

DRAFT

STATE 111(d)/129 PLAN

**CONTROL OF MERCURY EMISSIONS
FROM COAL-FIRED ELECTRIC STEAM
GENERATING UNITS**

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CAA SECTION 111(d) STATE PLAN FOR THE CONTROL OF MERCURY EMISSIONS FROM COAL-FIRED ELECTRIC STEAM GENERATING UNITS (EGUs)

I. BACKGROUND

On May 18, 2005, the U.S. Environmental Protection Agency (EPA) finalized the Clean Air Mercury Rule (CAMR) to establish standards of performance for mercury emissions from new and existing coal-fired electric steam generating units (EGUs), as defined in Section 111 of the federal Clean Air Act (CAA). The final CAMR was published in the Federal Register on May 18, 2005 (70 FR 28606-28700). Subsequent revisions include corrections in the Federal Register on August 30, 2005 (70 FR 51266-51269) and amendments in the Federal Register on June 9, 2006 (71 FR 33388-33402). In Oklahoma, six (6) facilities with twelve (12) existing EGUs are subject to the requirements of CAMR. Consequently, the Oklahoma Department of Environmental Quality (DEQ) must develop this State Plan to implement and enforce the Section 111(d) requirements to control mercury emissions from these EGUs.

Oklahoma proposes to incorporate by reference 40 CFR 60 subpart HHHH as it existed in the June 9, 2006 Federal Register. (See Appendix A to this document.) Under CAMR each State receives an annual budget for mercury emissions from coal-fired EGUs with a nameplate capacity larger than 25 megawatts. A state can meet its CAMR budget either by joining the EPA-managed cap and trade program or by demonstrating that the state annual EGU mercury budgets codified in 40 CFR §60.24(h)(3) will not be exceeded in any year. Oklahoma's annual mercury budget for the period January 1, 2010 through 2017 is 0.721 tons and its budget for 2018 and thereafter is 0.285 tons. Oklahoma has elected to participate in the EPA-managed cap and trade program for coal-fired EGUs. Additionally, Oklahoma authorizes the EPA Administrator to assist Oklahoma in implementing the Mercury Budget Trading Program by carrying out the Administrator functions specified in 40 CFR 60 subpart HHHH.

II. LEGAL AUTHORITY TO IMPLEMENT THE STATE PLAN

The DEQ is an Oklahoma state environmental agency, and is designated as the administrative agency for the Oklahoma Clean Air Act for the state [27A O.S. § 2-5-105]. The DEQ has established that the statutory authorities and responsibilities concerning air quality shall be handled by the Air Quality Division (AQD). The AQD has the authority to implement the Oklahoma Clean Air Act and fulfill the requirements of the Federal Clean Air Act [27A O.S. § 1-3-101(B) (8), § 2-3-101(E) (1), § 2-5-105]. On the recommendation of the Air Quality Advisory Council (Council), the Environmental Quality Board (Board) has the authority under Oklahoma law to adopt air quality regulations for the DEQ. Specifically, the Board and the DEQ have the authority to:

1. adopt emission standards and regulations to implement the Oklahoma Clean Air Act and fulfill requirements of the Federal Clean Air Act [27A O.S. § 2-5-105, 27A O.S. § 2-5-106, 27A O.S. § 2-5-107 and 27A O.S. §2-5-114];
2. enforce the relevant laws, regulations, standards, orders and compliance schedules authorized by [27A O.S. § 2-5-105(4) and 27A O.S. § 2-5-110], and seek injunctive relief when necessary [27A O.S. § 2-5-105(14)];

3. abate pollutant emissions on evidence that the source is presenting an immediate, imminent and substantial endangerment to human health [27A O.S. § 2-5-105(15)];
4. prevent construction, modification, or operation of a source in violation of the requirement to have a permit, or in violation of any substantive provision or condition of any permit issued [27A O.S. § 2-5-117(A)(2)];
5. obtain information necessary to determine compliance [27A O.S. § 2-5-105(17)];
6. require recordkeeping, make inspections, and conduct tests [27A O.S. § 2-5-105(16) and 27A O.S. 2-5-105(17)];
7. require the installation, maintenance and use of monitors and require emission reports of owners or operators [27A O.S. § 2-5-112(B)(5)]; and
8. make emission data available to the public [51 O.S. §§ 24A.1 through 24A.26].

