

CBEC

Boiler PM & PM10

	From Test				PM EF	PM10 EF
	lb/mmBtu	lb/mmBtu	lb/mmBtu	Ave lb/mmBtu		
EP1	0.085	0.059	0.066	0.070 PM	0.0700	0.0469
EP2	0.046	0.042	0.044	0.044 PM	0.0440	0.0295
EP3	0.027	0.027	0.023	0.026 PM	0.0257	0.0172

Formula: PM Emission Factor = PM Test Results
 PM10 Emission Factor = PM Test Results x PM10 Particle Distribution

PM Test Results from most recent particulate test results as reported to the IDNR.
 PM10 Particle Distribution from AP-42.

Coal Handling Dust Collectors

Emission Point	Emission Unit	PM Test lb/hr	Coal Tons/Hr	Emission Factor lb/Ton	New Factor
EP6	EU6	1.13	2800.00	4.0357E-04	4.0357E-04
EP7	EU7	1.2	3100.00	3.8710E-04	
EP8	EU8	0.94	3100.00	3.0323E-04	
EP9	EU9	0.65	3200.00	2.0313E-04	
EP10	EU10, EU1	1.26	1480.00	8.5135E-04	
EP11	EU11	0.61	1480.00	4.1216E-04	
EP13	EU13	1.42	900.00	1.5778E-03	
EP14	EU14	3.11	450.00	6.9111E-03	
EP15	EU15	2.59	450.00	5.7556E-03	
EP16	EU16	0.52	460.00	1.1304E-03	
EP17	EU17	0.84	460.00	1.8261E-03	

Formula: EF lb/Ton = PM Test lb/hr / Coal Tons/hr

Where: PM Test lb/hr = emissions test results as reported to the IDNR
 Coal Tons/hr = coal system throughput recorded during the test
 EF lb/Ton = Emission factor from calculation

EP20, EP21 PM10 Emission factor from 30500619 - Portland cement load out
 PM Emission factor = PM10/particle distribution factor from
 AP-42 Bituminous and subbituminous coal combustion Table 1.1-6 (ESP -- 0.67)
 Emission factor
 PM10 0.2000
 PM 0.2985

EU30, EU31A-D, EU117-EU117B

Coal Handling Emission Factor - AP42 13.2.4 Aggregate Handling And Storage Piles
 Applicable to coal continuous drop process such as stocking out and conveyor belt feeds.

Emission Factor PM10

$$E = k(0.0032)((U/5)^{1.3}/(M/2)^{1.4})$$

$$E = (0.35 * 0.0032) * (((10.5/5)^{1.3}) / (4.5/2)^{1.4})$$

$$E = 0.00094 \text{ lbs/ton}$$

Emission Factor PM

$$E = k(0.0032)((U/5)^{1.3}/(M/2)^{1.4})$$

$$E = (0.74 * 0.0032) * (((10.5/5)^{1.3}) / (4.5/2)^{1.4})$$

$$E = 0.00200 \text{ lbs/ton}$$

E = emission factor
 k = particle size multiplier PM10 = 0.35 PM = 0.74
 U = mean wind speed - mph Council Bluffs average = 10.5 mph
 M = material moisture content Table 13.2.4-1 mean for as received coal 4.5