

X51 - COPPER 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_{Cu} = Weight percent of copper 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	1.13E-5 x 1/C Cu	Assume that TSP and PM-10 are based on average weight percent of copper in solution.			
PM10	1.13E-5 x 1/C Cu				
ALUMINUM					
BERYLLIUM					
CADMIUM					
CHLORINE					
COPPER	1.13E-05	Assume emission factor is the same as nickel electroplating.			
OTHER	1.13E-5 x C_i/C_{Cu}				