

**X11 - HARD CHROME / ANODIZING ELECTROPLATING, WET SCRUBBER 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 75% control efficiency for wet scrubber. 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, %.

-  $C_{Cr+6}$  = 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	8.93E-06	AP-42 (July 1996), Table 12.20-1 = 0.25 grains/amp-hr			
PM10	8.93E-06				
ALUMINUM					
BERYLLIUM					
CADMIUM					
CHLORINE					
CHROMIUM HEXAVALENT	3.58E-06	Average of ARB's Tech. Support Doc. to Proposed ATCM for Emissions of Cr+6 from Chrome Plating & Chromic Acid Anodizing Ops. (Aug. 1989) = 5.2 mg Cr+6/amp-hr (1.146E-5 lbs Cr+6/amp-hr) and AP-42 (July 1996), Table 12.20-1 = 0.12 grains Cr+6/amp-hr (1.715E-5 lbs Cr+6/amp-hr).			
OTHER	3.58E-6 x C <sub>i</sub> /C <sub>Cr+6</sub>				