

Attachment A. Emission Factors for Persistent Organic Pollutants and Polycyclic Aromatic Hydrocarbons

TAC	CASRN or DEQ SEQ ID	Basis	Value	Units	Reference
Melt Shop - Electric Arc Furnace (EAF)					
PCDD/Fs TEQ	646	TEQ	1.58E-09	lb TEQ/ton steel produced	TAMCO Amended AB2588 Health Risk Assessment, January 2015. Appendix B-1a & -1b.
PCBs TEQ	645	TEQ	3.57E-10	lb TEQ/ton metal melted	Wu et al., 2014, Table 6; Remus et al., 2013, Table 8.4. Average of emission factors.
PAHs	401	BaP _{eq}	1.96E-05	lb BaP _{eq} /ton metal melted	Lee et al., 1999. Table 7.
Naphthalene	91-20-3	Total Mass	2.04E-03	lb/ton metal melted	Lee et al., 1999. Table 7.
Benzo[a]pyrene	50-32-8	Total Mass	1.38E-06	lb/ton metal melted	Lee et al., 1999. Table 7.
Hexachlorobenzene	118-74-1	Total Mass	5.00E-06	lb/ton metal melted	UNEP, 2013. Table III.18.2.
PBDEs	447	Total Mass	5.55E-07	lb/ton metal melted	Wang et al. 2010, Table S10; Wu et al., Table 6. Average of emission factors.
Slag Concentrations					
PCDD/Fs TEQ	646	TEQ	1.03E-08	lb TEQ/ton slag	Remus et al., 2013. Table 8-9.
PCBs TEQ	645	TEQ	1.03E-09	lb TEQ/ton slag	Remus et al., 2013. Table 8-9.

Notes:

BaP_{eq} = Benzo[a]pyrene-equivalent

PAH = Polycyclic aromatic hydrocarbons

PBDE = Polybrominated diphenyl ether

PCDD/Fs = Polychlorinated dibenzo-p-dioxins (PCDDs) & dibenzofurans (PCDFs)

PCB = Polychlorinated biphenyls

TAC = Toxic Air Contaminant

TEQ = Toxic Equivalency

References:

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