

**REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP)
CONCERNING OZONE (O₃) AND
FINE PARTICULATE MATTER (PM_{2.5})
TRANSPORT EMISSIONS**

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

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Adopted

April 16, 2008

SECTION VI. CONTROL STRATEGY

- A. Introduction (No change.)
- B. Ozone (No change.)
- C. Particulate Matter (No change.)
- D. Carbon Monoxide (No change.)
- E. Lead (No change.)
- F. Oxides of Nitrogen (No change.)
- G. Sulfur Dioxide (No change.)
- H. Conformity with the National Ambient Air Quality Standards (NAAQS) (No change.)
- I. Site Specific (No change.)
- J. Mobile Source Strategies (No change.)
- K. Clean Air Interstate Rule (No change.)
- L. Transport (New.)
- M. Regional Haze (Proposed December 2007.)

EXECUTIVE SUMMARY

This revision to the State Implementation Plan (SIP) for ozone (O₃) and fine particulate matter (PM_{2.5}) transport sets forth how the Texas Commission on Environmental Quality (TCEQ) will meet the Federal Clean Air Act (FCAA), section 110(a)(1) requirement for states to submit SIPs within three years after the promulgation of new or revised National Ambient Air Quality Standards (NAAQS) to meet the requirements of FCAA, § 110(a)(2), including FCAA, § 110(a)(2)(D)(i), relating to interstate transport of O₃ and/or PM_{2.5}. On July 18, 1997, the United States Environmental Protection Agency (EPA) promulgated a revised NAAQS for ozone and a revised NAAQS for particulate matter (PM). For ozone, the EPA replaced the one-hour standard with an eight-hour standard and for PM, the EPA added a new 24-hour standard and a new annual standard for particulate matter of 2.5 microns and less (PM_{2.5}). The purpose of this SIP revision is to document that any emissions from sources in Texas that may contribute to nonattainment in another state have been mitigated through existing control strategies.

On April 25, 2005, the EPA published a finding of states' failure to submit in the *Federal Register* (Volume 70, Number 78) that required SIPs relating to interstate transport of eight-hour ozone and PM_{2.5}. This publication started a two-year clock for the promulgation of a Federal Implementation Plan (FIP). The finding of failure to submit identified Texas as a state that had not properly addressed interstate transport pollution. Several areas in Texas are nonattainment for the eight-hour ozone NAAQS, but the entire state is currently designated attainment for the 1997 24-hour and annual standards for PM_{2.5}.

The EPA's "*SIP Guidance on Section 110(a)(2)(D)(i) Findings of Failure to Submit*" dated August 11, 2006, notes that states participating in the Clean Air Interstate Rule (CAIR) will satisfy the transport SIP requirements for ozone and PM_{2.5} by submitting a CAIR SIP or by relying on the CAIR FIP to demonstrate that emissions from Texas do not interfere with attainment in another state. Texas is participating in the federal CAIR program for PM_{2.5} and is considered as having addressed annual sulfur dioxide (SO₂) and nitrogen oxides (NO_x) transport for PM_{2.5}. Therefore, Texas' PM_{2.5} transport SIP obligation has been partially fulfilled by the submission of the CAIR SIP to the EPA on August 3, 2006.

This SIP revision also includes verification that the Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR) permitting programs and the Protection of Visibility requirements are being implemented in Texas.

Texas is not covered under the CAIR program for eight-hour ozone contribution. However, in addition to the annual NO_x reductions from the CAIR program Texas has a strategy in place for the eastern part of the state to reduce NO_x emissions from electric generating units. This strategy, along with other NO_x reducing programs in current ozone SIP revisions, is the basis of Texas' Eight-Hour Ozone and Fine Particulate Matter (PM_{2.5}) Transport SIP revision submittal. The control strategies that are comparable to the CAIR program include: Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations; Utility Electric Generation in East and Central Texas Emission Specifications; Texas-specific legislation from the 1999 76th session in Senate Bill 7 (SB 7) that requires a regional NO_x cap and trade program; and a Mass Emissions Cap and Trade (MECT) program in the Houston-Galveston-Brazoria nonattainment area.

The combined electric generating unit (EGU) specific strategies listed above have reduced NO_x by an estimated 598 tons per day from 2000 through 2005. This equates to an estimated 218,270 tons per year. Control strategy modeling indicates that an additional two tons per day will be

reduced by 2009, for a total of 600 tons per day or 219,000 tons per year. In addition, the Houston-Galveston-Brazoria (HGB) MECT program for non-electric generating facilities has reduced NO_x emissions an additional 105 tons per day or 38,325 tons per year from 2000 through 2004, with an additional 76 tons per day or 27,740 tons per year reduction expected in 2009. In addition to the listed reductions that are consistent with CAIR, Texas has numerous other strategies through eight- and one-hour ozone initiatives that are described in Chapter 2. These strategies include, but are not limited to: programs to reduce NO_x emissions from major industrial, commercial, and institutional sources; cement kiln controls; transportation control measures (TCMs); local voluntary mobile source emission reduction programs (VMEP); Texas Low Emission Diesel (TxLED); and the Texas Emission Reduction Program (TERP).

In addition to the control strategies that are already in place to reduce NO_x emissions in Texas, an EPA document, *“Technical Support Document for the Final Clean Air Interstate Rule – Air Quality Modeling, March 2005,”* states that modeling predicts that all four of the nonattainment areas (Denver, Memphis-West Memphis, St. Louis, and Baton Rouge) in states nearest to Texas (Colorado, Arkansas, Tennessee, Missouri, and Louisiana) will be attaining the eight-hour ozone standard in 2010 after CAIR emissions reductions have been made. The EPA’s analysis included Texas emissions east of Laredo, including the Beaumont-Port Arthur, Dallas-Fort Worth, and the Houston-Galveston-Brazoria nonattainment areas.

In conclusion, the existing environmental and technical work contained in the EPA’s document, *“Technical Support Document for the Final Clean Air Interstate Rule – Air Quality Modeling, March 2005,”* confirms that all nonattainment areas in adjacent states will be attaining the eight-hour ozone standard. In addition, the EPA’s recognition that CAIR is adequate to demonstrate compliance with the PM_{2.5} transport requirements shows Texas has adequately addressed any potential transport issues associated with eight-hour ozone and PM_{2.5} and fulfilled its eight-hour ozone and PM_{2.5} transport SIP obligations.

SECTION V: LEGAL AUTHORITY

A. General

The TCEQ has the legal authority to implement, maintain, and enforce the NAAQS.

The first air pollution control act, known as the Clean Air Act of Texas, was passed by the Texas Legislature in 1965. In 1967, the Clean Air Act of Texas was superseded by a more comprehensive statute, the Texas Clean Air Act (TCAA), found in Article 4477-5, Vernon's Texas Civil Statutes. The Legislature amended the TCAA in 1969, 1971, 1973, 1979, 1985, 1987, 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005 and 2007. In 1989, the TCAA was codified as Chapter 382 of the Texas Health & Safety Code.

Originally, the TCAA stated that the Texas Air Control Board (TACB) is the state air pollution control agency and is the principal authority in the state on matters relating to the quality of air resources. In 1991, the Texas Legislature abolished the TACB effective September 1, 1993, and its powers, duties, responsibilities, and functions were transferred to the Texas Natural Resource Conservation Commission (TNRCC). With the creation of the TNRCC, the authority over air quality is found in both the Texas Water Code and the TCAA. Specifically, the authority of the TNRCC is found in Chapters 5 and 7. Chapter 5, Subchapters A - F, H - J, and L, include the general provisions, organization and general powers and duties of the TNRCC, and the responsibilities and authority of the Executive Director. This Chapter also authorizes the TNRCC to implement action when emergency conditions arise and to conduct hearings. Chapter 7 gives the TNRCC enforcement authority. In 2001, the 77th Texas Legislature continued the existence of the TNRCC until September 1, 2013, and changed the name of the TNRCC to the Texas Commission on Environmental Quality (TCEQ).

The TCAA specifically authorizes the TCEQ to establish the level of quality to be maintained in the state's air and to control the quality of the state's air by preparing and developing a general, comprehensive plan. The TCAA, Subchapters A - D, also authorize the TCEQ to collect information to enable the commission to develop an inventory of emissions; conduct research and investigations; enter property and examine records; prescribe monitoring requirements; institute enforcement proceedings; enter into contracts and execute instruments; formulate rules; issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; conduct hearings; establish air quality control regions; encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the Federal Government; and establish and operate a system of permits for construction or modification of facilities.

Local government authority is found in Subchapter E of the TCAA. Local governments have the same power as the TCEQ to enter property and make inspections. They also may make recommendations to the commission concerning any action of the TCEQ that affects their territorial jurisdiction, may bring enforcement actions, and may execute cooperative agreements with the TCEQ or other local governments. In addition, a city or town may enact and enforce ordinances for the control and abatement of air pollution not inconsistent with the provisions of the TCAA or the rules or orders of the commission.

Subchapters F, G, and H of the TCAA authorize the TCEQ to establish low emission vehicle requirements for mass transit authorities, local government fleets, and private fleets; create a mobile emissions reduction credit program; establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the federal Clean Air Act; establish gasoline volatility and low emission diesel standards; and fund and authorize

participating counties to implement low-income vehicle repair assistance, retrofit and accelerated vehicle retirement programs.

B. Applicable Law

The following statutes and rules provide necessary authority to adopt and implement the SIP. The rules listed below have previously been submitted as part of the SIP.

Statutes

TEXAS HEALTH & SAFETY CODE, Chapter 382 September 1, 2007

TEXAS WATER CODE September 1, 2007

All sections of each subchapter are included, unless otherwise noted.