The laws that give the Council, Board and DEQ these authorities are located in Title 27A of the Oklahoma Statutes at Sections 2-2-101, 2-5-105, -106, -107, -108, -110, -112, -114, and -117. In addition, portions of the Oklahoma Open Records Act, 51 O.S. §§ 24A.1 through 24A.26, require records of State agencies to be open for public inspection and copying.

III. PUBLIC PARTICIPATION

Prior to submitting this Section 111(d) State Plan to EPA for approval, the Department held a public hearing for the purpose of accepting comments on this proposed State Plan for controlling mercury emissions from all EGUs in the State. This public hearing coincided with the Council hearing held on January 17, 2007 at 9:00 A.M. in the OG&E meeting room, 321 N. Harvey, Oklahoma City, Oklahoma, 73105.

The Oklahoma Administrative Procedures Act and state rules require that all notice of public hearings, agency rulemaking and rule adoption be published in the Oklahoma Register, the official state publication. As required under 40 CFR §60.23, the Department published notice of the date, time and location of the hearings at least 30 days prior to the scheduled date of the hearing in the Oklahoma Register. The DEQ certified that the public hearings were held in accordance with the criteria specified in 40 CFR §60.23(d), and provided a list of witnesses and their organizational affiliations appearing at the hearing and a brief written summary of each presentation or written submission. See Appendix B.

IV. IMPLEMENTATION OF THE SECTION 111(d) STATE PLAN

The DEQ has incorporated the Federal CAMR by reference into the Oklahoma Administrative Code at OAC 252:100-44. See Appendix A.

V. SOURCE INVENTORY OF EXISTING COAL-FIRED ELECTRIC STEAM GENERATING UNITS

In accordance with 40 CFR Part 60, Subpart B, §60.25(a), the State Plan must include “an inventory of all existing designated coal-fired EGUs including emissions data for the designated pollutant.” Oklahoma’s mercury budget covers twelve (12) existing designated coal-fired EGUs operated by six

(6) facilities. The inventory of the existing designated coal-fired EGUs is presented in Table 2 below. Plant summary inventories for each facility are in Appendix C.

Table 1. Source Inventory of Oklahoma EGUs

Company	Plant Name	Unit ID	Nameplate Capacity (Megawatts)	Initial Year	Hg tons per year
AES Shady Point Inc	AES Shady Point	GEN1	175	1990	0.030
AES Shady Point Inc	AES Shady Point	GEN2	175	1990	0.032
Grand River Dam Authority	GRDA	1	490	1981	0.170
Grand River Dam Authority	GRDA	2	520	1985	0.180
Oklahoma Gas & Electric Co	Muskogee	4	572	1977	0.049
Oklahoma Gas & Electric Co	Muskogee	5	572	1978	0.050
Oklahoma Gas & Electric Co	Muskogee	6	572	1984	0.058
Oklahoma Gas & Electric Co	Sooner	1	569	1979	0.060
Oklahoma Gas & Electric Co	Sooner	2	569	1980	0.049
Public Service Co of Oklahoma	Northeastern	3	473	1979	0.060
Public Service Co of Oklahoma	Northeastern	4	473	1980	0.050
Western Farmers Elec Coop Inc	Hugo	1	446	1982	N/A

VI. ANNUAL MERCURY MASS EMISSIONS LIMITATIONS FOR OKLAHOMA'S EXISTING COAL-FIRED ELECTRIC GENERATING UNITS

Annual EGU mercury mass emission caps for individual states are specified in 40 CFR Part 60.24. For Oklahoma, §60.24 specifies a statewide mercury mass emission cap of 0.721 tons/yr (23,072 oz/yr) for the years 2010 through 2017, and a state mercury mass emissions cap of 0.285 tons/yr (9,120 oz/yr) for 2018 and thereafter.

