

Boiler MACT Summary

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TMTS

New Boiler & Process Heater MACT
≥10 <30 MM Btu/hr
NSPS 40CFR63 Subpart JJJJJJ Final 2/21/11

EMISSION LIMITS FOR AREA SOURCE BOILERS (PTE < 10/25 tpy for HAPs)
 [lb/MM Btu heat input except CO]

Source	Category	PM	Hg	CO ppm Daily Avg.
New	Coal	0.42	4.8E-06	400 (@ 7% oxygen)
	Biomass	0.07	NA	100 (@ 7% oxygen)
	Oil	0.03	NA	NA
Existing	Coal	NA	4.8E-06	400 (@ 7% oxygen)

See URL for footnotes & detail (e.g., coal boilers are regulated as biomass boilers if they burn more than 10% biomass on an annual fuel input basis.)
<http://www.epa.gov/airquality/combustion/docs/20110221areasourceboilers.pdf>

On 1/12/11, EPA deferred for 3 years NSR Permitting Requirements GHG Emissions from Biomass-fired Boilers and Other Biogenic Sources

New Boiler & Process Heater MACT >30 MM Btu/hr

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	Oil	0.03	NA	NA
Existing	Coal	NA	4.8E-06	400 (@ 7% oxygen)

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Boiler and Process Heater MACT Major Sources

Subcategory	Particulate Matter (PM) lb/MM Btu	Hydrogen Chloride (HCl) lb/MM Btu	Mercury (Hg) lb/MM Btu	Carbon Monoxide (CO) (ppm @3% oxygen)	Dioxin/Furan (TEQ) (ng/dscm)
Existing –Coal Stoker	0.039	0.035	0.0000046	270	0.003
Existing - Coal Fluidized Bed	0.039	0.035	0.0000046	82	0.002
Existing – Pulverized Coal	0.039	0.035	0.0000046	160	0.004
Existing – Biomass Stoker/other	0.039	0.035	0.0000046	490	0.005
Existing - Biomass Fluidized Bed	0.039	0.035	0.0000046	430	0.02

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Existing – Biomass Dutch Oven/Suspension Burner	0.039	0.035	0.0000046	470	0.2
Existing – Biomass Fuel Cells	0.039	0.035	0.0000046	690	4
Existing – Biomass Suspension/Grate	0.039	0.035	0.0000046	3,500	0.2
Existing – Liquid	0.0075	0.00033	0.0000035	10	4
Existing – Gas 2 (Other Process Gases)	0.043	0.0017	0.000013	9.0	0.08
Existing – non- continental liquid	0.0075	0.0003	0.00000078	160	4

CISWI New Source MACT Floor Limits

(Table 2, Final Rule, 3/21/11; all limits at 7% O₂)

Subcategory	Hydrogen Chloride (HCl) ppmvd	Carbon Monoxide (CO) ppmvd	Lead (Pb) mg/dscm	Cadmium (Cd) mg/dscm	Mercury (Hg) mg/dscm
Incinerators	0.091	12	0.0019	0.0023	0.00016
ERUs-Solids	0.45	160 (biomass) 46 (coal)	0.0031	0.00051	0.00033
ERUs-Liquid/Gas	14	36	0.096	0.023	0.00025
Waste-burning Kilns	3.0	90	0.0026	0.00048	0.0062
Small, Remote Incinerators	200	12	0.26	0.61	0.0035

EPA Final Rule: <http://www.epa.gov/airquality/combustion/docs/20110221ciswi.pdf>

CISWI New Source MACT Floor Limits (cont.)

(Table 2, Final Rule, 3/21/11; all limits at 7% O₂)

Subcategory	Particulate Matter (PM-Filterable) mg/dscm	Dioxin/Furan (Total) ng/dscm	Dioxin/Furan (TEQ) ng/dscm	Nitrogen Oxides (NO _x) ppmvd	Sulfur Dioxide (SO ₂) ppmvd
Incinerators	18	0.052	0.13	23	11
ERUs-Solids	250	0.068	0.011	290 (biomass) 340 (coal)	6.2 (biomass) 650 (coal)
ERUs-Liquid/Gas	110	(no limit)	0.002	76	720
Waste-burning Kilns	2.5	0.090	0.0030	200	38
Small, Remote Incinerators	230	1,200	31	78	1.2

EPA Final Rule: <http://www.epa.gov/airquality/combustion/docs/20110221ciswi.pdf>