

X31 - CADMIUM CYANIDE 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_{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	4.52E-06	Default TSP/PM-10 EF = Cd + CN EF's = 4.52E-6 lbs/amp-hr.			
PM10	4.52E-06	Assume TSP and PM-10 emissions are based on the average weight percent of cadmium in solution.			
ALUMINUM					
ARSENIC					
BARIUM					
BERYLLIUM					
CADMIUM	1.43E-06	AP-42 (July 1996), Table 12.20-4 = 0.04 grains Cd/amp-hr			
CYANIDE	3.09E-06	Cyanide EF determined using Cd EF and ratio of CN in Cd(CN) ₂ = 1.43E-6 x [112.4/(26)(2)]			
OTHER	1.43E-6 x Ci/C Cd				