The following list represents Oklahoma's mercury allocations for each electric generating unit EGU. These allocations were based on reported Heat Input to the Clean Air Marketing Division for the years 2000-2004 using methods specified in 40 CFR §60.4142. These numbers include a 5% new source set-aside for 2010-2014.

Table 2. Limits for Coal-fired Electric Steam Generating Units in Oklahoma

Company	Plant Name	Unit ID	Heat Input	Hg Ounces
AES Shady Point Inc	AES Shady Point	GEN1	12,032,298	646
AES Shady Point Inc	AES Shady Point	GEN2	12,213,797	656
Grand River Dam Authority	GRDA	1	37,722,235	2026
Grand River Dam Authority	GRDA	2	43,467,187	2334
Oklahoma Gas & Electric Co	Muskogee	4	37,182,577	1997
Oklahoma Gas & Electric Co	Muskogee	5	39,976,074	2147
Oklahoma Gas & Electric Co	Muskogee	6	38,090,353	2045
Oklahoma Gas & Electric Co	Sooner	1	40,265,338	2162
Oklahoma Gas & Electric Co	Sooner	2	37,676,085	2023

Public Service Co of Oklahoma	Northeastern	3	39,811,241	2138
Public Service Co of Oklahoma	Northeastern	4	37,196,093	1997
Western Farmers Elec Coop Inc	Hugo	1	32,522,343	1746
New Source Set-aside 5%	N/A	N/A	N/A	1154

VII. COMPLIANCE SCHEDULE FOR COAL-FIRED EGUs

An owner or operator of each designated existing coal-fired EGU must achieve compliance with the annual emission limitations specified by the DEQ. The owner or operator of one or more coal-fired EGUs subject to the emission limitations shall demonstrate compliance on a unit-by-unit basis or facility-wide emission averaging. The owners or operators of EGUs subject to Subpart HHHH shall comply with all applicable Subpart HHHH requirements and this Section 111(d) State Plan on or before January 1, 2010.

VIII. RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

Under 40 CFR §60.24, EGUs are required to comply with the monitoring, recordkeeping, and reporting provisions of 40 CFR Part 75 with regard to mercury mass emissions. The proposed regulation requires demonstration of compliance with the proposed mercury mass emissions limitations through the use of continuous emissions monitoring systems that are installed, calibrated, operated, and certified in accordance with the requirements of 40 CFR Part 75.

Further, the proposed regulation requires compliance with the monitoring, reporting, and recordkeeping requirements of 40 CFR Part 60, which would include: §60.4170, General Requirements; §60.4171, Initial Certification and Recertification Procedures; §60.4172, Out of Control Periods; §60.4173, Notifications; §60.4174, Recordkeeping and Reporting; §60.4175, Petitions; §60.4176, Additional Requirements to Provide Heat Input Data; and Performance Specification 12A.

In addition to the requirements of 40 CFR Part 60 and 40 CFR Part 75, the proposed regulation requires the maintenance of all relevant reports, test results, and records for a period of at least 5-years.

The proposed regulation also requires submittal of semi-annual reports, including, as a minimum, the following information:

1. tabulation of emissions monitoring results reduced to 1-hr averages
2. calendar year-to-date summation of mass emissions
3. identification and cause of any invalid data averages
4. records of repairs, adjustment, or maintenance of the monitoring system
5. results of all tests, audits, and recalibrations performed during the period
6. certification statement, and signature of the designated representative

APPENDIX A: FEDERAL AND STATE MERCURY RULES

Clean Air Mercury Rule, 70 FR 28606-28700, 70 FR 51266-51269, 71 FR 33388-33402
OAC 252:100-44

APPENDIX B: DOCUMENTATION OF THE PUBLIC PARTICIPATION PROCESS

Transcript of Hearing
Sign-in sheet from hearing
Comments from hearing
Notice published in Oklahoma Register (to be added)
Governor's approval published in Oklahoma Register (to be added)
Permanent Rule Adoption published in Oklahoma Register (to be added)

APPENDIX C: PLANT SUMMARIES