

TEXAS STATE PLAN FOR THE CONTROL OF  
DESIGNATED FACILITIES AND POLLUTANTS

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

CLEAN AIR MERCURY RULE  
(CAMR)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. BOX 13087  
AUSTIN, TEXAS 78711-3087

PROJECT NO. 2005-049-SIP-NR

Adopted  
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## I. INTRODUCTION

On March 15, 2005, the United States Environmental Protection Agency (EPA) finalized the Clean Air Mercury Rule (CAMR). The final rule was published in the *Federal Register* on May 18, 2005. CAMR will permanently cap and reduce mercury emissions from new<sup>1</sup> and existing<sup>2</sup> coal-fired utility units nationwide in two phases. States were given the option to use one of two compliance options: 1) meet the state's emission budget by requiring new and existing coal-fired electric generating units (EGUs) to participate in an EPA-administered cap-and-trade system that caps emissions in two stages; or 2) meet an individual state emissions budget through measures of the state's choosing. In 2005, the 79<sup>th</sup> Texas Legislature passed House Bill 2481<sup>3</sup> in its Regular Session which requires Texas to adopt the CAMR rule by reference. Therefore, Texas is statutorily required to participate in the EPA-administered cap-and-trade program. The TCEQ adopted CAMR [40 Code of Federal Regulations (CFR) Part 60, Subchapter HHHH] by reference in 30 Texas Administrative Code (TAC) Chapter 101, Subchapter H, Division 8.<sup>4</sup>

As part of the regulatory scheme for controlling mercury, CAMR requires Texas to prepare and submit this state plan pursuant to Federal Clean Air Act section 111(d) by no later than November 17, 2006. Regulations in 40 CFR Part 60 contain requirements that establish a SIP-like procedure under which each state submits to EPA a plan that establishes standards of performance for existing sources of certain air pollutants and that provides for the implementation and enforcement of those standards. The cap-and-trade program is a standard of performance for the control of mercury emissions from existing sources. This plan is the mechanism by which the standard of performance for existing sources is applied to existing EGUs.

The CAMR program will be implemented in two phases beginning with Phase I in 2010 and Phase II in 2018. Table 1.1 outlines the mercury caps under CAMR for Phase I and Phase II .

**Table 1.1: Mercury Caps under CAMR**

	<b>National Annual Mercury Cap</b>	<b>Texas Annual Mercury Cap</b>
<b>Phase I - 2010-2017</b>	38 tons per year	4.657 tons per year
<b>Phase II - 2018 and thereafter</b>	15 tons per year	1.838 tons per year

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<sup>1</sup>New EGU - Units commencing operation on or after January 1, 2001.

<sup>2</sup>Existing EGU - Units commencing operation before January 1, 2001.

<sup>3</sup>Act of June 18, 2005, 79<sup>th</sup> Leg., R.S., HB. 2481, § 2 (codified at Tex. Health & Safety Code §382.0173, concerning Adoption of Rules Regarding Certain SIP Requirements and Standards of Performance for Certain Sources. See Appendix A.

<sup>4</sup>30 Texas Administrative Code (TAC) Chapter 101, Subchapter H, Division 8. See Appendix B.

In 40 CFR Part 60.24(h)(3), the EPA requires states to submit a state plan that will contain emission standards and compliance schedules, and demonstrate that states will be in compliance with their annual mercury budget. 40 CFR Part 60.24(h)(4) requires that state plans have a mechanism for EGUs to comply with the monitoring, recordkeeping, and reporting provisions of 40 CFR Part 75 with regard to mercury mass emissions. In addition to meeting the requirements of 40 CFR Part 60.24, state plans will be required to show legal authority to adopt emission standards and compliance schedules necessary for attainment and maintenance of the state's relevant annual EGU mercury budget, and require owners or operators of EGUs in Texas to meet monitoring, recordkeeping and reporting requirements of 40 CFR Part 60(h)(4).

Title V permits will need to be revised to reflect EGU participation in CAMR. Sources must submit the mercury update to the Title V permits by June 1, 2007. Submission of CAMR permit applications are dictated by 40 CFR Part 60.4121 for mercury.

## **II. CONTROL STRATEGY**

Texas was directed by the 2005 79<sup>th</sup> Texas Legislature, Regular Session, in House Bill 2481 to participate in the nationwide mercury cap-and-trade program that was developed and will be administered by the EPA. The program is designed after the Acid Rain/Title IV program in the Federal Clean Air Act. CAMR (40 CFR Part 60, Subchapter HHHH) has been adopted by reference in 30 TAC Chapter 101, Subchapter H, Division 8<sup>5</sup>. Any affected facility for which construction commenced after January 30, 2004, must also comply with the mercury new source performance standards in 40 CFR Part 60.45(a)<sup>6</sup>.

