

**E15 - PORTABLE ENGINE, DIESEL FIRED, 50 - 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 0008 to estimate weight fraction of ROG in TOC.
- Several default factors are based on an assumed diesel BTU content of 19,300 BTU/lb and density of 7.1 lbs/gal per AP-42.
- Emission factor for TOG is sum of AP-42 factors for TOC (0.36) and Aldehydes (0.07).

| POLLUTANT              | District Emission Factor   | EPA REFERENCE                           | EPA    | (UNITS)        | COMMENTS   |
|------------------------|----------------------------|---|--------|----------------|--|
|                        | (lbs/1000 gal fuel burned) | DOCUMENT                                | FACTOR |                |  |
| NOX                    | 604.30                     | AP-42 (10/96), Section 3.3, Table 3.3-1 | 4.41   | lbs/MMBtu      | lbs/kgal = lbs/MMBtu $\times$ 0.019300MMBtu/lb $\times$ 7100 lbs/kgal            |
| CO                     | 130.18                     | AP-42 (10/96), Section 3.3, Table 3.3-1 | 0.95   | lbs/MMBtu      | lbs/kgal = lbs/MMBtu $\times$ 0.019300MMBtu/lb $\times$ 7100 lbs/kgal            |
| SOX                    | 0.21                       | Title 13, CCR, Section 2281             |        |                | CARB 15 ppmw diesel sulfur content standard with assume fuel density 7.1 lbs/gal |
| TOG                    | 58.92                      | AP-42 (10/96), Section 3.3, Table 3.3-1 | 0.43   | lbs/MMBtu      | lbs/kgal = lbs/MMBtu $\times$ 0.019300MMBtu/lb $\times$ 7100 lbs/kgal            |
| ROG                    | 52.09                      | EPA VOC Speciation Profile 0008 (1/90)  | 88.40% | lbs ROG/lb TOC | Reference in Section 3.4 of AP-42 is missing, using EPA VOC profile              |
| TSP                    | 42.48                      | AP-42 (10/96), Section 3.3, Table 3.3-1 | 0.31   | lbs/MMBtu      | lbs/kgal = lbs/MMBtu $\times$ 0.019300MMBtu/lb $\times$ 7100 lbs/kgal            |
| PM10                   | 42.48                      |   | 0.31   | lbs/MMBtu      | All PM emissions assumed <1 um per AP-42   |
| PM2.5                  | 42.48                      |   | 0.31   | lbs/MMBtu      | All PM emissions assumed <1 um per AP-42   |
| 1,3-BUTADIENE          | 2.17E-01                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| ACETALDEHYDE           | 7.83E-01                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| ACROLEIN               | 3.39E-02                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| ARSENIC                | 1.60E-03                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| BENZENE                | 1.86E-01                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| BERYLLIUM              |                            |   |        |                |  |
| CADMIUM                | 1.50E-03                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| CARBON DIOXIDE         | 22,473                     | AP-42 (10/96), Section 3.3, Table 3.3-1 | 164    | lbs/MMBtu      | Assumes 99% conversion of carbon in fuel to CO2                                  |
| CHLOROBENZENE          | 2.00E-04                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| CHROMIUM HEXAVALENT    | 1.00E-04                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| CHROMIUM NONHEXAVALENT | 5.00E-04                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| COPPER                 | 4.10E-03                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |
| DIESEL PARTICULATE     | 42.48                      | AP-42 (10/96), Section 3.3, Table 3.3-1 | 0.31   | lbs/MMBtu      | All PM emissions assumed <1 um per AP-42   |
| ETHYL BENZENE          | 1.09E-02                   |   |        |                | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001)                 |

|                          |          |  |  |  |  |
|--------------------------|----------|--|--|--|--|
| FORMALDEHYDE             | 1.73E+00 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| HEXANE                   | 2.69E-02 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| HYDROGEN CHLORIDE        | 1.86E-01 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| HYDROGEN SULFIDE         |          |  |  |  |  |
| LEAD                     | 8.30E-03 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| MANGANESE                | 3.10E-03 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| MERCURY                  | 2.00E-03 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| NAPHTHALENE              | 1.97E-02 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| NICKEL                   | 3.90E-03 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| PAH'S UNSPECIFIED        | 3.62E-02 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| - BENZO(A)ANTHRACENE     |          |  |  |  |  |
| - BENZO(B)FLUORANTHENE   |          |  |  |  |  |
| - BENZO(K)FLUORANTHENE   |          |  |  |  |  |
| - BENZO(A)PYRENE         |          |  |  |  |  |
| - INDENO(1,2,3-CD)PYRENE |          |  |  |  |  |
| - DIBENZ(A,H,)ANTHRACENE |          |  |  |  |  |
| PROPYLENE                | 4.67E-01 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| SELENIUM                 | 2.20E-03 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| TOLUENE                  | 1.05E-01 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| XYLENES                  | 4.24E-02 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |
| ZINC                     | 2.24E-02 |  |  |  | Ventura County APCD AB 2588 Combustion Emission Factors (5/2001) |

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By B. Wong