

**X33 - CADMIUM 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, %.
- $C_{Cd}$  = Weight percent of Cr+6 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	1.81E-07	Default TSP/PM-10 EF = Cd + CN EF's = 1.81E-7 lbs/amp-hr.			
PM10	1.81E-07	Assume TSP and PM-10 emissions are based on the average weight percent of cadmium in solution.			
ALUMINUM					
ARSENIC					
BARIUM					
BERYLLIUM					
CADMIUM	5.71E-08	AP-42 (July 1996), Table 12.20-4 = 0.04 grains Cd/amp-hr			
CYANIDE	1.23E-07	Cyanide EF determined using Cd EF and ratio of Cd in Cd(CN) <sub>2</sub> = 5.71E-8 x [112.4/(26)(2)]			
OTHER	5.71E-8 x $C_i/C_{Cd}$				