Chapter 5: Texas Natural Resource Conservation Commission

Subchapter A: General Provisions

Subchapter B: Organization of the Texas Natural Resource Conservation Commission

Subchapter C: Texas Natural Resource Conservation Commission

Subchapter D: General Powers and Duties of the Commission

Subchapter E: Administrative Provisions for Commission

Subchapter F: Executive Director (except §§ 5.225, 5.226, 5.227, 5.2275, 5.231, 5.232, and 5.236)

Subchapter H: Delegation of Hearings

Subchapter I: Judicial Review

Subchapter J: Consolidated Permit Processing

Subchapter L: Emergency and Temporary Orders (§§ 5.514, 5.5145 and 5.515 only)

Chapter 7: Enforcement

Subchapter A: General Provisions (§§ 7.001, 7.002, 7.00251, 7.0025, 7.004, 7.005 only)

Subchapter B: Corrective Action and Injunctive Relief (§ 7.032 only)

Subchapter C: Administrative Penalties

Subchapter D: Civil Penalties (except § 7.109)

Subchapter E: Criminal Offenses and Penalties: §§ 7.177, 7.179-7.183

Rules

All of the following rules are found in Title 30, Texas Administrative Code, as of the following effective dates:

Chapter 7, Memoranda of Understanding, §§ 7.110 and 7.119 May 2, 2002

Chapter 19, Electronic Reporting March 1, 2007

Chapter 35, Subchapters A-C, K: Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions July 20, 2006

Chapter 39, Public Notice, §§ 39.201; 39.401; 39.403(a) and (b)(8)-(10); 39.405(f)(1) and (g); 39.409; 39.411 (a), (b)(1)-(6) and (8)-(10) and (c)(1)-(6) and (d); 39.413(9), (11), (12) and (14); 39.418(a) and (b)(3) and (4); 39.419(a), (b),(d) and (e); 39.420(a), (b) and (c)(3) and (4); 39.423 (a) and (b); 39.601; March 29, 2006

39.602; 39.603; 39.604; and 39.605

Chapter 55, Request for Contested Case Hearings; Public Comment, §§ 55.1; 55.21(a) - (d), (e)(2), (3) and (12), (f) and (g); 55.101(a), (b), (c)(6) - (8); 55.103; 55.150; 55.152(a)(1), (2) and (6) and (b); 55.154; 55.156; 55.200; 55.201(a) - (h); 55.203; 55.205; 55.209 and 55.211	July 5, 2006
Chapter 101: General Air Quality Rules	August 16, 2007
Chapter 106: Permits by Rule, Subchapter A	June 30, 2004
Chapter 111: Control of Air Pollution from Visible Emissions and Particulate Matter	July 19, 2006
Chapter 112: Control of Air Pollution from Sulfur Compounds	July 16, 1997
Chapter 113: Standards of Performance for Hazardous Air Pollutants and for Designated Facilities and Pollutants	December 27, 2007
Chapter 114: Control of Air Pollution from Motor Vehicles	January 6, 2008
Chapter 115: Control of Air Pollution from Volatile Organic Compounds	July 19, 2007
Chapter 116: Permits for New Construction or Modification	January 10, 2008
Chapter 117: Control of Air Pollution from Nitrogen Compounds	June 14, 2007
Chapter 118: Control of Air Pollution Episodes	March 5, 2000
Chapter 122, § 122.122: Potential to Emit	December 11, 2002
Chapter 122, § 122.215: Minor Permit Revisions	June 3, 2001
Chapter 122, § 122.216: Applications for Minor Permit Revisions	June 3, 2001
Chapter 122, § 122.217: Procedures for Minor Permit Revisions	December 11, 2002
Chapter 122, § 122.218: Minor Permit Revision Procedures for Permit Revisions Involving the Use of Economic Incentives, Marketable Permits, and Emissions Trading	June 3, 2001

LIST OF ACRONYMS –

BPA – Beaumont-Port Arthur
CAIR – Clean Air Interstate Rule
CARE – Clean Air Responsibility Enterprise
CFR – Code of Federal Regulations
CO – Carbon Monoxide
DFW – Dallas-Fort Worth
EAC – Early Action Compact
EGF – Electric Generating Facility
EGU – Electric Generating Units
EPA – United States Environmental Protection Agency
FAR – Flexible Attainment Region
FCAA – Federal Clean Air Act
FIP – Federal Implementation Plan
FR – Federal Register
HECT – HRVOC Emission Cap and Trade
HGB – Houston-Galveston-Brazoria
HRVOC – Highly Reactive Volatile Organic Compound
IOP – Increment of Progress
Lb – Pound
LDAR – Leak Detection and Repair
MECT – Mass Emission Cap and Trade
MMBtu – Million British Thermal Unit
MVEB – Motor Vehicle Emissions Budget
MWe – Megawatt Electrical
MWh – Megawatt Hour
MOA – Memorandum of Agreement
NAAQS – National Ambient Air Quality Standards
NCTCOG – North Central Texas Council of Governments
NEGU – Non-Electric Generating Facilities
NLEV – National Low Emission Vehicle
NO_x – Nitrogen Oxides or Oxides of Nitrogen
NSR – New Source Review
O₃ – Ozone
PAL – Flexible Plant-wide Applicability Limit Permit
PM – Particulate Matter
PM₁₀ – Particulate Matter 10 microns and less
PM_{2.5} – Particulate Matter 2.5 microns and less
PSD – Prevention of Significant Deterioration
PUC – Public Utility Commission of Texas
RACM – Reasonable Available Control Measure
RACT – Reasonable Available Control Technology
ROP – Rate of Progress
SB – Senate Bill
SIP – State Implementation Plan
SO₂ – Sulfur Dioxide
TAC – Texas Administrative Code
TACB – Texas Air Control Board
TCAA – Texas Clean Air Act
TCEQ – Texas Commission on Environmental Quality (commission)

TCM – Transportation Control Measure
TPD – Tons per Day
TPOD – Tons per Ozone Day
TERM – Transportation Emission Reduction Measure
TERP – Texas Emission Reduction Plan
TexAQS – Texas Air Quality Study
TNRCC – Texas Natural Resource Conservation Commission
TPY - Tons per Year
TxLED – Texas Low Emission Diesel
VMEP – Voluntary Mobile Source Emission Reduction Program
VOC – Volatile Organic Compound
WoE – Weight of Evidence

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TRANSPORT EMISSIONS
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CHAPTER 1: GENERAL

1.1 BACKGROUND

“The History of the Texas State Implementation Plan (SIP),” a comprehensive overview of the SIP revisions submitted to the EPA by the State of Texas, is available at the following Web site: <http://www.tceq.state.tx.us/nav/eq/sip.html> .

1.2 INTRODUCTION

This revision to the SIP for the transport of ozone and fine particulate matter of 2.5 microns and less (PM_{2.5}) sets forth how the Texas Commission on Environmental Quality (TCEQ) will meet the requirements of FCAA Section 110(a)(2)(D)(i) that requires states to submit a SIP that contains adequate provisions that prohibit any source or other type of emissions activity within the state from emitting any air pollutants in amounts that will:

- contribute significantly to nonattainment of the National Ambient Air Quality Standards (NAAQS) for areas in other states;
- interfere with maintenance of the NAAQS by any other state;
- interfere with measures required to meet an implementation plan for any other state related to Prevention of Significant Deterioration (PSD); and
- interfere with measures required to meet the implementation plan for any other state related to regional haze and visibility.

On July 18, 1997, the United States Environmental Protection Agency (EPA) promulgated a revised NAAQS for ozone and a revised NAAQS for particulate matter (PM). For ozone, the EPA replaced the one-hour standard with an eight-hour standard. The EPA also added a new 24-hour standard and a new annual standard for PM_{2.5}. The FCAA, section 110(a)(1) requires states to submit SIPs within three years after the promulgation of new or revised NAAQS that meet the requirements of FCAA, §110(a)(2), including FCAA, §110(a)(2)(D)(i), relating to interstate transport of pollution.

On April 25, 2005, the EPA published a finding of failure to submit SIPs relating to interstate transport in the *Federal Register* (Volume 70, Number 78), starting a two-year clock for the promulgation of a Federal Implementation Plan (FIP). The finding of failure to submit identified Texas as a state that had not properly addressed interstate transport in its SIP.

The EPA’s “*SIP Guidance on Section 110(a)(2)(D)(i) Findings of Failure to Submit*” dated August 11, 2006, notes that states participating in the Clean Air Interstate Rule (CAIR) will satisfy the transport SIP requirements for ozone and PM_{2.5} by submitting a CAIR SIP or by relying on the CAIR Federal Implementation Plan (FIP) to demonstrate that emissions from Texas do not interfere with attainment in another state. Texas is participating in the federal CAIR program for PM_{2.5} and thus EPA’s guidance is considered as having addressed annual sulfur dioxide (SO₂) and nitrogen oxides (NO_x) transport for PM_{2.5}. Therefore, Texas’ PM_{2.5} transport SIP obligation has been partially fulfilled by the submission of the CAIR SIP to the EPA on August 3, 2006. In order to completely fulfill obligations related to interstate transport of ozone and PM_{2.5}, this SIP revision includes verification that the Prevention of Significant Deterioration

PSD) and Nonattainment New Source Review (NSR) permitting programs and the Protection of Visibility requirements are being implemented in Texas.

