

OPTION 2
(DRAFT BASED ON 2004 PROPOSED MACT)

TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 100. AIR POLLUTION CONTROL

**SUBCHAPTER 44. MERCURY EMISSIONS FROM COAL-FIRED ELECTRIC
GENERATING UNITS**

252:100-44-1. Purpose

The purpose of this subchapter is to control mercury emissions from coal-fired electric generating units within the State of Oklahoma.

252:100-44-2. [RESERVED]

252:100-44-3. [RESERVED]

252:100-44-4. [RESERVED]

252:100-44-5. Definitions

The following words and terms when used in this subchapter shall have the following meanings unless the context clearly indicates otherwise:

“Applicable electric generating unit”, “EGU” or “Unit” means:

A stationary coal-fired boiler (boiler) or stationary, coal-fired combustion turbine (combustion turbine) serving at any time a generator with a nameplate capacity of more than 25 megawatts electric (MWe), producing electricity for sale. This definition does not include:

(A) Any boiler or combustion turbine that qualified as a cogeneration unit during the 12-month period subsequent to the date it first produced electricity and continues to qualify as a cogeneration unit, and which has not served, at any time, a generator with nameplate capacity of more than 25 MWe supplying in any calendar year more than one-third of the unit’s potential electric output capacity, or 219,000 megawatt hours (MWh), whichever is greater, to any utility power distribution system for sale.

(B) Any “solid waste incineration unit” as defined in the Act section 129(g)(1) combusting “municipal waste” as defined in the Act section 129(g)(5) providing it is also subject to 40 CFR 60, Subparts Eb or AAAA; an EPA-approved state plan for implementing 40 CFR 60, Subpart Cb or 40 CFR 62, Subpart FFF; an EPA-approved state plan for implementing 40 CFR 60, Subpart BBBB; or 40 CFR 62, Subpart JJJ.

“Boiler” means an enclosed fossil- or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam or other medium.

“Bottoming-cycle cogeneration unit” means a cogeneration unit in which the energy input to the unit is first used to produce useful thermal energy and at least some of the reject heat from the useful thermal energy application or process is then used for electricity production.

“Coal” means any solid fuel classified as anthracite, bituminous, subbituminous or lignite by the American Society of Testing and Materials (ASTM) Standard Specification for Classification of Coals by Rank D388-77, 90, 91, 95, or 98a.

“Coal-derived fuel” means any fuel (whether in a solid, liquid or gaseous state) produced by the mechanical, thermal or chemical processing of coal.

“Coal-fired” means combusting any coal or coal-derived fuel, alone or in combination with any other fuel, during any year.

“Cogeneration unit” means a stationary coal-fired boiler or stationary coal-fired combustion turbine:

(A) Having equipment used to produce electricity and useful thermal energy for industrial, commercial, heating or cooling purposes through the sequential use of energy; and

(B) Producing during the 12-month period starting on the date the unit first produces electricity and during any calendar year after which the unit first produces electricity:

(1) For a topping-cycle cogeneration unit:

(i) Useful thermal energy not less than 5 percent of the total energy output; and

(ii) Useful power that, when added to one-half of the useful thermal energy produced, is not less than 42.5 percent of total energy input, if useful thermal energy produced is 15 percent or more of total energy output, or not less than 45 percent of total energy input, if useful thermal energy produced is less than 15 percent of total energy output; and

(2) For a bottoming-cycle cogeneration unit, useful power not less than 45 percent of total energy input.

“Combustion turbine” means:

(A) An enclosed device comprising a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine; and

(B) If the enclosed device under paragraph (a) of this definition is combined cycle, any associated heat recovery steam generator and steam turbine.

“Electric generating plant” means an applicable electric generating unit or units that are located on one or more contiguous or adjacent properties, and under common control of the same person (or persons under common control) which supply electricity to the electricity grid through a common electrical connection.

“Existing unit” means any applicable electric generating unit other than a new applicable electric generating unit.

“Inlet mercury” means the average concentration of mercury in flue gas at the inlet of the emission control device immediately downstream of the boiler of an electric generating unit.

