

E07 - ENGINE, GASOLINE FIRED, <600 BHP, UNCONTROLLED

CALCULATION METHODS

$E_a = U_a \times EF$ (lbs/1000 gallons)

$E_h = U_h$ (gal/hr) \times (1/1000) \times EF (lbs/1000 gallons)

NOTES:

- Control efficiencies must be included in emission factors since the calculation procedure will not refer to this data.
- There is no ROG factor specified in Section 3.3 of AP-42 (10/96). Using EPA VOC Speciation profile 1186 to estimate weight fraction of ROG in TOC.
- Trace metal emission factors are assumed to be negligible for gasoline fuel.
- Several default factors are based on an assumed gasoline BTU content of 20,300 BTU/lb (Table 3.3-1 AP-42) and a density of 5.6 lbs/gal (Table 7.1-2 AP-42).
- Sulfur content of gasoline (40 ppmw) is based on the ARB flat limit for reformulated gasoline effective 4/96.
- Emission factor for TOG is sum of AP-42 factor for TOC (3.03) and Aldehydes (0.07).

POLLUTANT	District Emission Factor	EPA REFERENCE	EPA	(UNITS)	COMMENTS
	(lbs/1000 gal fuel burned)	DOCUMENT	FACTOR		
NOX	185.30	AP-42 (10/96), Section 3.3, Table 3.3-1	1.63	lbs/MMBtu	lbs/kgal = lbs/MMBtu \times 0.020300MMBtu/lb \times 5600 lbs/kgal
CO	112.37	Roy Huntley correspondence 2/10/99	62.7	lbs/MMBtu	AP-42 value is wrong, revised value discussed w/EPA on 2/10/99
SOX	0.45				Assume 40 ppm sulfur in gasoline at 5.6 lbs/gal
TOG	352.41	AP-42 (10/96), Section 3.3, Table 3.3-1	3.1	lbs/MMBtu	lbs/kgal = lbs/MMBtu \times 0.020300MMBtu/lb \times 5600 lbs/kgal
ROG	343.77	EPA VOC Speciation Profile 1186 (1/90)	97.55%	lbs ROG/lb TOC	Reference in Section 3.3 of AP-42 is missing, using EPA VOC profile
TSP	11.37	AP-42 (10/96), Section 3.3, Table 3.3-1	0.1	lbs/MMBtu	lbs/kgal = lbs/MMBtu \times 0.020300MMBtu/lb \times 5600 lbs/kgal
PM10	11.37		0.1	lbs/MMBtu	All PM emissions assumed <1 um per AP-42
BENZENE	6.17	EPA VOC Speciation Profile 1186 (1/90)	1.75%	lbs/lb TOC	lbs/kgal = lbs/lb TOC \times lbs TOC/1000 gal
1,3-BUTADIENE	0.00	EPA VOC Speciation Profile 1186 (1/90)		lbs/lb TOC	lbs/kgal = lbs/lb TOC \times lbs TOC/1000 gal
CHLORINE					
CHROMIUM HEXAVALENT					
CHROMIUM NONHEXAVALENT					
COPPER					
ETHYL BENZENE	2.36	EPA VOC Speciation Profile 1186 (1/90)	0.67%	lbs/lb TOC	lbs/kgal = lbs/lb TOC \times lbs TOC/1000 gal
FORMALDEHYDE	0.00	EPA VOC Speciation Profile 1186 (1/90)		lbs/lb TOC	lbs/kgal = lbs/lb TOC \times lbs TOC/1000 gal
HEXANE	5.39	EPA VOC Speciation Profile 1186 (1/90)	1.53%	lbs/lb TOC	lbs/kgal = lbs/lb TOC \times lbs TOC/1000 gal
HYDROGEN CHLORIDE					
HYDROGEN SULFIDE					
LEAD					
MANGANESE					
MERCURY					
NAPHTHALENE					
NICKEL					

PAH'S UNSPECIFIED					
- BENZO(A)ANTHRACENE					
- BENZO(B)FLUORANTHENE					
- BENZO(K)FLUORANTHENE					
- BENZO(A)PYRENE					
- INDENO(1,2,3-CD)PYRENE					
- DIBENZ(A,H)ANTHRACENE					
PROPYLENE					
SELENIUM					
TOLUENE	10.50	EPA VOC Speciation Profile 1186 (1/90)	2.98%	lbs/lb TOC	lbs/kgal = lbs/lb TOC x lbs TOC/1000 gal
XYLENES	9.76	EPA VOC Speciation Profile 1186 (1/90)	2.77%	lbs/lb TOC	lbs/kgal = lbs/lb TOC x lbs TOC/1000 gal
ZINC					

Last Updated on 8/24/99
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