

**X32 - CADMIUM 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, %.

-  $C_{Cd}$  = Weight percent of Cadmium 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	9.04E-07	Default TSP/PM-10 EF = Cd + CN EF's = 9.04E-7 lbs/amp-hr.			
PM10	9.04E-07	Assume TSP and PM-10 emissions are based on the average weight percent of cadmium in solution.			
ALUMINUM					
ARSENIC					
BARIUM					
BERYLLIUM					
CADMIUM	2.86E-07	AP-42 (July 1996), Table 12.20-4 = 0.04 grains Cd/amp-hr			
CYANIDE	6.18E-07	Cyanide EF determined using Cd EF and ratio of Cd in Cd(CN) <sub>2</sub> = 2.86E-7 x [112.4/(26)(2)]			
OTHER	2.86E-7 x $C_i/C_{Cd}$				