

**X43 - NICKEL 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, %.
- $C_{Ni}$  = Weight percent of nickel 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       | 1.80E-7 x<br>1/C Ni  | Assume that TSP and PM-10 are based on average weight percent of nickel in solution.   |        |         |          |
| PM10      | 1.80E-7 x<br>1/C Ni  |  |        |         |          |
| ALUMINUM  |                      |  |        |         |          |
| BERYLLIUM |                      |  |        |         |          |
| CADMIUM   |                      |  |        |         |          |
| CHLORINE  |                      |  |        |         |          |
| NICKEL    | 1.80E-07             | Average of : "EPA's Toxic Air Pollutant Emission Factors - A Compilation for Selected Air Toxic Compounds and Sources, Oct. 1988" (4.96E-7 lbs Ni/amp-hr), and "AP-42, Table 12.20-4, Oct. 2021" (5.29E-5 lbs Ni/amp-hr), and "South Coast AQMD's 2003 -2004 New Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory, June 2004" (5.10E-7 lbs Ni/amp-hr) times the control efficiency (1.00 - 0.99). |        |         |          |
| OTHER     | 1.80E-7 x<br>Ci/C Ni |  |        |         |          |