

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

USEPA AP-42 Section 13.2.1 Equation 1
Input Values

k 7.3 g/VMT
sL 0.2 g/m2
W 5 tons
C 0.2119 g/VMT

AP-42 PM₁₀ Emission Factor 3.3 g/VMT
0.0073 lb/VMT

GLE access road length 1.5 miles
GLE access road area 226,226 ft² 29.2009
Total VMT 2,911 miles
Number of days per year with at least 0.01
in of precipitation in Wilmington NC 118 days

Total Fugitive PM₁₀ emissions from vehicle
traffic on GLE access road 21.2 lbs per work day 2.1 lbs per work hour
9.37E-06 lb per ft² per work hour

Total Fugitive PM₁₀ emissions from vehicle
traffic on GLE access road with precipitation
factor 8.61E-06 lb per ft² 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	On-site water truck (4,000 gal)	10	64,000	0	0	0
	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	70	1,260	5,600,000
				Total	990	4,940

Fleet Average
Number of wheels 5.0
Fleet Average
Vehicle Weight
(tons) 4.3

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