

X62 - COPPER CYANIDE ELECTROPLATING, CHEMICAL FUME SUPPRESSANT 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 95% control efficiency for anti-mist additives (i.e. foam, fume suppressant). See ARB Tech. Support Doc. to Proposed ATCM for Emissions of Cr+6 from Chrome Plating & Chromic Acid Anodizing Operations

(Jan. 1988), Table III-2 and ARB Tech. Guidance Doc. to the Criteria & Guidelines Reg. for AB2588 (Aug. 1989), page 44.

- 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 | 4.29E-09 | Default TSP/PM-10 EF = CN + Cu EF's = 4.29E-9 lbs/amp-hr. | | | |
| PM10 | 4.29E-09 | Assume that TSP and PM-10 are based on average weight percent of cyanide in solution. | | | |
| ALUMINUM | | | | | |
| BERYLLIUM | | | | | |
| CADMIUM | | | | | |
| CHLORINE | | | | | |
| CYANIDE | 1.93E-09 | AP-42 (July 1996), Table 12.20-4 = 2.7E-6 grains CN/dscf -> 2.7E-4 grains CN/amp-hr. | | | |
| COPPER | 2.36E-09 | Copper EF determined using CN EF and ratio of Cu in $Cu(CN)_2 = 1.93E-9 \times [63.5/(26)(2)]$ | | | |
| OTHER | 1.93E-9 x Ci/C CN | | | | |