Texas is not covered under the CAIR program for eight-hour ozone. However, in addition to the annual NO_x reductions from the CAIR program, in 1999 the state implemented a strategy in the eastern part of Texas to reduce NO_x emissions from electric generating units (EGU). The CAIR strategy, along with other NO_x reducing programs from Texas Eight-Hour Ozone SIP revisions, Early Action Compact (EAC) SIP revisions, an Eight-Hour Ozone Flex Program, Eight-Hour Maintenance Plans, and One-Hour Ozone SIP revisions are described under Section 2.2, “*Control Strategy Overview*.” The combination of these NO_x reduction programs fulfills the state’s obligation for an ozone transport SIP. The control strategies in the SIP revisions include:

- Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations;
- Utility Electric Generation in East and Central Texas Emission Specifications;
- Texas-specific legislation from the 1999 76th session in Senate Bill 7 (SB 7) that required emissions reductions of approximately 50 percent under a regional NO_x cap and trade program;
- Houston-Galveston-Brazoria nonattainment area Mass Emissions Cap and Trade (MECT) program that required NO_x reductions of approximately 80 percent across NO_x point sources;
- Eight-Hour Ozone State Implementation Plan Revisions for the Houston-Galveston-Brazoria, Dallas-Fort Worth, and Beaumont-Port Arthur areas;
- Eight-Hour Ozone Early Action Compact State Implementation Plan Revisions for Austin-Round Rock, Northeast Texas, and the San Antonio areas;
- Eight-Hour Ozone Flex Plan in the Corpus Christi area;
- Eight-Hour Ozone Maintenance Plans for Victoria County and El Paso County;
- One-Hour Ozone State Implementation Plan Revisions for Houston-Galveston-Brazoria, Dallas-Fort Worth, Beaumont-Port Arthur, Northeast Texas and Regional;
- One-Hour Ozone Flex Plans for Austin and Corpus Christi areas;
- One-Hour Ozone Northeast Texas Flexible Attainment Region State Implementation Plan Revision; and the
- One-Hour Ozone Regional State Implementation Plan Revision.

Current Revision

This SIP revision contains several elements that provide information on how Texas is:

- not contributing significantly to nonattainment of the ozone and PM_{2.5} NAAQS for areas in other states;

- not interfering with the maintenance of the ozone and PM_{2.5} NAAQS in any other state;
- not interfering with measures required to meet an implementation plan for any other state related to PSD; and
- not interfering with measures required to meet the implementation plan for any other state related to regional haze and visibility.

1.3 HEALTH EFFECTS

In 1997, the EPA revised the NAAQS for ozone from a one-hour to an eight-hour standard based on scientific data that indicated that the eight-hour standard provides better protection of public health from longer-term exposures to moderate levels of ozone. To support the eight-hour ozone standard, the EPA provided information that indicated that even low levels of ozone can decrease lung capacity temporarily in some healthy adults and cause inflammation of lung tissue, aggravate asthma, and make people more susceptible to respiratory illnesses such as bronchitis and pneumonia.

Children are at a higher risk from exposure to ozone, since they breathe more air per pound of body weight than adults and because children’s respiratory systems are still developing. Children also spend a considerable amount of time outdoors during summer and during the start of the school year (August-October) when the highest ozone levels are recorded. Adults most at risk to ozone exposure are outdoor workers, people exercising outside, and individuals with pre-existing respiratory diseases.

Also in 1997, the EPA revised the NAAQS for particulate matter (PM). Fine particles and precursor pollutants are emitted by a wide range of sources, including power plants, cars, trucks, industrial sources, and other burning or combustion-related activities. The EPA has noted the following health effects associated with PM_{2.5} exposure: premature death, aggravation of heart and lung disease, and asthma attacks. Older adults, people with heart and lung disease, and children are particularly sensitive to PM_{2.5}.

1.4 PUBLIC HEARING AND COMMENTERS

The commission opened a public hearing at the following time and location:

CITY	DATE	TIME	LOCATION
Austin	December 11, 2007	10:00 a.m.	Texas Commission on Environmental Quality 12100 Park 35 Circle Building B, Room 201A

The public comment period was opened on November 23, 2007, and closed on January 7, 2008. The comment period was 45-days long. An opportunity to provide public comment was offered at a public hearing scheduled in Austin, Texas, on December 11, 2007; however, no oral comments were provided at the hearing. One written comment was received during the comment period from the Sierra Club – Houston Regional Group (Sierra Club). The response to the Sierra Club’s comments can be found in Appendix D.

Copies of the adopted SIP revision and its appendix can be obtained from the TCEQ's Web site at <http://www.tceq.state.tx.us/nav/eq/sip.html> or upon request to:

Texas Commission on Environmental Quality
Air Quality Division
P. O. Box 13087
Mail Code 206
Austin, Texas 78711-3087
Re: Ozone and PM_{2.5} Transport SIP Information

1.5 SOCIAL AND ECONOMIC CONSIDERATIONS

For a detailed explanation of the social and economic issues involved with any of the measures in this SIP submission, please refer to the preambles that precede each adopted rule package of the following referenced rules in previously adopted SIPs and rules for the measure specified in the SIP.

- Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations, Houston-Galveston-Brazoria, Dallas-Fort Worth, and Beaumont-Port Arthur, areas can be found in 30 Texas Administrative Code (TAC) Chapter 117, Subchapter B, Division 2;
- Utility Electric Generation in East and Central Texas can be found in 30 TAC Chapter 117, Subchapter B, Division 2;
- Senate Bill 7 Regional NO_x Cap can be found in TAC Chapter 101, Subchapter H, Division 2;
- Mass Emission Cap and Trade can be found in 30 TAC Chapter 101, Subchapter H, Division 3;
- Eight-Hour Ozone State Implementation Plan Revisions for the Houston-Galveston-Brazoria, Dallas-Fort Worth, and Beaumont-Port Arthur areas;
- Eight-Hour Ozone Early Action Compact State Implementation Plan Revisions for Austin-Round Rock, Northeast Texas, and the San Antonio areas;
- Eight-Hour Ozone Flex Program in the Corpus Christi area;
- Eight-Hour Ozone Maintenance Plan for Victoria County;
- One-Hour Ozone State Implementation Plan Revisions for Houston-Galveston-Brazoria, Dallas-Fort Worth, Beaumont-Port Arthur, and Regional;
- One-Hour Ozone Flex Programs for Austin-Round Rock area and the Corpus Christi area;
- One-Hour Ozone Northeast Texas Flexible Attainment Region; and the
- One-Hour Ozone Regional State Implementation Plan Revision.

Specific information regarding social and economic considerations for these SIP revisions, EACs, and the ozone flex programs can be found within these packages. These documents can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

1.6 FISCAL AND MANPOWER RESOURCES

The TCEQ has determined that its fiscal and manpower resources are adequate and will not be adversely affected through the implementation of this plan. Specific information regarding the TCEQ budget is available upon request.

1.7 COORDINATION WITH LOCAL AGENCIES

The TCEQ has determined that there will be no assignment to local agencies. However, pre-existing assignments to local agencies regarding various enforcement activities remain in effect and could be utilized if enforcement activities are delegated to the TCEQ from the EPA.

1.8 ORGANIZATIONS RESPONSIBLE FOR DEVELOPMENT, IMPLEMENTATION, AND ENFORCEMENT

The TCEQ is the agency delegated authority by the Texas Legislature regarding the protection of air quality in the State of Texas. Other local government entities also have limited authority regarding air quality matters in the State of Texas.

1.9 DATA AVAILABILITY

The TCEQ affirms that it will retain all data used in the preparation of this SIP revision. All supporting documentation and data are available from the TCEQ upon request or are publicly available via the TCEQ Web site at: <http://www.tceq.state.tx.us/nav/eq/sip.html> .

Additional information may be subject to confidentiality restrictions, if applicable.

CHAPTER 2: REQUIRED CONTROL STRATEGY ELEMENTS

2.1 BACKGROUND

Texas is not covered under the Clean Air Interstate Rule (CAIR) program for eight-hour ozone. However, in addition to the annual nitrogen oxides (NO_x) reductions from the CAIR program, in 1999 the state implemented a strategy in the eastern part of Texas to reduce NO_x emissions from electric generating units (EGUs). The CAIR strategy, along with other NO_x reducing programs from Texas Eight-Hour Ozone SIP revisions, Early Action Compact (EAC) SIP revisions, Eight-Hour Maintenance Plans, an Eight-Hour Ozone Flex Program, One-Hour Ozone SIP revisions, a One-Hour Ozone Flexible Attainment Region SIP revision, and One-Hour Ozone Flexible Agreements are described under Sections 2.2.1 through 2.2.3 in this chapter. The combination of these NO_x reduction programs fulfills the state's obligation for an ozone transport SIP. The control strategies specific to EGUs include:

- Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations;
- Utility Electric Generation in East and Central Texas Emission Specifications;
- Texas-specific legislation from the 1999 76th session in Senate Bill 7 (SB 7) that requires NO_x reductions through a regional cap and trade program; and
- Mass Emissions Cap and Trade (MECT) program in the Houston-Galveston-Brazoria nonattainment area.

In addition to EGU control strategies specific for NO_x controls in Eastern Texas, Texas has eight-hour ozone SIP revisions in place for the Houston-Galveston-Brazoria (HGB) area, the Dallas-Fort Worth (DFW) area, and the Beaumont-Port Arthur (BPA) area, as well as maintenance plans for Victoria and El Paso. The state also has Early Action Compact SIP revisions for Eight-Hour Ozone in place for the Austin-Round Rock area, the Northeast Texas area, and the San Antonio area. An Eight-Hour Ozone Flex Program is in place for Corpus Christi, as well as Eight-Hour Ozone Maintenance Plans for Victoria and El Paso. One-Hour Ozone SIP revisions were developed for HGB, DFW, BPA, Northeast Texas, and a Regional Strategy, as well as One-Hour Ozone Flexible Agreements for the Austin-San Marcos Metropolitan Statistical Area and Corpus Christi. For PM_{2.5}, Texas is included in the federal CAIR and has submitted a CAIR SIP to the United States Environmental Protection Agency (EPA).

