

**G02 - BULK GASOLINE STORAGE TANKS, EXTERNAL FLOATING ROOF.**

**CALCULATION METHODS**

$E_a = L_r + L_f + L_{wd} + (L_{rf} \times \#rf) + (L_{dg} \times \#dg) \times \%C_i/100$

$E_h = E_a / H$

**NOTES:**

- $L_r$  (rim seal losses - lbs/hr) are calculated separately from the database and provided to the sites as a fixed emission rate (constant) dependent only upon design parameters.
- $L_f$  (fitting losses - lbs/hr) are calculated separately from the database and provided to the sites as a fixed emission rate (constant) dependent only upon design parameters.
- $L_{wd}$  (Withdrawal Losses - lbs/year) =  $[(0.943 \times Q \times C \times WI) / D] \times [1 + (N_c \times F_c / D)]$
- $L_d$  (Deck Seam Losses - lbs/hr) were omitted from the calculation procedure since this type of equipment does not exist in San Diego County.
- $L_{rf}$  (refilling losses) =  $0.315D^2$
- $\#rf$  = refilling times
- $L_{dg}$  (degassing losses) =  $0.462D^2 + 0.707D$
- $\#dg$  = degassing times
- Max hourly emissions are assumed equal to average hourly emissions since no acute substances are expected to be released from gasoline storage operations.
- Emissions from loading racks and vapor processors are calculated separately.
- Emissions from fixed roof tanks should be calculated with the standard gasoline dispensing form using emission factors for bulk dispensing.
- Calculation procedures are primarily based upon information in AP-42, Section 7.1 (11/2006).

POLLUTANT	District Emission Factor	EPA REFERENCE	ARB	(UNITS)	COMMENTS
	(Weight Percent %)	DOCUMENT	FACTOR		
NOX					
CO					
SOX					
TOG	100.000	AP-42, Section 7.1 and others			Assumes all gasoline vapor is TOG.
ROG	100.000	AP-42, Section 7.1 and others			Assumes all gasoline vapor is ROG.
TSP					
PM10					
BENZENE	0.40%	NESHAPS Doc. 453/R-94-002a	0.40%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel
ETHYL BENZENE	0.10%	NESHAPS Doc. 453/R-94-002a	0.10%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel
HEXANE	1.40%	NESHAPS Doc. 453/R-94-002a	1.40%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel
LEAD					
TOLUENE	1.10%	NESHAPS Doc. 453/R-94-002a	1.10%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel
2,2,4-TRIMETHYLPENTANE	0.70%	NESHAPS Doc. 453/R-94-002a	0.70%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel
XYLENES	0.40%	NESHAPS Doc. 453/R-94-002a	0.40%	weight percent in vapor	Assumes emissions = gasoline vapor speciation for reformulated / oxygenated fuel