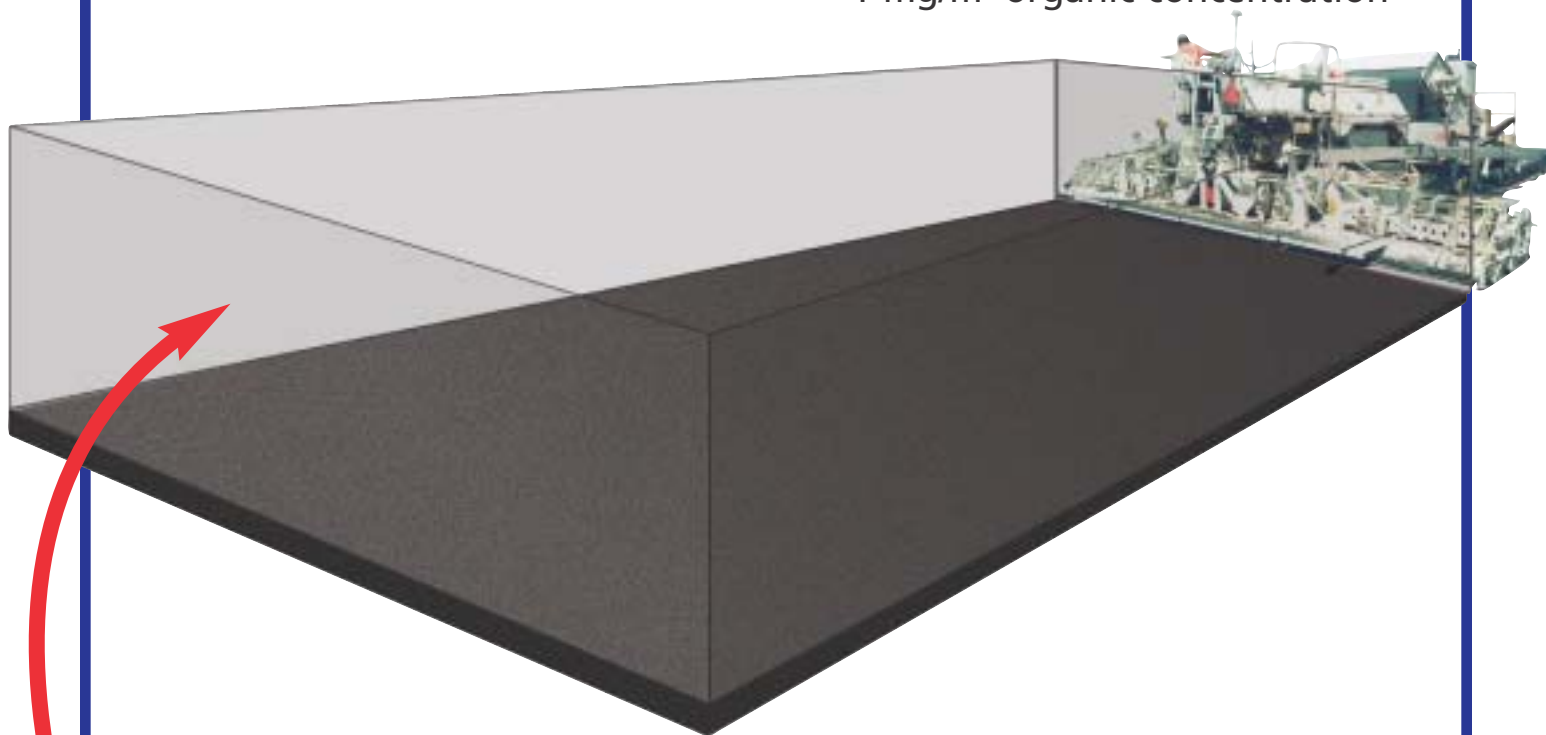


Daily Amount of Organic Emissions from Hot Mix Paving Operations

ASSUMPTIONS

1500 tons of HMA laid/day
5% asphalt cement content
145 pounds per cubic foot

12 ft. wide lane paved
2 in. mat thickness
6 ft. high headspace
1 mg/m³ organic concentration



CALCULATIONS

Amount of Asphalt Cement

1500 tons/day (5% asphalt cement) = 75 tons of asphalt cement/day

Length Paved During a Day

$\frac{1500 \text{ tons/day [2000 lbs/ton]}}{145 \text{ lbs/ft}^3 \text{ [12 ft.-wide] [2/12 ft.-thick]}}$ = 10,345 ft. or 1.96 miles

Amount of Organic Fume

$\frac{1 \text{ mg/m}^3 \text{ [12 ft.-wide] [6 ft.-high] [10,345 ft.-long]}}{35.31 \text{ ft.}^3/\text{m}^3}$ = 21.1 grams of organics

EMISSION FACTORS

$\frac{21.1 \text{ grams of organic}}{75 \text{ tons of asphalt cement [453.6 grams/lb.]}}$ = 0.0006 lb./ton of asphalt cement

$\frac{21.1 \text{ grams of organic}}{1500 \text{ tons of HMA [453.6 grams/lb.]}}$ = 0.00003 lb./ton of HMA