2.2 CONTROL STRATEGY OVERVIEW

The EPA's guidance for interstate transport SIPs requires states to submit a SIP revision that contains adequate provisions that prohibit any source or other type of emissions activity within the state from emitting any air pollutants in amounts that will:

- (1) contribute significantly to nonattainment of the National Ambient Air Quality Standards (NAAQS) for areas in other states;
- (2) interfere with maintenance of the NAAQS in any other state;
- (3) interfere with measures required to meet an implementation plan for any other state related to Prevention of Significant Deterioration (PSD); and

(4) interfere with measures required to meet the implementation plan for any other state related to regional haze and visibility.

2.2.1 Significant Contributions and Interfere with Maintenance Elements

Texas is making a section 110(a)(2)(D)(i) SIP submission to address significant contribution to nonattainment and interference with maintenance of the eight-hour ozone standard in another state, because Texas is not covered by CAIR for eight-hour ozone. The commission concurs with the EPA’s CAIR modeling EPA document, “*Technical Support Document for the Final Clean Air Interstate Rule – Air Quality Modeling, March 2005,*” which states modeling for all four of the nearest non-Texas nonattainment cities (Denver, Memphis-West Memphis, St. Louis, and Baton Rouge) will be attaining the eight-hour ozone standard in 2010 after CAIR emissions reductions have been made. In addition to implementing CAIR for PM_{2.5}, Texas has implemented requirements for emission reductions from EGUs, which provides assurances that emissions from Texas will not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in another state. Table 2-1, *Distances from Texas Eight-Hour Ozone Nonattainment Areas to the Four Nearest-Nonattainment Areas in Adjacent States*, provides a listing of the mileage from the center of the nonattainment areas in Texas and the nearest outer boundary of the nonattainment areas in Texas to Denver, Memphis-West Memphis, St. Louis, and Baton Rouge. Appendix A provides maps of these locations.

Table 2-1 *Distances from Texas Eight-Hour Ozone Nonattainment Areas to the Four Nearest-Nonattainment Areas in Adjacent States*

City	Distance from City to City in Miles			Distance from Nonattainment Area to City in Miles		
	Dallas	Houston	Beaumont	DFW	HGB	BPA
Denver	663	878	907	605	815	862
St. Louis	550	680	630	501	617	603
West Memphis	413	478	416	371	416	392
Memphis	422	481	423	378	423	394
Baton Rouge	369	255	178	320	194	152

The following information provides additional support to the EPA’s modeling that Texas does not significantly contribute to nonattainment or interfere with maintenance of the NAAQS in another state. The additional supporting information focuses specifically on ozone specific EGU strategies that correspond with the EPA’s CAIR ozone program. Additional information is provided regarding other eight-hour ozone strategies in ozone SIP revisions, EAC SIP revisions, the ozone flex program in Corpus Christi, and ozone maintenance plans. Additional information regarding one-hour ozone strategies within one-hour ozone SIP revisions and one-hour ozone flexible agreements has also been provided.

2.2.1.1 Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations

The regulatory provisions relating to the Utility Electric Generation in Ozone Nonattainment Areas Emission Specifications for Attainment Demonstrations require different specifications for each nonattainment area in Texas. These provisions apply to each electric generating facility that generates electric energy for compensation, or are owned or operated by a municipality or Public Utility Commission of Texas (PUC) regulated utility or any of its successors, regardless of whether the successor is a municipality or is regulated by the PUC. The compliance date for these provisions was May 1, 2005.

Specific provisions in place for the specified nonattainment areas in Texas are described below:

-Houston-Galveston-Brazoria. The owner or operator of each utility boiler, auxiliary steam boiler, or stationary gas turbine located in the HGB eight-hour ozone nonattainment area must ensure that NO_x emissions do not exceed the lower of any applicable permit limit in a permit issued on or after January 2, 2001, for which the owner or operator submitted an application determined to be administratively complete by the executive director before January 2, 2001; any limit in a permit by rule under which construction commenced by January 2, 2001; or the following rates, in pounds per million British thermal units (lb/MMBtu) heat input, on the basis of daily and 30-day averaging periods specified in 30 Texas Administrative Code (TAC) 117.108 and as specified in the Mass Emissions Cap and Trade (MECT) program in 30 TAC Chapter 101. NO_x rates used to determine the daily and 30-day averaging caps for utility boilers include a range of: gas-fired 0.030 lb/MMBtu; coal-fired and oil-fired 0.050 lb/MMBtu for wall-fired and 0.045 lb/MMBtu for tangential-fired; auxiliary steam boilers 0.030 lb/MMBtu; and stationary gas turbines 0.032 lb/MMBtu (including duct burners used in turbine exhaust ducts).

-Dallas-Fort Worth. The owner or operator of each utility boiler located in the DFW eight-hour ozone nonattainment area must ensure that emissions of NO_x do not exceed 0.033 lb/MMBtu heat input from boilers that are part of a large DFW system, and 0.06 lb/MMBtu heat input from boilers that are part of a small DFW system, on a daily average or through the provisions of a limited system cap.

-Beaumont-Port Arthur. The owner or operator of each utility boiler located in the BPA eight-hour ozone nonattainment area must ensure that NO_x emissions do not exceed 0.10 lb/MMBtu heat input on a daily average except as provided by the system cap or the use of emissions credits for compliance.

The above rules affecting the HGB, DFW, and BPA areas can be found in 30 TAC Chapter 117, Subchapter B, Division 2. The rules were published in the *Texas Register* on June 21, 2002, and the public comment period ended on July 22, 2002. The adopted rule package was published in the *Texas Register* on January 3, 2003. The effective date of the rule package was January 17, 2003.

2.2.1.2 Utility Electric Generation in East and Central Texas Emission Specifications

The provisions relating to the Utility Electric Generation in East and Central Texas apply to each utility electric power boiler and stationary gas turbine, including duct burners used in turbine exhaust ducts, that: generate electric energy for compensation; are owned by an electric cooperative, independent power producer, municipality, river authority, or public utility; and are located in Atascosa, Bastrop, Bexar, Brazos, Calhoun, Cherokee, Fannin, Fayette, Freestone, Goliad, Gregg, Grimes, Harrison, Henderson, Hood, Hunt, Lamar, Limestone, Marion, McLennen, Milam, Morris, Nueces, Parker, Red River, Robertson, Rusk, Titus, Travis, Victoria, or Wharton County. Utility electric power boilers and stationary gas turbines (including duct burners used in turbine exhaust ducts) must ensure that electric power boilers' NO_x emissions do not exceed specific rates in lb/MMBtu. The rates are 0.14 lb/MMBtu for gas-fired units and 0.165 lb/MMBtu for coal-fired units based on heat input on an annual (calendar year) average. The compliance date for these requirements was May 1, 2005. This rule, 30 TAC Chapter 117, Subchapter B, Division 2, was published in the *Texas Register* on June 21, 2002, and the public comment period ended on July 22, 2002. The adopted rule package was published in the *Texas Register* on January 3, 2003. The effective date of the rule package was January 17, 2003.

2.2.1.3 Senate Bill 7 (76th Texas Legislature)

Senate Bill (SB) 7, 76th Texas Legislature session, requires a cap and trade program for previously grandfathered, or unpermitted, electric generating facilities and other electric generating facilities that choose to participate in the cap and trade program. The NO_x allowances were determined using a NO_x rate of 0.14 lb NO_x/MMBtu for grandfathered facilities in the East Texas region and a rate of 0.195 lb NO_x/MMBtu for the grandfathered facilities in the West Texas and El Paso region.

The first control period for this program began on May 1, 2003. The last revision on this rule package, 30 TAC Chapter 101, Subchapter H, Division 2, was published in the *Texas Register* on September 10, 1999, and the public comment period ended on October 11, 1999. The adopted rule package was published in the *Texas Register* on January 7, 2000. The effective date of the rule package was January 11, 2000.

2.2.1.4 Houston-Galveston-Brazoria Mass Emission Cap and Trade (MECT)

The MECT program applies to facilities that emit NO_x in the HGB ozone nonattainment area and are subject to the emission specifications under Utility Electric Generation in Ozone Nonattainment Areas mentioned previously plus industrial, commercial, and institutional combustion sources. Units covered include: industrial, commercial, or institutional boilers and process heaters; stationary gas turbines; stationary internal combustion engines; fluid catalytic cracking units (including carbon monoxide (CO) boilers, CO furnaces, and catalyst regenerator vents); boilers and industrial furnaces which were regulated as existing facilities by the EPA under 40 Code of Federal Regulations Part 266, Subpart H (as was in effect on June 9, 1993); duct burners used in turbine exhaust ducts; pulping liquor recovery furnaces; lime kilns; lightweight aggregate kilns; heat treating furnaces and reheat furnaces; magnesium chloride fluidized bed dryers; and incinerators.

The first control period for the MECT program began on January 1, 2002. The last proposal to revise this rule, 30 TAC Chapter 101, Subchapter H, Division 3, was published in the *Texas Register* on June 25, 2004, and the public comment period ended on July 26, 2004. The adopted rule package was published in the *Texas Register* on November 26, 2004. The effective date of the rule package was December 2, 2004.

2.2.1.5 Summary of Emission Reduction Strategies in Texas Related to Electric Generating Unit Strategies

The combined EGU-specific strategies listed above have reduced NO_x by an estimated 598 tons per day (218,270 tons per year) from 2000 through 2005. Control strategy modeling indicates that an additional two tons per day of NO_x will be reduced from EGUs by 2009, for a total of 600 tons per day (219,000 tons per year).

