

**B21 - BOILER, NATURAL GAS FIRED, RESIDENTIAL, <0.3 MMBTU/HR, UNCONTROLLED**

**CALCULATION METHODS**

$E_a = U_a \times EF$  (lbs/mmft<sup>3</sup>)

$E_h = U_h$  (scfm)  $\times$  (60/1000000)  $\times$  EF (lbs/mmft<sup>3</sup>)

**NOTES:**

- The trace organic factors listed below are based on detected AB 2588 compounds identified in AP-42 Table 1.4-3 (7/98).
- The AP-42 (7/98) factors have been converted into lbs/mmscf by assuming a natural gas BTU content of 1020 BTU/scf.
- The listed AP-42 emission factors for 3-methylchloranthrene, 7,12-dimethylbenz(a)anthracene, acenaphthene, acenaphthylene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and phenanthrene are NOT included since these values are based on nondetectable test results.
- The listed AP-42 emission factors for 2-methylnaphthalene, fluoranthene, flourene, and pyrene are NOT included since these values were based on insignificant and/or nondetectable test results.
- The AP-42 trace metal emission factors listed in Table 1.4-4 are NOT included since these values were based on insignificant and/or nondetectable test results.
- The AP-42 emission factors for butane, ethane, pentane, and propane are not included since these are not listed toxic air contaminants.

POLLUTANT	District Emission Factor	EPA REFERENCE	EPA FACTOR	(UNITS)	COMMENTS
	(lbs/million ft <sup>3</sup> fuel burned)	DOCUMENT			
NOX	94.00	AP-42, Sect.1.4, 7/98, Table 1.4-1	94	lbs/million ft <sup>3</sup>	
CO	40.00	AP-42, Sect.1.4, 7/98, Table 1.4-1	40	lbs/million ft <sup>3</sup>	
SOX	0.60	AP-42, Sect.1.4, 7/98, Table 1.4-1	0.6	lbs/million ft <sup>3</sup>	Assumes an average sulfur content of 2000 grains MM ft <sup>3</sup> natural gas.
TOG	11.00	AP-42, Sect.1.4, 7/98, Table 1.4-1	11	lbs/million ft <sup>3</sup>	
ROG	5.50	AP-42, Sect.1.4, 7/98, Table 1.4-1	5.5	lbs/million ft <sup>3</sup>	
TSP	7.60	AP-42, Sect.1.4, 7/98, Table 1.4-1	7.6	lbs/million ft <sup>3</sup>	
PM10	7.60	AP-42, Sect.1.4, 7/98, Table 1.4-1	7.6	lbs/million ft <sup>3</sup>	Assumes PM10 = TSP per EPA instructions.
ACETALDEHYDE					
AMMONIA					
BENZENE	0.0021	AP-42, Sect.1.4, 7/98, Table 1.4-3	0.0021	lbs/million ft <sup>3</sup>	
1,3-BUTADIENE					
CHLORINE					
DICHLOROBENZENE	0.0012	AP-42, Sect.1.4, 7/98, Table 1.4-3	0.0012	lbs/million ft <sup>3</sup>	
ETHYL BENZENE					
FORMALDEHYDE	0.075	AP-42, Sect.1.4, 7/98, Table 1.4-3	0.075	lbs/million ft <sup>3</sup>	
HEXANE	1.8	AP-42, Sect.1.4, 7/98, Table 1.4-3	1.8	lbs/million ft <sup>3</sup>	
METHANOL					

NAPHTHALENE	0.00061	AP-42, Sect.1.4, 7/98, Table 1.4-3	0.00061	lbs/million ft3	
PROPYLENE					
TOLUENE	0.0034	AP-42, Sect.1.4, 7/98, Table 1.4-3	0.0034	lbs/million ft3	
XYLENES					

*Last Updated on 6/8/01 (B10)  
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