

**X53 - COPPER ELECTROPLATING, HEPA FILTER 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 99% control efficiency for HEPA filter.
- 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	4.53E-7 x 1/C Cu	Assume that TSP and PM-10 are based on average weight percent of copper in solution.			
PM10	4.53E-7 x 1/C Cu				
ALUMINUM					
ARSENIC					
BARIUM					
BERYLLIUM					
CADMIUM					
CHLORINE					
COPPER	4.53E-07	Assume emission factor is the same as nickel electroplating.			
OTHER	4.53E-7 x Ci/C Cu				