In addition, the HGB MECT program for non-electric generating units (NEGU) has reduced NO_x emissions an additional 105 tons per day (38,325 tons per year) from 2000 through 2004, with an additional 76 tons per day (27,740 tons per year) reduction expected for 2009. Similarly the NEGU NO_x reductions expected between 2000 and 2009 for the other two nonattainment areas in East Texas, DFW and BPA, total an additional 49 tons per day (17,885 tons per year). This brings the total NO_x reductions expected by the rules identified in Section 2.2.1.1 through 2.2.1.4 to 831 tons per day (303,315 tons per year) between 2000 and 2009.

The NO_x emissions from point sources inventoried and modeled for 2000 for the entire state of Texas, not just those areas addressed in Section 2.2.1.1 thru 2.2.1.4 were approximately 2,482 tons per day. By 2005, Texas had made an overall 30 percent reduction (see the 733 ton per day

total in Appendix B) since 2000 in total NO_x from the rules cited in Sections 2.2.1.1 thru 2.2.1.4. Across East Texas, including the nonattainment counties, NO_x reductions for the above source categories amount to no less than 45 percent between 2000 and 2005. These are actual emissions reductions, not projected reductions. A summary of the above strategies and the methodology used to calculate the emission reductions is provided in Appendix B.

2.2.2 Eight-Hour Ozone State Implementation Plan (SIP) Revisions

Sections 2.2.2.1 thru 2.2.2.9 provides an overview of some of the eight-hour ozone SIP revisions that Texas has submitted to the EPA.

2.2.2.1 Houston-Galveston-Brazoria Eight-Hour Ozone SIP Revision

The eight-county HGB metropolitan area was classified as a “moderate” ozone nonattainment area by the EPA under the eight-hour ozone standard on April 15, 2004. The eight counties include: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller Counties. The governor of Texas requested a reclassification to severe in June 2007. The EPA notified the TCEQ in July 2007 that they will begin the process of reclassification from moderate to severe in response to Governor Perry’s request. The challenges to attain the eight-hour ozone standard are great because the HGB area is one of the most comprehensively controlled industrial complexes in the world; the area has unique and complex ozone formation chemistry and meteorology; the magnitude of reductions needed is significant; and the TCEQ lacks regulatory authority to set emission standards for on-road and non-road mobile sources. The commission adopted the current HGB SIP revision on May 23, 2007.

The HGB SIP revision documents the substantial progress toward attainment made under the one-hour ozone NAAQS despite rapid economic and population growth in the area. This SIP revision also documents steps toward attainment of the eight-hour ozone standard. This SIP revision is the first step in addressing the eight-hour ozone standard in the HGB area. This SIP revision includes revisions to rules in 30 TAC Chapter 114, related to the Texas Low Emission Diesel Rule (TxLED) for Certain Marine Fuels; 30 TAC Chapter 115, Division I, related to the Control of Volatile Organic Compounds (VOC) Emissions from Storage and Degassing Operations in the HGB area; and 30 TAC Chapter 117, related to the Water Heater Rule. The revision also includes local Voluntary Mobile Emission Reduction (VMEP) commitments. The TCEQ is committed to continuing progress toward attaining the standard and will work with the EPA to set submission dates for new obligations and interim progress in reducing emissions. The HGB SIP revision attainment demonstration will include an expeditiously as practicable attainment date (no later than June 15, 2019). Additional information regarding the specifics of these control strategies in the HGB Eight-Hour Ozone SIP revision can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.2 Dallas-Fort Worth Eight-Hour Ozone SIP Revision

The nine-county DFW metropolitan area was designated a “moderate” ozone nonattainment area under the eight-hour ozone standard on April 15, 2004. The nine counties include: Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, and Tarrant Counties. The DFW Eight-Hour Ozone Attainment Demonstration SIP revision was adopted by the commission on May 23, 2007, and submitted to the EPA.

The DFW SIP revision demonstrates attainment of the eight-hour ozone standard using photochemical modeling, including reductions from associated 30 TAC 117 rules and voluntary mobile emission reductions, and using weight-of-evidence (WoE), including corroborative analysis and additional control measures not explicitly accounted for in the photochemical

modeling. The 30 TAC 117 rules will reduce nitrogen oxides (NO_x) emissions from the following sources:

- major industrial, commercial, and institutional sources;
- minor sources;
- electric generating facilities (EGFs);
- cement kilns; and
- East Texas combustion sources.

All of the rules apply to the nine-county DFW area except for the East Texas Combustion Rule, which applies to 33 counties located in northeast Texas. Through the Voluntary Mobile Emissions Reduction Program (VMEP) in the nine nonattainment counties, the North Central Texas Council of Governments (NCTCOG) committed to reducing NO_x emissions by March 2009. The NCTCOG also committed to implementing transportation control measures (TCMs) in the nine nonattainment counties that will further reduce NO_x emissions in 2009. Additional information regarding the specifics of these control strategies in the DFW Eight-Hour Ozone Attainment Demonstration SIP revision can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.3 Beaumont-Port Arthur Eight-Hour Ozone SIP Revisions

The BPA three-county nonattainment area was classified as a marginal eight-hour ozone nonattainment area on April 15, 2004. The three nonattainment counties include: Hardin, Jefferson, and Orange. On October 27, 2004, the commission adopted an attainment demonstration for both the one-hour and the eight-hour ozone standard for the BPA area. The attainment demonstration contained results of photochemical modeling and technical analyses in support of the demonstration of attainment of the one-hour and the eight-hour ozone standards. The submittal included the post-1996 motor vehicle emissions budget (MVEB). Additional information regarding the specifics of the 2004 BPA SIP revision can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

On September 28, 2005, the commission adopted the BPA Eight-Hour Ozone Standard Attainment Demonstration SIP revision and subsequently submitted it to the EPA. The SIP revision included the adoption of an Eight-Hour Ozone Attainment Demonstration SIP revision and revisions to Chapter 115 rules. The 2005 BPA SIP revisions addressed each of the remaining requirements needed for an EPA-approvable SIP revision. These requirements included a Reasonable Available Control Technology (RACT) demonstration with associated rulemaking. The rulemaking for major-source applicability for the purposes of RACT included rules for batch processing (30 TAC 115.167, relating to exemptions), and ship building and repair (30 TAC 115.427 (a)(3)(H), relating to exemptions). An exemption level of 100 tons per year of VOC was set based on all stationary sources included in an account. These rules were amended to lower the exemption level to 50 tons per year with the BPA SIP revision. The SIP submission also contains revision regarding the Clean Fuel Vehicle program and the three percent contingency requirement and an updated MVEB. Additional information regarding the specifics of these control strategies in the 2005 BPA SIP revision can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.4 Austin-Round Rock Eight-Hour Ozone Early Action Compact SIP Revision

The Austin-Round Rock Early Action Compact (EAC) SIP revision was adopted by the commission on November 17, 2004. This compact was part of the strategy for the area including Bastrop, Caldwell, Hays, Travis, and Williamson Counties to continue attainment with the eight-

hour ozone standard promulgated under the Federal Clean Act Amendment (FCAA) of 1990 (as codified in 42 United States Code, 7401 et seq.) This SIP revision included emission reductions needed to demonstrate attainment of the eight-hour ozone standard by 2007 and maintain it through at least 2012. The SIP revision includes five rule revisions requested by the area: Vehicle Inspection and Maintenance Program in Travis and Williamson Counties (30 TAC 114, Subchapter C); opt-in rule prohibiting heavy-duty diesel vehicle idling in jurisdictions that sign enforcement agreements with the TCEQ (30 TAC Chapter 114, Subchapter J); lowering the Stage 1 Vapor Recovery exemption to 25,000 gallons/month throughput in the five-county area (30 TAC; Chapter 115, Subchapter C, Divisions 2); degreasing requirements in the five-county area (30 TAC Chapter 115, Subchapter E, Division 1); and seasonal cutback asphalt restrictions in the five-county area (30 TAC Chapter 115, Subchapter F, Division 1).

This SIP revision also included a commitment to pursue additional NO_x reductions through two additional programs. These programs include:

- Texas Emission Reduction Plan (TERP) – The Austin EAC Region obtained sufficient grants to reduce NO_x by two tons per day by 2007 from on- and non-road heavy duty diesel equipment; and
- Power Plant Reductions – Austin Energy and the Lower Colorado River Authority (LCRA) committed to annual NO_x reductions at facilities. These power plants voluntarily committed to reduce annual NO_x emissions below current state and federal mandates at their facilities in and near the region. These agreements were detailed and formalized in air permit revisions. Austin Energy implemented an environmental dispatch program for gas-fired facilities on ozone action days that became effective on January 1, 2005. Austin Energy also implemented a voluntary NO_x cap of 1,500 tons per year encompassing the Holly, Decker, and Sand Hills facilities that was included as a special condition of the Holly Power Plant air permit as of January 11, 2004. LCRA's permit alterations were received from the TCEQ on December 21, 2005, for Sam Gideon Power Plant, and on February 24, 2006, for the Fayette Power Project. Additional enforceable annual emission reductions from the University of Texas and Fayette Power Project were implemented by December 31, 2006.

The Austin-Round Rock EAC SIP revision also committed to encouraging participation in the Clean Air Partners Program and energy efficiency program as local initiatives. In addition, the following voluntary activities were included in the EAC without quantifying the associated emission reduction: Residential Electric Lawn Mower Exchange Program; Adopt-a-School Bus Program; Tree Planting Guide; and the State Agency Voluntary Commute Reduction Projects.

