

**B01 - BOILER, RESIDUAL OIL FIRED, >100 MMBTU/HR, 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 ROG factor based on the speciation table is 0.93 lbs/1000 gal versus 0.76 lbs/1000 gal using AP-42, Section 1.3 assumption.

| POLLUTANT              | District Emission Factor   | EPA REFERENCE                              | EPA      | (UNITS)      | COMMENTS   |
|------------------------|----------------------------|--|----------|--------------|--|
|                        | (lbs/1000 gal fuel burned) | DOCUMENT                                   | FACTOR   |              |  |
| NOX                    |                            | AP-42, Sect.1.3,10/96, Table 1.3-1         | 67       | lbs/1000 gal | Use site specific NOx source test data for SDGE Encina & South Bay   |
| CO                     | 5.00                       | AP-42, Sect.1.3,10/96, Table 1.3-1         | 5        | lbs/1000 gal | Use site specific CO source test data if available                   |
| SOX                    | 35.50                      |  | 90       | lbs/1000 gal | Assume a sulfur content of 0.5% and a fuel density of 7.1 lbs/gallon |
| TOG                    | 1.04                       | AP-42, Sect.1.3,10/96, Table 1.3-2         | 1.04     | lbs/1000 gal |  |
| ROG                    | 0.93                       | Calculated from EPA VOC speciation profile | 0.93     | lbs/1000 gal | Use EPA VOC Profile (89% ROG) not AP-42 factor (0.76 lbs/kgal)       |
| TSP                    | 10.00                      | AP-42, Sect.1.3,10/96, Table 1.3-1         | 10       | lbs/1000 gal |  |
| PM10                   | 10.00                      | AP-42, Sect.1.3,10/96, Table 1.3-1         | 10       | lbs/1000 gal |  |
| ACETONE                | 2.91E-01                   | EPA VOC Speciation Profile # 0001 1/90     | 28.00%   | lbs/lb TOC   | = 1.04 x 0.28  |
| ARSENIC                | 1.32E-03                   | AP-42 Table 1.3-10                         | 1.32E-03 | lbs/1000 gal |  |
| BARIUM                 | 2.57E-03                   | AP-42 Table 1.3-10                         | 2.57E-03 | lbs/1000 gal |  |
| BENZENE                | 2.14E-04                   | AP-42 Table 1.3-8                          | 2.14E-04 | lbs/1000 gal |  |
| BERYLLIUM              | 2.78E-05                   | AP-42 Table 1.3-10                         | 2.78E-05 | lbs/1000 gal |  |
| CADMIUM                | 3.98E-04                   | AP-42 Table 1.3-10                         | 3.98E-04 | lbs/1000 gal |  |
| CHLORINE               |                            |  |          |              |  |
| CHROMIUM HEXAVALENT    | 2.48E-04                   | AP-42 Table 1.3-10                         | 2.48E-04 | lbs/1000 gal |  |
| CHROMIUM NONHEXAVALENT | 8.45E-04                   | AP-42 Table 1.3-10                         | 8.45E-04 | lbs/1000 gal |  |
| COBALT                 | 6.02E-03                   | AP-42 Table 1.3-10                         | 6.02E-03 | lbs/1000 gal |  |
| COPPER                 | 1.76E-03                   | AP-42 Table 1.3-10                         | 1.76E-03 | lbs/1000 gal |  |
| ETHYL BENZENE          | 6.36E-06                   | AP-42 Table 1.3-8                          | 6.36E-06 | lbs/1000 gal |  |
| FORMALDEHYDE           | 3.12E-01                   | EPA VOC Speciation Profile # 0001 1/90     | 30.00%   | lbs/lb TOC   | = 1.04 x 0.30  |
| HEXANE                 | 5.20E-02                   | EPA VOC Speciation Profile # 0001 1/90     | 5.00%    | lbs/lb TOC   | = 1.04 x 0.05  |
| HYDROGEN CHLORIDE      |                            |  |          |              |  |
| HYDROGEN SULFIDE       |                            |  |          |              |  |
| LEAD                   | 1.51E-03                   | AP-42 Table 1.3-10                         | 1.51E-03 | lbs/1000 gal |  |

|                          |          |                    |          |              |  |
|--------------------------|----------|--------------------|----------|--------------|--|
| MANGANESE                | 3.00E-03 | AP-42 Table 1.3-10 | 3.00E-03 | lbs/1000 gal |  |
| MERCURY                  | 1.13E-04 | AP-42 Table 1.3-10 | 1.13E-04 | lbs/1000 gal |  |
| NAPHTHALENE              | 1.13E-03 | AP-42 Table 1.3-8  | 1.13E-03 | lbs/1000 gal |  |
| NICKEL                   | 8.45E-02 | AP-42 Table 1.3-10 | 8.45E-02 | lbs/1000 gal |  |
| PAH'S (UNSPECIFIED)      | 5.13E-05 | AP-42 Table 1.3-8  | 5.13E-05 | lbs/1000 gal |  |
| - BENZO(A)ANTHRACENE     | 4.01E-06 | AP-42 Table 1.3-8  | 4.01E-06 | lbs/1000 gal |  |
| - BENZO(B)FLUORANTHENE   | 1.48E-06 | AP-42 Table 1.3-8  | 1.48E-06 | lbs/1000 gal |  |
| - INDENO(1,2,3-CD)PYRENE | 2.14E-06 | AP-42 Table 1.3-8  | 2.14E-06 | lbs/1000 gal |  |
| - DIBENZ(A,H)ANTHRACENE  | 1.67E-06 | AP-42 Table 1.3-8  | 1.67E-06 | lbs/1000 gal |  |
| SELENIUM                 | 6.83E-04 | AP-42 Table 1.3-10 | 6.83E-04 | lbs/1000 gal |  |
| TOLUENE                  | 6.20E-03 | AP-42 Table 1.3-8  | 6.20E-03 | lbs/1000 gal |  |
| 1,1,1-TRICHLOROETHANE    | 2.36E-04 | AP-42 Table 1.3-8  | 2.36E-04 | lbs/1000 gal |  |
| XYLENES                  | 1.90E-04 | AP-42 Table 1.3-8  | 1.90E-04 | lbs/1000 gal |  |
| ZINC                     | 2.91E-02 | AP-42 Table 1.3-10 | 2.91E-02 | lbs/1000 gal |  |

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