

B03 - BOILER, DISTILLATE - DIESEL FIRED, >100 MMBTU/HR, TANGENTIAL FIRING, 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.
- The EPA speciation profile failed to identify methane. VOC species are assumed to be based on ROG emissions.
- Use these default factors for distillate fuel (i.e.: diesel fuel, jet fuel, kerosene, heating oil, etc.).
- Trace metal emission factors are based on fuel sample analyses received by the District for AB2588 purposes in 1990 and 1991.

| POLLUTANT | District Emission Factor | EPA REFERENCE | EPA | (UNITS) | COMMENTS |
|------------------------|----------------------------|--|----------|--------------|---|
| | (lbs/1000 gal fuel burned) | DOCUMENT | FACTOR | | |
| NOX | 42.00 | AP-42, Sect.1.3,10/96, Table 1.3-1 | 42 | lbs/1000 gal | |
| CO | 5.00 | AP-42, Sect.1.3,10/96, Table 1.3-1 | 5 | lbs/1000 gal | |
| SOX | 3.50 | | | | Assume a sulfur content of 0.05% and a fuel density of 7.0 lbs/gallon |
| TOG | 1.04 | AP-42, Sect.1.3,10/96, Table 1.3-2 | 1.04 | lbs/1000 gal | |
| ROG | 0.76 | AP-42, Sect.1.3,10/96, Table 1.3-2 | 0.76 | lbs/1000 gal | Assumes AP-42 Utility Boilers represent equipment >100 mmBtu/hr |
| TSP | 7.00 | AP-42, Sect.1.3,10/96, Table 1.3-1 | 7 | lbs/1000 gal | |
| PM10 | 7.00 | AP-42, Sect.1.3,10/96, Table 1.3-1 | 7 | lbs/1000 gal | |
| ACETONE | | | | | |
| ARSENIC | 7.80E-03 | | 7.80E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| BENZENE | | | | | |
| BERYLLIUM | | | | | |
| CADMIUM | 1.20E-03 | | 1.20E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| CHLORINE | | | | | |
| CHROMIUM HEXAVALENT | 2.00E-04 | | 2.00E-04 | lbs/1000 gal | Assumes 5% Cr to Cr+6 conversion for combustion per ARB instructions |
| CHROMIUM NONHEXAVALENT | 3.40E-03 | | 3.40E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| COPPER | 3.60E-03 | | 3.60E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| ETHYL BENZENE | | | | | |
| FORMALDEHYDE | 3.70E-01 | EPA VOC Speciation Profile # 0002 1/90 | 48.70% | lbs/lb ROG | = 0.76 x 0.487 |
| HEXANE | 1.22E-01 | EPA VOC Speciation Profile # 0002 1/90 | 16.00% | lbs/lb ROG | = 0.76 x 0.16 |
| HYDROGEN CHLORIDE | | | | | |
| HYDROGEN SULFIDE | | | | | |
| LEAD | 4.80E-03 | | 4.80E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| MANGANESE | 1.40E-03 | | 1.40E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |

| | | | | | |
|-------------|----------|--|----------|--------------|---|
| MERCURY | 2.30E-03 | | 2.30E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| NAPHTHALENE | | | | | |
| NICKEL | 2.30E-03 | | 2.30E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| PAH'S | | | | | |
| SELENIUM | 9.80E-03 | | 9.80E-03 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |
| TOLUENE | | | | | |
| XYLENES | | | | | |
| ZINC | 1.43E-02 | | 1.43E-02 | lbs/1000 gal | Based on average diesel / distillate analyses submitted to the District |

*Last Updated on 8/24/99
By D. Byrnes*