Additional information regarding the specifics of these control strategies in the Austin-Round Rock Early Action Compact can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.5 Northeast Texas Eight-Hour Ozone Early Action Compact SIP Revision

The Northeast Texas Early Action Compact (EAC) SIP revision was adopted on November 17, 2004. This compact was part of the strategy for the area including Gregg, Harrison, Rusk, Smith, and Upshur Counties to continue attainment with the eight-hour ozone standard promulgated under the FCAA of 1990 (as codified in 42 United States Code, 7401 et seq.). The Northeast Texas SIP revision contains results of photochemical modeling and technical analyses in support of the demonstration of attainment of the eight-hour ozone standard in 2007 and maintenance of that standard through 2012.

As part of the Northeast Texas EAC SIP revision, the Eastman Chemical Company-Texas Operations and Huntsman Chemical implemented an enhanced Leak Detection and Repair (LDAR) program to identify and address emissions of highly reactive VOCs. These highly reactive volatile organic compound (HRVOC) reductions are in addition to previous requirements included in the model. At Eastman, the voluntary LDAR programs will be enforceable under voluntary emission reduction permits. Huntsman Chemical volunteered these emission reductions as part of a new Flexible Plant-wide Applicability Limit (PAL) Permit that makes the reductions enforceable.

The Northeast Texas EAC also committed the area to pursue action on the following voluntary measures: identify and pursue funding for compressor engines and non-road equipment that are eligible for Texas Emission Reduction Plan (TERP) funding; on-road vehicle emission reductions through the purchase of 18 lower-emitting propane light heavy-duty (Class 2b) vans; public awareness programs; and energy efficiency programs. Additional information regarding the control strategies in the Northeast Texas EAC can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.6 San Antonio Eight-Hour Ozone Early Action Compact SIP Revision

The San Antonio Early Action Compact (EAC) SIP revision was adopted on November 17, 2004. This compact was part of the strategy for the area including Bexar, Comal, Guadalupe, and Wilson Counties to continue attainment with the eight-hour ozone standard promulgated under the FCAA of 1990 (as codified in 42 United States Code, 7401 et seq.). The San Antonio SIP revision was required to implement the EAC. This SIP revision is part of that attainment demonstration and includes emission reductions needed to demonstrate attainment of the eight-hour standard by 2007 through at least 2012. On April 15, 2004, the San Antonio area received a deferral of the effective date of its designation of nonattainment for the eight-hour ozone standard for Bexar, Comal, and Guadalupe Counties. The San Antonio area includes two state rule revisions requested by the area to decrease VOC emissions: lowering the Stage 1 Vapor Recovery exemption to 25,000 gallons/month throughput in the five-county area (30 TAC; Chapter 115, Subchapter C, Divisions 2); and degreasing requirements for the four-county area (30 TAC Chapter 115, Subchapter E, Division 1). The San Antonio EAC region also obtained sufficient Texas Emission Reduction Program (TERP) grants to reduce NO_x by 2 tons per day by 2007 from on- and non-road heavy duty diesel equipment and committed to emission reductions from the following local controls: energy efficiency/renewable energy projects; transportation emission reduction measures (TERMs); and transportation demand management projects.

In addition to control strategies that were included in the future control strategy model run, the SIP revision implemented additional programs that although difficult to quantify and include in photochemical modeling, contribute to cleaner air. These programs include alternative fuel vehicle initiatives and a lawnmower recycling program. Additional information regarding these control strategies in the San Antonio Area EAC can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.7 Corpus Christi Eight-Hour Ozone Flex Plan

The Corpus Christi Eight-Hour Ozone Flex Plan Memorandum of Agreement (MOA) was developed according to EPA's guidance, "*Eight-Hour Ozone Flex Program – May 2006.*" Corpus Christi is the first area in the nation to develop and submit to the EPA an Eight-Hour Ozone Flex Plan. The MOA encourages the continuation of voluntary emission reduction measures to assist in maintaining attainment of the eight-hour ozone standard in Nueces and San Patricio Counties. Emission reduction measures included in the MOA, are the Stage I Vapor

Recovery Program, the Pollution Prevention Partnership Program, and the Ozone Action Day Program. These will be implemented through an MOA between the TCEQ, the City of Corpus Christi, Nueces County, San Patricio County, the Port of Corpus Christi Authority, the Corpus Christi Metropolitan Planning Organization, the Corpus Christi Regional Transportation Authority, and the EPA. The MOA was adopted by the commission on June 13, 2007.

Additional information regarding the plan can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.8 Victoria County Eight-Hour Ozone Maintenance Plan

On March 7, 2007, the commission adopted the Victoria County Eight-Hour Ozone Maintenance Plan. This SIP revision contained an eight-hour ozone maintenance plan that will ensure the County of Victoria remains in attainment of the eight-hour ozone NAAQS. Local governments and other interested parties in the Victoria area will continue implementing programs that have proven effective in maintaining healthy air quality to assure that the area continues to maintain its attainment status for the eight-hour ozone standard. The maintenance plan is the appropriate mechanism and allows individual communities the flexibility to pursue emission reduction strategies most appropriate for their circumstances. The plan includes the following components: attainment inventory; maintenance demonstration; ambient air quality monitoring; contingency plan; and verification of continued attainment. Additional information regarding the Victoria Eight-Hour Ozone Maintenance Plan can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.2.9 El Paso County Eight-Hour Ozone Maintenance Plan

As a result of the FCAA Amendments of 1990, El Paso County was designated as nonattainment for the one-hour ozone standard. On April 15, 2004, the EPA designated El Paso County as attainment for the eight-hour ozone standard. The EPA's Phase I Implementation Rule for the eight-hour ozone standard directed that areas designated as nonattainment for the one-hour ozone standard but designated attainment for the eight-hour ozone standard must submit a maintenance plan for the eight-hour ozone standard by June 15, 2007. On January 11, 2006, the commission adopted the Eight-Hour Ozone Maintenance Plan for El Paso. The El Paso Eight-Hour Ozone Maintenance Plan includes the following components: attainment inventory; maintenance demonstration; ambient air quality monitoring; contingency plan; and verification of continued attainment. Additional information regarding the El Paso Eight-Hour Ozone Maintenance Plan can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3 One-Hour Ozone State Implementation Plan (SIP) Revisions

Sections 2.2.3.1 thru 2.2.3.6 provide an overview of some of the one-hour ozone SIP revisions that Texas has submitted to EPA.

2.2.3.1 Houston-Galveston-Brazoria One-Hour Ozone Attainment SIP Revisions

On December 6, 2000, the TCEQ adopted revisions to 30 TAC Chapters 101, 114, 115, and 117, as well as revisions to the HGB SIP. This SIP revision served as the attainment demonstration of the one-hour ozone standard. The December 2000 submittal contained the following elements: rules and photochemical modeling analyses; post-1999 Rate of Progress (ROP) plans for the milestone years 2002 and 2005, and for the attainment year 2007; transportation conformity motor vehicle emissions budgets (MVEB) for NO_x and VOC; enforceable commitments to implement further measures if needed; and a commitment to perform and submit a mid-course review by May 2004. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On September 26, 2001, the TCEQ adopted a revision to the Texas SIP for the HGB ozone nonattainment area. The SIP revision for the HGB ozone nonattainment area included the following elements: corrections to the ROP table MVEB's budget for the years 2002, 2005, and 2007 due to a mathematical inconsistency; incorporation of a change to the idling restriction control strategy clarifying that the operator of a rented or leased vehicle is responsible for compliance with the requirements of Chapter 114 in situations where the operator of a leased or rented vehicle is not employed by the owner of the vehicle (the commission committed to making this change when the rule was originally adopted in December 2000); incorporation of revisions to the clean diesel fuel rules to provide greater flexibility in complying with the requirements of the rule while preserving the emission reductions necessary to demonstrate attainment in the HGB area; incorporation of a stationary diesel engine rule that was developed as a result of the state's analysis of EPA's reasonably available control measures; incorporation of revisions to the point source NO_x rules; incorporation of revisions to the emissions cap and trade rules; the removal of the construction equipment operating restriction and the accelerated purchase requirement for Tier 2/3 heavy duty equipment; the replacement of those rules with the TERP program; the layout of the mid-course review process which details how the state would fulfill the commitment to obtain the additional emission reductions necessary to demonstrate attainment of the one-hour ozone standard in the HGB area; and replacement of 2007 ROP MVEBs to be consistent with the attainment MVEBs. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On December 13, 2002, the TCEQ adopted revisions to the HGB One-Hour Ozone Attainment Demonstration SIP. This SIP revision contained rules to reduce emissions of HRVOC from four key industrial sources: fugitives, flares, process vents, and cooling towers. The HRVOC rules are performance-based, emphasizing monitoring, recordkeeping, reporting, and enforcement. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On December 1, 2004, the commission adopted revisions to the SIP for the HGB nonattainment area and rules found in Title 30, TAC, Chapters 101 and 115. This fulfilled the commitment from 2000 to perform a mid-course review SIP revision to ensure attainment of the one-hour ozone standard. The data gathered from the 2000 Texas Air Quality Study (TexAQS) was used to improve the photochemical modeling work for the HGB area. The collection of technical improvements gave a more comprehensive understanding of the ozone challenge in Houston for the development of a plan to reach attainment. The SIP revision commitments included:

- **HRVOC:** The revision to the SIP implemented measures to ensure compliance with the specific strategies to control HRVOC emissions.
- **HRVOC Emissions Cap and Trade (HECT) Program:** The HECT program is an annual cap and trade program to provide compliance flexibility to the Chapter 115 control requirements for process vents and cooling-tower heat exchangers. Sites subject to the program are required to possess an HRVOC allowance for each ton of HRVOC emissions. Sites also have the option of trading excess HRVOC allowances on the open market within a specific trading zone.
- **General Fugitives:** The rulemaking removed certain recordkeeping requirements from the general volatile organic fugitive emissions rules in Subchapter D, Division 3, and makes the requirements applicable only to sources of HRVOC fugitive emissions in rule amendments that were revised as part of a concurrent rulemaking in 30 TAC Chapter 115, Subchapter H. The amendments also made a variety of changes to correct

typographical errors, update cross-references, add flexibility, and achieve the intended emission reductions.

