

X63 - COPPER CYANIDE ELECTROPLATING, HEPA FILTER CONTROLLED

CALCULATION METHODS

$E_a = U_a \times EF$

$E_h = U_h \times EF$

NOTES:

- U_a = Annual electrical usage, ampere-hour/year
- U_h = Maximum hourly electrical usage, ampere-hour/ hour
- Assume 99% control efficiency for HEPA filter.
- Assume TSP = PM-10.
- C_i = Weight percent of other listed substance in solution, %.
- C CN = Weight percent of cyanide in solution, %.
- "OTHER" pollutants and their corresponding emission factors are to be manually entered.
- Assume 100% capture efficiency.

| POLLUTANT | Emission Factor | REFERENCE | ARB | (UNITS) | COMMENTS |
|-----------|------------------------------|---|--------|---------|----------|
| | (lbs/amp-hr) | DOCUMENT | FACTOR | | |
| NOX | | | | | |
| CO | | | | | |
| SOX | | | | | |
| TOG | | | | | |
| ROG | | | | | |
| TSP | 8.58E-10 | Default TSP/PM-10 EF = CN + Cu EF's = 8.58E-10 lbs/amp-hr. | | | |
| PM10 | 8.58E-10 | Assume that TSP and PM-10 are based on average weight percent of cyanide in solution. | | | |
| ALUMINUM | | | | | |
| BERYLLIUM | | | | | |
| CADMIUM | | | | | |
| CHLORINE | | | | | |
| CYANIDE | 3.86E-10 | AP-42 (July 1996), Table 12.20-4 = 2.7E-6 grains CN/dscf -> 2.7E-4 grains CN/amp-hr. | | | |
| COPPER | 4.72E-10 | Copper EF determined using CN EF and ratio of Cu in $Cu(CN)_2 = 3.86E-10 \times [63.5/(26)(2)]$ | | | |
| OTHER | $3.86E-10 \times C_i/C_{CN}$ | | | | |