

Nashville Ready Mix

60-0165

79408

Concrete Batch Plant

AP-42 Chapter 11.12

Mix Rate (yd ³ /hr)	150	Production (yd ³ /hr)	75000	Pound (Lb)/Ton	2000
Operation (hr/yr)	500	Design (hr/yr)	8760		
<u>Pollutant</u>	<u>EF</u>	<u>Lb/Hr</u>	<u>Lb/Yr</u>	<u>Lb/Yr (Design)</u>	<u>Tpy</u>
PM (cement)	0.0002	0.03	15.00	262.80	0.01
PM (fly ash)	0.0003	0.05	22.50	3375.00	0.01
Aggregate	0.0064	0.96	480.00	8409.60	0.24
Sand	0.0015	0.23	112.50	1971.00	0.06
Weight Batcher	0.0079	1.19	592.50	10380.60	0.30
Truck Loading	0.0395	5.92	2961.00	51876.72	1.48
Fugitive PM		8.29	3553.50	62257.32	2.07

Equations used in calculations:

Potential Emissions (tpy) = EF (lb/yd³) x Batch Rate (yd³/hr) x Design (hr/yr) / 2000 (lb/ton)

Potential Emissions based on Production (tpy) = EF (lb/yd³) x Batch Rate (yd³/hr) x Operation (hr/yr) / 2000 (lb/ton)

Fugitive Emissions (tpy) = Aggregate (tpy) + Sand (tpy) + Weight Batcher (tpy) + Truck Loading (tpy)

TAPCR 1200-03-07-.04

Flow (ft ³ /min)	2500	Operation (hr/yr)	2080	Design (hr/yr)	8760
Grains/Pound	7000	Minutes/Hour	60	Pounds/Ton	2000
<u>Pollutant</u>	<u>EF</u>	<u>Lb/Hr</u>	<u>Lb/Yr</u>	<u>Lb/Yr (Design)</u>	<u>Tpy</u>
PM (Silo No.1)	0.25	1.61	3342.86	14078.57	1.67
PM (Silo No.2)	0.25	1.61	3342.86	14078.57	1.67
PM (Silo No.3)	0.25	1.61	3342.86	14078.57	1.67
PM (weigh batcher)	0.25	0.55	1144.00	4818.00	0.57
Total PM		5.38			5.60

Equations used in calculations:

Emission Rate (lb/hr) = EF x Flow (cfm) x 60 (min/hr) / 7000 (gr/lb)

Allowable Emissions based on Production (tpy) = Emission Rate (lb/hr) x Operation (hr/yr) / 2000 (lb/ton)

Allowable Emissions (tpy) = Emission Rate (lb/hr) x Design (hr/yr) / 2000 (lb/ton)

Total PM (Tpy) = Silo No. 1 (tpy) + Silo No. 2 (tpy) + Silo No. 3 (tpy) + Weigh Batcher (tpy)

NOTES

Allowable Emissions based on PWR (Table 2) become equal to the value of 0.25 gr/dscf when its calculated value exceeds the regulated limit.

Potential Emissions based on AP-42 becomes equal to the value of Allowable Emissions when its calculated value exceeds the regulated limit.