- **HGB Motor-Vehicle Idling Limitations:** The commission repealed the motor-vehicle idling limitations in the HGB area in 30 TAC Chapter 114, Subchapter J, Division 1. The commission originally adopted idling limitation rules on December 6, 2000, as a control strategy to reduce NO_x emissions in the HGB ozone nonattainment area by limiting the engine idling time of motor vehicles with a gross vehicle weight rating over 14,000 pounds to five consecutive minutes while the vehicle is operating in the affected area from April 1 to October 31 each year. With regard to the repeal of the heavy duty diesel idling rules, by the year 2007, the idling limits would have reduced NO_x emissions in the affected area by 0.48 tons per day (tpd). The repeal of the idling restriction did not significantly impact modeled ozone concentrations. Given the minimal emission reductions, difficulty of enforcement, and the development of a more robust attainment demonstration, the commission maintained that the inclusion of the motor vehicle idling restriction rules was not a reasonable measure. These factors also indicated that this measure did not advance the one-hour ozone attainment date of the HGB area and therefore was not Reasonably Available Control Measure (RACM). Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.2 Dallas-Fort Worth One-Hour Ozone Attainment SIP Revisions

On February 24, 1999, the TCEQ adopted a revision to the Texas SIP for the DFW area. The DFW area was classified as a moderate ozone nonattainment area for the one-hour standard in accordance with the FCAA Amendments of 1990. However, air quality monitoring for 1994 through 1996 show that the one-hour NAAQS for ozone has been exceeded more than one day per year over this three-year period. On February 18, 1998, the EPA issued a final notice in the *Federal Register* that the DFW area was being reclassified to “serious” for failing to attain the NAAQS for ozone. As a result of this reclassification, the EPA required that a new SIP revision demonstrating attainment of the ozone standard in DFW be submitted by March 20, 1999. The state submitted a SIP revision for DFW that included photochemical modeling showing the level of reductions needed to attain the standard by 1999, a Nine Percent ROP target calculation for the years 1997-99, VOC RACT rules in 30 TAC Chapter 115 applicable to sources meeting the 50 tons per year major source level, NO_x RACT rules in 30 TAC Chapter 117 applicable to major sources of NO_x, and amendments to 30 TAC Chapter 116 reinstating nonattainment new source review for NO_x. The governor submitted this SIP revision to the EPA on March 16, 1999. Additional information regarding the control strategies in the DFW SIP can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On October 15, 1999, the commission adopted a revision to the SIP for the DFW one-hour ozone nonattainment area. This SIP revision was developed in order to address the shortfall in needed reductions towards the Nine Percent ROP target and the lack of modeled control strategies from the February 24, 1999, SIP revision. Potential emission reduction credits were reviewed that were not claimed in the February 1999 SIP revision in order to make up the ROP shortfall. The focus was on VOC reductions because fewer VOC reductions would be needed to make up the shortfall compared to NO_x emission reductions. The ROP lacked about 20% of the VOC reductions needed, which amounted to 5.87 tpd. Elements were identified that were not previously considered that bring emission reduction credits in order to complete the Nine Percent ROP requirements for the years 1996-99. Additional information regarding the control strategies can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On April 19, 2000, the TCEQ adopted revisions to the SIP. These revisions served as the required next step in the attainment demonstration planning process for the BPA, DFW, and HGB ozone nonattainment areas. The DFW area's attainment deadline as a serious ozone nonattainment area was November 15, 1999. The April 2000 SIP revision contained a modeling demonstration that showed that the air quality in the DFW area is influenced at times from the HGB area. Additional information regarding this SIP revision can be found at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

On August 22, 2001, the TCEQ adopted a revision to the Texas SIP as the required next step in the attainment demonstration planning process for the DFW one-hour ozone nonattainment area. Key revisions included the repeal of the rules regarding fleet composition for heavy-diesel equipment and the rules regarding operating restrictions for diesel construction equipment as part of the implementation of Senate Bill (SB) 5, 77th Legislature, 2001. Signed into law in May 2001, SB 5 required the commission to submit a SIP revision to the EPA deleting the requirements of two rules, contained in 30 TAC Chapter 114 (relating to Control of Air Pollution from Motor Vehicles), from the SIP no later than October 1, 2001. The rule repeals contained in this SIP revision reflected the repeal of two rules related to construction equipment that were adopted on April 19, 2000, as part of the control strategy for the DFW one-hour ozone attainment demonstration. The TERP program contained in SB 5 replaced the rules and resulted in reductions in excess of those expected from the rules that were repealed. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On April 27, 2005, the commission adopted a Five Percent Increment of Progress (IOP) SIP revision for the DFW nonattainment area. This SIP revision contained the following control measures:

- TERP: In the DFW area, projects funded as of September 1, 2004, were projected to result in reductions in NO_x emissions of over 7.78 tpd in 2007.
- Energy Efficiency: Statewide adoption of the International Residential Code and the International Energy Conservation Code for residential, commercial, and industrial buildings was mandated by the 77th Texas Legislature under SB 5. The resulting NO_x reductions based on electricity and natural gas savings from existing projects were calculated to be 0.72 tpd.
- Alcoa, Milam County: Alcoa chose to replace its three existing boilers with two lignite-fired circulating fluidized bed boilers, as presented as an option under a federal consent decree signed on April 9, 2003. Only one of these boilers was to be replaced by June 15, 2007, resulting in a reduction of 3.9 tpd of NO_x. Therefore, only that portion of the credit implemented by June 15, 2007, was included as part of this SIP revision.
- Statewide Portable Fuel Container Rule: The Portable Fuel Container Rule established new requirements relating to the design criteria for portable fuel containers and portable fuel container spouts. The new rules established design criteria for "no-spill" portable fuel containers. Portable fuel containers manufactured under these standards release fewer amounts of fuel as the result of spillage and evaporation.
- Lean-Burn and Rich-Burn Engines: The adopted Five Percent IOP plan included the implementation of new emission specifications and other compliance demonstration requirements in 30 TAC Chapter 117, Subchapter B, Division 3 for certain industrial,

commercial, and institutional stationary reciprocating internal-combustion engines in the nine-county area. The resulting NO_x reductions were 1.87 tpd.

- Surface Coating: In rulemaking concurrent to this SIP revision, the commission adopted a rule to extend the requirements for surface coating to the five newly designated DFW nonattainment counties. The resulting VOC reductions were 0.3 tpd.
- Stage I Gasoline Unloading: In rulemaking concurrent to this SIP revision, the commission adopted a rule to extend the Stage I requirements to the five newly designated DFW nonattainment counties. The resulting VOC reductions were 1.49 tpd.

Additional information regarding this SIP revision is located at:

<http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.3 Beaumont-Port Arthur One-Hour Ozone Attainment SIP Revisions

On October 27, 1999, the TCEQ adopted a revision to the Texas SIP concerning the attainment demonstration for the Beaumont–Port Arthur (BPA) ozone nonattainment area. Because photochemical modeling showed that both VOC and NO_x reductions are effective in reducing ground-level ozone in the BPA area, this SIP revision identified, under separate rulemaking, revisions to the NO_x RACT requirements to include lean burn engines. Also, VOC RACT rules were modified for industrial wastewater and batch processes. Additional information regarding the specifics of this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

The BPA area was classified as moderate on April 2, 1996, and therefore, was required to attain the one-hour ozone standard by November 15, 1996. The BPA area did not attain the standard by that date and also did not attain the standard by November 15, 1999, the attainment date for serious areas. In determining the appropriate attainment date for an area, EPA considered the effect of transport of ozone or its precursors from an upwind area which interferes with the downwind area's ability to attain. On July 16, 1998, EPA issued a guidance memorandum titled "*Extension of Attainment Dates for Downwind Transport Areas.*" The guidance, referred to hereinafter as the "transport guidance," provided a means for the EPA to extend the attainment date for an area affected by transported air pollution, without reclassifying the area to a higher classification. The transport guidance was particularly relevant to BPA, which is downwind of the HGB area and is affected by transport from HGB. On April 16, 1999, the EPA proposed in the *Federal Register* to allow BPA to take advantage of the transport guidance if an approvable attainment demonstration was submitted by November 15, 1999.