If the EPA determines that an EGU exceeded its mercury allowance requirements in the EPA's cap-and-trade program, the EGU will be required to surrender allowances sufficient to offset the excess emissions. The EGU must also surrender allowances to the EPA from the next control period equal to three times the excess emissions per 40 CFR Part 60.4154(d).

## **III. MONITORING AND REPORTING**

The TCEQ is adopting the CAMR program by reference in 30 TAC Chapter 101, Subchapter H, Division 8. Therefore, the owners and operators, and to the extent applicable, the mercury-designated representative for the EGUs, shall comply with the monitoring, recordkeeping, and reporting requirements as provided in 40 CFR Part 60.4171 through 60.4176 and 40 CFR Part 75 Subpart I.

CAMR requires monitoring of total vapor phase mercury concentrations from coal-fired EGUs through either a mercury continuous emission monitoring system (Performance Specification 12A) or a mercury sorbent trap monitoring system (40 CFR Part 75, Appendix K). In addition to the mercury concentrations, CAMR also requires monitoring of heat input, stack gas flow rate, and stack gas moisture (if moisture correction is necessary). Low mass emitters (less than or equal to 29 lbs mercury/year) have

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<sup>5</sup>Texas Administrative Code (TAC) Chapter 101, Subchapter H, Division 8. See Appendix B.

<sup>6</sup>30 Texas Administrative Code (TAC) Chapter 101.20 requires any person owning or operating a source of air contaminants to comply with the federal New Source Performance Standards.

the option of using periodic mercury stack testing in lieu of the continuous mercury concentration monitoring systems. Low mass emitters between 9 lbs mercury/year and 29 lbs mercury/year must test twice per year, while low mass emitters with 9 lbs mercury/year or less must test once per year.

#### **IV. COMPLIANCE PLAN AND SCHEDULE**

CAMR applies to any stationary, coal-fired boiler or stationary, coal-fired combustion turbine meeting the applicability requirements under 40 CFR Part 60.4104. The referenced applicability requirements under 40 CFR Part 60.4104 apply to stationary, coal-fired boilers or combustion turbines serving at any time, since the start-up of the unit's combustion chamber, a generator with a nameplate capacity of more than 25 megawatt electrical (MWe) producing electricity for sale. The referenced applicability also includes cogeneration units serving at any time a generator with nameplate capacity of more than 25 MWe and 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. Integrated gasification combined cycle units are also subject to the final rule.

The CAMR program will be implemented in two phases. Phase I of the CAMR program, years 2010 - 2017, will take advantage of the "co-benefit" of the federal Clean Air Interstate Rule (CAIR). The EPA has concluded that mercury reductions achieved as a co-benefit of controlling sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) under CAIR should dictate the appropriate cap level for mercury. The EPA has also stated that requiring SO<sub>2</sub> and NO<sub>x</sub> controls beyond those needed to meet the requirements of CAIR solely for the purposes of further reducing mercury emissions by 2010 is not reasonable because the incremental cost effectiveness of such a requirement would be extraordinarily high. Therefore, additional Phase I mercury reductions will not be required beyond the co-benefit of CAIR. The additional reductions that will occur from CAIR's Phase II reductions, which begin in 2015, are not a requirement of CAMR. The CAMR Phase I national mercury cap is 38 tons per year, including 4.657 tons per year for Texas.

Phase II of the CAMR program, 2018 and thereafter, will require new and existing coal-fired utility units to use mercury-specific air pollution control technologies. The EPA has set a 15 ton per year national cap, including a 1.838 ton per year cap for Texas in 2018 and thereafter. Phase II reductions are based on the combined co-benefit CAIR reductions and mercury-specific controls.

Owners or operators of a mercury budget unit that commences commercial operation before July 1, 2008, must be in compliance with the monitoring requirements by January 1, 2009. Owners or operators of a mercury budget unit that commences commercial operation on or after July 1, 2008, must comply with the monitoring requirements by the later of the following dates: January 1, 2009, or 90 unit operating days or 180 calendar days, whichever occurs first, after the date the unit commences commercial operation<sup>7</sup>.

#### **V. LEGAL AUTHORITY**

The Texas Clean Air Act (TCAA) states that the commission is the state air pollution agency and is the principal authority in the state on matters relating to air quality. The powers and duties of the commission are contained in Chapter 382 of the Texas Health and Safety Code (THSC) and Chapters 5 and 7 of the Texas Water Code (TWC). The following is a summary of the commission's legal authority. Appendix

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<sup>7</sup> 40 CFR Part 60.4170(b)(1)-(2)

E contains the full text of the statutes listed, including information showing that the legal authorities specified in this section are available to the state at the time of submission of this plan.

