

Commercial and Industrial Solid Waste Incineration (CISWI) NSPS 40 CFR 60 subparts CCCC and DDDD

Applicability and Background of Rule

Subpart CCCC: NSPS

Subpart DDDD: EG

New versus existing (\$60.2015)

New sources:

1. CISWI units that commenced construction after May 20, 2011
2. CISWI units that commenced reconstruction or modifications after September 21, 2011

This action establishes new source performance standards and emission guidelines for commercial and industrial solid waste incineration units (CISWI). This final rule defines a CISWI unit as any combustion unit at a commercial or industrial facility that is used to combust solid

waste. U.S. EPA has promulgated a definition of solid waste that identifies whether non-hazardous secondary materials burned as fuels in combustion units are solid waste.

CISWI units subject to standards in this final rule include incinerators designed to burn discarded waste materials, units designed for heat recovery that combust solid waste materials, and waste burning kilns.

Four subcategories of CISWI units are impacted: incinerators, small remote incinerators, ERUs (energy recovery unit), and waste burning kilns. Burn off ovens are no longer included under this rule.

If an owner/operator of a CISWI unit permanently

ceases combusting solid waste, the affected unit would no longer be subject to this rule. Instead, it would be subject to CAA section 112 standards applicable to boilers and process heaters.

Emission Limits:

The final MACT floor emission limits for new and existing sources are found on the next page of this sheet. These emission limits correspond with the subcategories established for CISWI units based on the definition of non-hazardous solid waste.

Important Dates:

May 20, 2011:
Effective Date

Promulgation Date: February 21, 2011

Published in FR: March 21, 2011

Compliance Schedule:

New CISWI units must demonstrate compliance with the applicable limit within 60 days after the CISWI units reaches the charge rate at which it will operate but no later than 180 days after its initial start up. Existing CISWI units must demonstrate compliance with the applicable emission limits as soon as a state plan is approved. States must submit the state plan by March 21, 2012.

Testing and Monitoring for Compliance

The final rule requires all CISWI units to demonstrate initial compliance with the emission limits. Annual performance tests are required as well. You must conduct annual performance tests between 11 and 13 months of the previous performance test.

All: Subcategory specific monitoring requirements in addition to existing or new requirements.

Existing: Annual inspections of scrubbers, FF (fabric filter) and other air pollution control devices used to meet emission limits. Visi-

ble emissions test of the ash handling operations is required during the annual compliance test except for waste burning kilns. Units that operate a FF air pollution control device are required to install a bag leak detection system to monitor the device. Existing incinerators, small, remote incinerators, and ERUs are required to conduct annual emission testing for all pollutants.

New: CO CEMS for all subcategories. New kilns are required to install SO₂ and NO_x CEMS.

Reduced annual testing require-

ments for the nine pollutants can occur if testing results are shown to be well below the limits.

Alternatives:

Existing: use of a CO CEMS

New and Existing: PM, NO_x, SO₂, HCl, multi-metals, and Hg CEMS and integrated sorbent trap Hg monitoring and dioxin monitoring

Switching Rule Applicability:

If you cease combusting solid waste, you may opt to remain subject to these standards. However, you are subject to the requirements of these subparts for at least 6 months following the last date of solid waste combustion. If you cease combusting solid waste, you must be in compliance with any applicable standards (the boiler rules) on the effective date of the waste-to-fuel switch. If solid waste is re-introduced to the combustion chamber, you are subject to these standards on the first day solid waste is re-introduced to the combustion chamber.

Table 1. Subpart DDDD-EG Emission limits that apply to CISWI units after the date specified in the state plan.

Pollutants	Incinerators	ERUs-solids	ERUs-liquid/ gas	Waste- burning kilns	Small, remote incinerators
HCl (ppmv)	29	0.45	14	25	220
CO (ppmv)	36	490 (biomass)/ 59 (coal)	36	110	20
Pb (mg/dscm)	0.0036	0.0036	0.096	0.0026	2.7
Cd (mg/dscm)	0.0026	0.00051	0.023	0.00048	0.61
Hg (mg/dscm)	0.0054	0.00033	0.0013	0.0079	0.0057
PM, filterable (mg/dscm)	34	250	110	6.2	230
Dioxin/ furans, total (ng/dscm)	4.6	0.35	2.9	0.20	1200
Dioxin/ furans, TEQ (ng/dscm)	0.13	0.059	0.32	0.0070	57
NO _x (ppmv)	53	290 (biomass)/340 (coal)	76	540	240
SO ₂ (ppmv)	11	6.2 (biomass)/ 650 (coal)	720	38	420

Table 2. Subpart CCCC-NSPS Emission Limits for CISWI units which construction commenced after 11/30/99 but no later than 6/4/2010 or for which modification/reconstruction commenced after 6/1/2001 but no later than 9/21/2011.

Pollutants	Incinerators	ERUs-solids	ERUs-liquid/ gas	Waste- burning kilns	Small, remote incinerators
HCl (ppmv)	0.091	0.45	14	3.0	200
CO (ppmv)	12	160 (biomass)/ 46 (coal)	36	90	12
Pb (mg/dscm)	0.0019	0.0031	0.096	0.0026	0.26
Cd (mg/dscm)	0.0023	0.00051	0.023	0.00048	0.61
Hg (mg/dscm)	0.00016	0.00033	0.00025	0.0062	0.0035
PM, filterable (mg/dscm)	18	250	110	2.5	230
Dioxin/ furans, total (ng/dscm)	0.052	0.068	-	0.090	1200
Dioxin/ furans, TEQ (ng/dscm)	0.13	0.011	0.002	0.0030	31
NO _x (ppmv)	23	290 (biomass)/ 340 (coal)	76	200	78
SO ₂ (ppmv)	11	6.2 (biomass)/ 650 (coal)	720	38	1.2