The SIP revision contained results of photochemical modeling demonstrating transport from HGB to BPA. Following the EPA's transport guidance, it was demonstrated that BPA attained the one-hour ozone standard. In addition, the November 1999 SIP revision contained adopted rules for industrial wastewater and batch process sources to ensure that VOC emission limits for these sources meet the EPA's guidelines for RACT. Furthermore, the SIP revision included adopted rules establishing NO_x RACT emission limits for gas-fired, lean-burn stationary internal combustion engines. These NO_x rules represented "Phase I" of a two-part revision to the BPA attainment demonstration SIP revision. Additional information regarding the specifics of this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

The April 2000 SIP revision represented "Phase II" of the BPA attainment demonstration SIP revision, and contained adopted rules specifying NO_x emission limits for electric utility boilers, industrial boilers, and industrial process heaters. These strategies in combination with the rich-

burn engine rules reduced NO_x emission from 170.51 tons per ozone day (tpod) to 75.09 tpod. In accordance with EPA guidance, implementation of these NO_x emission limits represented a reasonable level of control, necessary for an approvable attainment demonstration. Modeling of these Phase II reductions showed that the BPA area attains the one-hour ozone standard, using weight of evidence analyses. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.4 Northeast Texas Flexible Attainment Region (FAR) One-Hour Ozone SIP Revision

On May 12, 1999, the commission adopted a revision to the SIP for the Northeast Texas region which made certain local ozone precursor emission reduction programs federally enforceable. This revision was submitted to EPA on June 4, 1999. Four affected companies (Norit Americas, Inc.; La Gloria Oil and Gas Company; Eastman Chemical Company, Texas Eastman Division; and ARCO Permian) in the Northeast Texas region voluntarily agreed to be subject to the implementation of enforceable emission reduction measures pursuant to Part A, Sections 2-5 of the Northeast Texas FAR Memorandum of Agreement (MOA). The MOA required the immediate implementation of control measures through the use of agreed orders, which are included in the SIP revision and are federally enforceable. Additional information regarding the specifics of these control strategies can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

On April 19, 2000, the TCEQ adopted a revision to the SIP to incorporate two agreed orders into the Northeast Texas SIP revision. This revision incorporated into the SIP an agreed order signed by the Eastman Chemical Company, Texas Operations, of Longview, Texas, in Harrison County (account number HH-0042-M). The agreed order made federally enforceable certain local ozone precursor emission reduction programs. Through the use of agreed orders these measures were adopted and included in the Northeast Texas FAR SIP revision and are federally enforceable. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.5 Regional One-Hour Ozone SIP Revision

On April 19, 2000, the TCEQ adopted a revision to the Texas SIP to serve as the required next step in the attainment demonstration planning process for the BPA, DFW, and HGB ozone nonattainment areas, and the Central and East Texas region. Due to the significant air quality concerns under the one-hour ozone NAAQS, and the anticipated challenges under the eight-hour NAAQS, Texas developed a regional strategy to reduce emissions. This strategy contained five elements: support of the National Low Emission Vehicle (NLEV) program; Stage I vapor recovery for larger gas stations; cleaner gasoline; the Clean Air Responsibility Enterprise (CARE) program; and reduction in NO_x emissions from larger point sources. Additional information regarding this SIP revision can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.6 One-Hour Ozone Flexible Agreement

The One-Hour Ozone Flexible Agreement is a voluntary local approach to encourage emission reductions that will keep an area in attainment of the one-hour ozone standard, while also working toward achieving the health benefits envisioned under the eight-hour ozone standard. The One-Hour Ozone Flexible Agreement plans were implemented through a MOA between the EPA, the TCEQ, and local governments.

2.2.3.6.1 Austin-San Marcos Metropolitan Statistical Area One-Hour Ozone Flex Plan

On March 28, 2002, local governments, community and business leaders, environmental groups, and concerned citizens in the Austin/San Marcos Metropolitan Statistical Area signed a MOA

with the TCEQ and the EPA to implement programs to improve regional air quality. Additional information regarding this plan can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.3.6.2 Corpus Christi One-Hour Ozone Flex Plan

On September 18, 2002, Nueces and San Patricio Counties, which comprise the Corpus Christi urban airshed, signed an Ozone Flex Intergovernmental Agreement with the TCEQ and the EPA. Additional information regarding this plan can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.4 General State Implementation Plan (SIP) Revision Information

Additional information regarding the numerous other SIP revisions that Texas has adopted from 1972 through 2007 can be found at: <http://www.tceq.state.tx.us/nav/eq/sip.html>

2.2.5 Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR) Element

FCAA Section 110(a)(2)(D)(i)(II) contains a requirement for states to submit SIP revisions that contain adequate provisions verifying that the Texas SIP prohibits any source or type of emissions activity within the state from emitting air pollutants in amounts that will interfere with another state's SIP measures for preventing significant deterioration of air quality.

2.2.5.1 Eight-Hour Ozone

All major sources in Texas are subject to PSD and Nonattainment NSR permitting programs, implemented in 30 TAC Chapter 116. Major sources are defined in 30 TAC § 116.12(17) in relation to the federal classification of an area for nonattainment permitting and by reference to 40 Code of Federal Regulations (CFR) § 51.166 for PSD.

2.2.5.2 Fine Particulate Matter (PM_{2.5})

All major sources in Texas are subject to PSD and Nonattainment NSR permitting programs, implemented in 30 TAC Chapter 116. Major sources are defined in 30 TAC § 116.12(17) in relation to the federal classification of an area for nonattainment permitting and by reference to 40 Code of Federal Regulations (CFR) § 51.166 for PSD. Additionally, these programs are being implemented in accordance with EPA's interim guidance regarding the use of PM₁₀ as a surrogate for PM_{2.5}.

2.2.5.3 Emission Credits

The use of emission reductions for offsets is governed by 30 TAC § 116.170, which requires that all emission reductions be certified as emission credits under 30 TAC Chapter 101 prior to use as offsets.

2.2.6 Protect Visibility Element

Section 110(a)(2)(D)(i)(II) also contains a requirement for all states to submit SIPs that contain adequate provisions prohibiting "... any source or other type of emission activity within the state from emitting any air pollutant in amounts which will - interfere with measures required to be included in the applicable implementation plan for any other state to protect visibility." The EPA has previously found that all states contain sources whose emissions are reasonably anticipated to contribute to regional haze in one or more Class I areas. Pursuant to this finding, Texas is currently under an obligation to submit a SIP revision that addresses regional haze, including a long-term strategy to address visibility impairment for each Class I area, which may

be affected by emissions from Texas. The TCEQ and other states and Regional Planning Organizations are currently engaged in the task of identifying those Class I areas impacted by each state's emissions. States are responsible for developing strategies for addressing regional haze for inclusion in their regional haze SIP. Texas is currently in the process of finalizing its Regional Haze SIP, which was proposed on December 5, 2007. The State has determined that the existing control strategies in Texas are adequate to address visibility impacts on Class I areas in other states. At this time, no other states have requested additional control strategies for Texas sources.

Texas invited over 100 federal, state, tribal, and local entities to join the July 2007 consultation calls concerning the development of Texas' Regional Haze SIP. These entities were also invited to make comments on the Regional Haze SIP proposal, and were invited to attend the public hearing on February 19, 2008. The following organizations were contacted by Texas for input on the Regional Haze SIP revision:

States

Arkansas, Colorado, Kansas, Louisiana, New Mexico, Oklahoma, and Wyoming

United States Federal Agencies

United States Forest Service Federal Land Managers; United States Fish and Wildlife Service Land Managers; National Parks Service Land Managers; and the United States Environmental Protection Agency.

Tribal Representatives

Louisiana -

Chitimacha Tribe of Louisiana; Coushatta Tribe of Louisiana; Jena Band of Choctaw Indians; and Tunica-Biloxi Indians of Louisiana

New Mexico -

Eight Northern Indian Pueblo Council; Mescalero Apache Tribe; Pueblo of Acoma; Pueblo of Cochiti; Pueblo of Isleta; Pueblo of Jemez; Jicarilla Apache Nation; Pueblo of Laguna; Pueblo of Nambe; Pueblo of Picuris; Pueblo of Pojoaque; Pueblo of Sandia; Pueblo of San Felipe; Pueblo of San Ildefonso; Ohkay Owingeh (formerly San Juan); Pueblo of Santa Ana; Pueblo of Santa Clara; Pueblo of Santo Domingo; Pueblo of Taos; Pueblo of Tesuque; and Pueblo of Zia; Zuni Tribe

Oklahoma -

Absentee-Shawnee Tribe of Indians of Oklahoma; Alabama-Quassarte Tribal Town; Apache Tribe of Oklahoma; Caddo Indian Tribe of Oklahoma; Cherokee Nation; Cheyenne-Arapaho Tribes of Oklahoma; Chickasaw Nation; Choctaw Nation of Oklahoma; Citizen Potawatomi Nation; Comanche Nation of Oklahoma; Delaware Nation (West); Eastern Shawnee Tribe of Oklahoma; Fort Sill Apache Tribe of Oklahoma; Inter Tribal Environmental Council of Oklahoma; Iowa Tribe of Oklahoma; Kaw Nation; Kialegee Tribal Town; Kickapoo Tribe of Oklahoma; Kiowa Indian Tribe of Oklahoma; Miami Tribe of Oklahoma; Modoc Tribe of Oklahoma; Muscogee (Creek) Nation; Osage Nation; Otoe-Missouri Tribe of Oklahoma; Ottawa Tribe of Oklahoma; Pawnee Nation of Oklahoma; Peoria Tribe of Indians of Oklahoma; Ponca Tribe of Indians of Oklahoma; Quapaw Tribe of Oklahoma; Sac and Fox Nation; Seneca-Cayuga Tribe of Oklahoma; Seminole Nation of Oklahoma; Shawnee Tribe; Thlopthlocco Tribal Town; Tonkawa Tribe of Indians of Oklahoma; United Keetoowah Band of Cherokee Indians of Oklahoma; Wichita and Affiliated Tribes; and Wyandotte Nation

Texas –

Alabama-Coushatta Tribe of Texas; Kickapoo Traditional Tribe of Texas; and Ysleta del Sur Pueblo of Texas

Regional Planning Organization

CENRAP – Central Regional Planning Organization – Arkansas, Iowa, Louisiana, Kansas, Minnesota, Missouri, Nebraska, Oklahoma, and Texas

The Regional Haze SIP consultation process with the federal land managers and adjacent states is ongoing.

CHAPTER 3: FUTURE ATTAINMENT PLANS

The Federal Clean Air Act (FCAA), section 110(a)(1) requires states to submit SIPs within three years after the promulgation of new or revised NAAQS that meet the requirements of FCAA, § 110(a)(2), including FCAA, § 110(a)(2)(D)(i), relating to interstate transport of pollution. Therefore, if the NAAQS is revised in the future, the TCEQ will need to take the adequate steps relating to the interstate transport of air pollution.