**1. Adopt emission standards and compliance schedules applicable to designated facilities.**

THSC §382.011, General Powers and Duties, provides the commission the authority to control the quality of the state's air; §382.012, State Air Control Plan, requires the commission to develop a comprehensive plan for the control of the state's air; §382.013, Air Quality Control Regions, authorizes the commission to designate air quality control regions as necessary to implement air quality standards; §382.014, Emission Inventory, authorizes the commission to require submission of emission data; and §382.017, Rules, provides the commission the authority to adopt rules and to differentiate among particular conditions, particular sources, and particular areas of the state. TWC §5.013, General Jurisdiction of Commission, establishes the commission's jurisdiction over the Texas Clean Air Act.

**2. Enforce applicable laws, regulations, standards, and compliance schedules, and seek injunctive relief.**

THSC §382.0541, Administration and Enforcement of Federal Operating Permit, establishes the commission's authority to administer the federal operating permit program; TWC §5.102, General Powers, provides the commission the power to perform any acts necessary and convenient to the exercise of its jurisdiction and powers; TWC §7.002, Enforcement Authority, authorizes the commission to institute legal proceedings to compel compliance; §7.032, Injunctive Relief, provides that injunctive relief may be sought by the executive director; and §7.302, Grounds for Revocation or Suspension of Permit, provides authority to the commission to revoke or suspend any air quality permit.

**3. Obtain information necessary to determine whether designated facilities are in compliance with applicable laws, regulations, standards, and compliance schedules.**

THSC §382.015, Power to Enter Property, provides the commission the authority to enter property to inspect and investigate conditions relating to emissions of air contaminants; §382.016, Monitoring Requirements; Examination of Records, authorizes the commission to require monitoring, recordkeeping, and access to records; §382.021, Sampling Methods and Procedures, authorizes the commission to prescribe sampling methods and procedures; §382.022, Investigations, authorizes the executive director to conduct and require investigations; §382.029, Hearing Powers, provides the commission power to conduct hearings, administer oaths, receive evidence, issue subpoenas, and make findings of fact and decisions; §382.034, Research and Investigations, authorizes the commission to conduct investigations; and TWC §5.102, General Powers, provides the commission the power to perform any acts necessary and convenient to the exercise of its jurisdiction and powers.

**4. Require recordkeeping and to make inspections and conduct tests of designated facilities.**

THSC §382.015, Power to Enter Property, authorizes the commission to enter property to inspect and investigate conditions relating to air emissions; and §382.016, Monitoring Requirements; Examination of Records, authorizes the commission to require monitoring, recordkeeping, and access to records.

**5. Require owners or operators of designated facilities to install, maintain, and use emission monitoring devices and to make periodic reports to the state.**

THSC §382.0514, Sampling, Monitoring, and Certification, provides the commission authority to require sampling, monitoring, certification of compliance, and reporting of same by federal sources; §382.016, Monitoring Requirements; Examination of Records, authorizes the commission to require monitoring, recordkeeping, and access to records.

**6. Make emissions data available to the public.**

THSC §382.014, Emission Inventory, authorizes the commission to require submission of emission data; §382.040, Documents; Public Property, provides that information, documents, and data collected by the commission are state property and public records; §382.041, Confidential Information, prohibits the commission from disclosing only certain material identified as confidential when submitted.

**VI. PUBLIC HEARING INFORMATION**

The commission held public hearings at the following times and locations:

<b>CITY</b>	<b>DATE</b>	<b>TIME</b>	<b>LOCATION</b>
Austin	April 11, 2006	2:00 p.m.	Texas Commission on Environmental Quality 12100 North I-35 Building E, Room 201S
Fort Worth	April 12, 2006	2:00 p.m.	Texas Commission on Environmental Quality 2309 Gravel Drive
Houston	April 13, 2006	2:00 p.m.	Texas Commission on Environmental Quality 5425 Polk Street Suite H, 3 <sup>rd</sup> Floor

The comment period ended on April 17, 2006, at 5:00 p.m. Response to those comments can be found in Appendix F.

Copies of the adopted state plan and all appendices can be obtained from the TCEQ's web site at <http://www.tceq.state.tx.us/implementation/air/sip/siplans.html> or upon request to:

Texas Commission on Environmental Quality  
Air Quality Planning and Implementation Division  
P. O. Box 13087  
Mail Code 206  
Austin, Texas 78711-3087  
Re: CAMR State Plan Information

**VII. Appendices**

- Appendix A - House Bill 2481, 2005 70<sup>th</sup> Texas Legislature Regular Session
- Appendix B - Rule Language - 30 TAC Chapter 101, Subchapter H, Division 7 (CAIR) and Division 8 (CAMR)
- Appendix C - Rule Language - 30 TAC Chapter 122, Subchapter A (Definitions); Subchapter B, Division 1 (General Requirements); and Subchapter E, Division 1 (Acid Rain), Division 2 (CAIR), and Division 3 (CAMR)

- Appendix D - Acronym List
- Appendix E - Legal Authority
- Appendix F - Response to Comments Received Regarding the Clean Air Mercury Rule (CAMR) State Plan Revision