
	On-site water truck (4,000 gal)	10	64,000	4	40	256,000
	Service/fuel truck for off-road equipment	10	64,000	0	0	0
Heavy-duty delivery trucks	Trailer trucks	18	80,000	0	0	0
	Semi truck	18	80,000	30	540	2,400,000
Total				994	5,860	8,416,000

Fleet Average Number of wheels 5.9  
Fleet Average Vehicle Weight (tons) 4.2

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