

Table S1- NO_x Emission Limits for Existing Large MWC Units (by Combustor Type) (US EPA, 2006).

MWC Technology	Before April 28, 2009 (ppmv)	On and After April 28, 2009 (ppmv)	Basis
Mass burn waterwall	205	205	parts per million by volume (ppmv) @ 7% oxygen, dry basis
Mass burn rotary waterwall	250	210	ppmv @ 7% oxygen, dry basis
Refuse-derived fuel combustor	250	250	ppmv @ 7% oxygen, dry basi
Fluidized bed combustor	180	180	ppmv @ 7% oxygen, dry basis
Mass burn refractory combustors	No limit	No limit	ppmv @ 7% oxygen, dry basis

Table S2: CISWI Waste-Burning Kilns Emission Standards (Current). These standards apply to units that commenced construction after June 4, 2010, or reconstruction/ modification after August 7, 2013.

Pollutant	Emission Limit [Source]	Basis / Averaging Time
Cadmium (Cd)	0.0014 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Carbon Monoxide (CO)	90 ppmv (long kilns) / 190 ppmv (preheater/precalciner)	ppmv @ 7% oxygen (3-run average)
Dioxins/Furans	TMB: 0.51 ng/dscm TEQ: 0.075 ng/dscm	ng/dscm @ 7% oxygen (3-run average) (TMB or TEQ option)
Hydrogen Chloride (HCl)	3.0 ppmv	ppmv @ 7% oxygen (3-run average or 30-day rolling average if HCl CEMS used)
Lead (Pb)	0.014 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Mercury (Hg)	0.0037 mg/dscm OR 21 lb/MM ton clinker	mg/dscm or lb/MM ton clinker (30-day rolling average, including CEMS data during startup/shutdown)
Nitrogen Oxides (NOx)	630 ppmv	ppmv @ 7% oxygen (3-run average)
Particulate Matter (PM)	13.5 mg/dscm	mg/dscm @ 7% oxygen (30-day rolling average using PM CPMS)
Sulfur Dioxide (SO ₂)	600 ppmv	ppmv @ 7% oxygen (3-run average)
Fugitive Ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods (Method 22)

Table S3: **CISWI Small, Remote Incinerators Emission Standards.** These standards apply to units that commenced construction after June 4, 2010, or reconstruction/modification after August 7, 2013

Pollutant	Emission Limit [Source]	Basis / Averaging Time
Cadmium (Cd)	0.67 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Carbon Monoxide (CO)	13 ppmv	ppmv @ 7% oxygen (3-run average)
Dioxins/Furans	TMB: 1,800 ng/dscm TEQ: 31 ng/dscm	ng/dscm @ 7% oxygen (3-run average)(TMB or TEQ option)
Hydrogen Chloride (HCl)	200 ppmv	ppmv @ 7% oxygen (3-run average)
Lead (Pb)	2.0 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Mercury (Hg)	0.0053 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Nitrogen Oxides (NO _x)	190 ppmv	ppmv @ 7% oxygen (3-run average)
Particulate Matter (PM)	270 mg/dscm	mg/dscm @ 7% oxygen (3-run average)
Sulfur Dioxide (SO ₂)	150 ppmv	ppmv @ 7% oxygen (3-run average)