

X61 - COPPER 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_{CN} = Weight percent of cyanide 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	2.15E-08	Default TSP/PM-10 EF = CN + Cu EF's = 2.15E-8 lbs/amp-hr.			
PM10	2.15E-08	Assume that TSP and PM-10 are based on average weight percent of cyanide in solution.			
ALUMINUM					
BERYLLIUM					
CADMIUM					
CHLORINE					
CYANIDE	9.65E-09	AP-42 (July 1996), Table 12.20-4 = 2.7E-6 grains CN/dscf -> 2.7E-4 grains CN/amp-hr.			
COPPER	1.18E-08	Copper EF determined using CN EF and ratio of Cu in $Cu(CN)_2 = 9.65E-9 \times [63.5/(26)(2)]$			
OTHER	$9.65E-9 \times C_i/C_{CN}$				