“Nameplate capacity” means, starting from the initial installation of a generator, the maximum electrical generating output (in MW) that an electric generating unit is capable of producing on a steady-state basis during continuous operation as specified by the manufacturer.

“New or modified unit” means any applicable electric generating unit, which commenced construction or modification after the effective date of this subchapter.

“Output-based emission standard” means a maximum allowable rate of emissions of mercury or other pollutant per unit of electrical output from an EGU.

252:100-44-6. [RESERVED]

252:100-44-7. [RESERVED]

252:100-44-8. [RESERVED]

252:100-44-9. Allowable emissions

(a) For applicable generating units other than integrated gasification combined-cycle (IGCC) units, the following emission limits apply. The limits described in this subsection are based on a 12-month rolling average.

(1) Each existing unit that burns only bituminous coal shall not emit into the ambient atmosphere any gases that contain mercury (Hg) in excess of 2.0 pounds per trillion British thermal units (lb/TBtu) on an input basis or 0.0000021 pounds per Megawatt hour (lb/MWh) on an output basis.

(2) Each new unit that burns only bituminous coal shall not emit into the ambient atmosphere any gases that contain Hg in excess of 0.000006 lb/MWh on an output basis.

(3) Each existing unit that burns only subbituminous coal shall not emit into the ambient atmosphere any gases that contain Hg in excess of 5.8 lb/TBtu on an input basis or 0.0000061 lb/MWh on an output basis.

(4) Each new unit that burns only subbituminous coal shall not emit into the ambient atmosphere any gases that contain Hg in excess of 0.000002 lb/MWh on an output basis.

(5) Each existing unit that burns only lignite coal shall not emit into the ambient atmosphere any gases that contain Hg in excess of 9.2 lb/TBtu on an input basis or 0.0000098 lb/MWh on an output basis.

(6) Each new unit that burns only lignite coal shall not emit into the ambient atmosphere any gases that contain Hg in excess of 0.0000062 lb/MWh on an output basis.

(7) Each existing unit that burns only coal refuse shall not emit into the ambient atmosphere any gases that contain Hg in excess of 0.38 lb/TBtu on an input basis or 0.0000041 lb/MWh on an output basis.

(8) Each new unit that burns only coal refuse shall not emit into the ambient atmosphere any gases that contain Hg in excess of 0.0000011 lb/MWh on an output basis.

(9) Each new or existing unit that burns a blend of coals from different coal ranks (i.e., bituminous coal, subbituminous coal, lignite) or a blend of coal and coal refuse, together with one or more supplementary fuels, shall not emit into the ambient atmosphere any gases that contain Hg in excess of the weighted Hg emissions limit based on the proportion of energy output contributed by each coal type burned during the compliance period and its applicable Hg emissions limit in paragraphs (a)(1) through (8) of this section as determined by Appendix XX of this chapter.

(b) For applicable IGCC units the following emission limits apply. The limits described in this subsection are based on a 12-month rolling average.

(1) Each existing unit shall not discharge into the ambient atmosphere any gases which contain Hg in excess of 19 lb/TBtu on an input basis or 0.0002 lb/MWh on an output basis.

(2) Each new unit shall not discharge into the ambient atmosphere any gases which contain Hg in excess of 0.00002 lb/MWh on an output basis.

252:100-44-10. [RESERVED]

252:100-44-11. Compliance determination

Compliance with the emission limits contained in OAC 252:100-44-9 shall be determined in accordance with the method set forth in 40 CFR 60.50(h).

252:100-44-12. [RESERVED]

252:100-44-13. Monitoring, recordkeeping and reporting

The owner or operator of an applicable electric generating unit shall demonstrate compliance with the mercury emission limitations described in OAC 252:100-44-9 and shall comply with the requirements of OAC 252:100-46, 40 CFR 60.49(p), 63.10(b) through (f) and 40 CFR Part 75, Subpart I.

252:100-44-14. [RESERVED]

252:100-44-15. Mercury allowances

The state shall hold all mercury allowances allocated by EPA. At the end of each calendar year, the state shall instruct EPA to retire permanently all such allowances.