

REVISIONS TO THE STATE OF TEXAS AIR QUALITY
IMPLEMENTATION PLAN FOR THE CONTROL OF PARTICULATE
MATTER AIR POLLUTION

EL PASO PARTICLES WITH AN AERODYNAMIC DIAMETER LESS
THAN OR EQUAL TO A NOMINAL TEN MICROMETERS (PM₁₀)
MODERATE NONATTAINMENT AREA



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

**REVISED MEMORANDUM OF AGREEMENT WITH THE
CITY OF EL PASO**

PROJECT NUMBER 2011-010-SIP-NR

Adoption
January 25, 2012

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EXECUTIVE SUMMARY

The City of El Paso was designated nonattainment for the National Ambient Air Quality Standard (NAAQS) for particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀) and classified as a moderate nonattainment area upon enactment of the Federal Clean Air Act Amendments (FCAA) of 1990. On November 15, 1991, Texas submitted to the United States Environmental Protection Agency (EPA) a state implementation plan (SIP) revision for the El Paso moderate nonattainment area to demonstrate that the area would attain the PM₁₀ NAAQS no later than December 31, 1994. The international impacts provision in FCAA, §179B, provides that an area does not have to meet the moderate nonattainment deadline if the state demonstrates attainment but for emissions emanating from outside the United States. Air dispersion modeling of United States emissions included in the SIP revision indicated that the El Paso nonattainment area would have been in attainment in 1991, and at the 1994 deadline, but for emissions transported from Mexico.

Although the area modeled attainment with United States emissions only, fugitive dust control measures were adopted to minimize impacts from United States sources. The 1991 SIP revision included control measures in 30 Texas Administrative Code (TAC) Chapter 111, Control of Air Pollution from Visible Emissions and Particulate Matter, Subchapter A, Division 4, Materials Handling, Construction, Roads, Streets, Alleys, and Parking Lots. The control measures adopted in 30 TAC §111.147 required paving as a method of dust control in the City of El Paso for specified roads and added a requirement that alleys be paved at the rate of 15 miles per year. Section 111.147 also set frequencies for street sweeping in designated sections of the El Paso area. On November 5, 1991, a Memorandum of Understanding (MOU) between the City of El Paso local government (the City) and the Texas Air Control Board, a predecessor agency of the Texas Commission on Environmental Quality (TCEQ), was signed to outline the responsibilities and regulatory requirements for both parties. This MOU was submitted to the EPA as Appendix Q: *Memorandum of Understanding with the City of El Paso* of the 1991 El Paso PM₁₀ attainment demonstration SIP revision. On January 18, 1994, the EPA published in the *Federal Register* (FR) approval of the El Paso PM₁₀ SIP revision, including the MOU, effective February 17, 1994 (59 FR 02532).

On October 9, 2001, the 1991 MOU was replaced with a Memorandum of Agreement (MOA) because MOUs are typically used only for agreements between two state agencies and this agreement was between an agency and a city, so an MOA was considered more appropriate. Although the MOA was submitted to the EPA in a letter dated February 19, 2002, it is unclear whether the EPA accepted it as a SIP revision.

For the site reporting Federal Reference Method (FRM) PM₁₀ data for all three years from 2007 through 2009 (Socorro AQS ID 481410057), there were no exceedances of the PM₁₀ 24-hour NAAQS. The inventory of unpaved alleys has decreased from 66% in 1991 to 16% in 2010, with approximately 23 miles of unpaved alleys remaining. Additional city action to reduce airborne PM₁₀ has also reduced the need to sweep streets at the frequencies specified under the current 30 TAC §111.147 rule.

The TCEQ has a concurrent rulemaking to amend 30 TAC §111.147(1)(E) to remove the requirement for alleys in the City of El Paso to be paved at the specified rate of 15 miles per year and replace it with the following requirements: 1) all new alleys shall be paved; 2) unpaved alleys may not be used for residential garbage and recycling collection; and 3) reclaimed asphalt pavement may be used as an alternate means of particulate matter control for alleys. The rulemaking also amends 30 TAC §111.147(2) to change the sweeping frequency requirement

from four times per year to three times per year in the city limits and from six times per week to four times per week in the central business district.

The 2001 MOA with the City has also been revised to reflect these changes to 30 TAC §111.147. The current SIP revision incorporates the revised 30 TAC §111.147 and MOA into the El Paso PM₁₀ SIP.

SECTION V: LEGAL AUTHORITY

General

The Texas Commission on Environmental Quality (TCEQ) has the legal authority to implement, maintain, and enforce the National Ambient Air Quality Standards (NAAQS) and to control the quality of the state's air, including maintaining adequate visibility.

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, 2007, 2009, and 2011. In 1989, the TCAA was codified as Chapter 382 of the Texas Health and 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 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 (TWC) and the TCAA. Specifically, the authority of the TNRCC is found in TWC, 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. Chapter 5 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). In 2009, the 81st Texas Legislature, during a special session, amended section 5.014 of the Texas Water Code, changing the expiration date of the TCEQ to September 1, 2011, unless continued in existence by the Texas Sunset Act. In 2011, the 82nd Texas Legislature continued the existence of the TCEQ until 2023.

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; to conduct research and investigations; to enter property and examine records; to prescribe monitoring requirements; to institute enforcement proceedings; to enter into contracts and execute instruments; to formulate rules; to issue orders taking into consideration factors bearing upon health, welfare, social and economic factors, and practicability and reasonableness; to conduct hearings; to establish air quality control regions; to encourage cooperation with citizens' groups and other agencies and political subdivisions of the state as well as with industries and the federal government; and to 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 and the rules or orders of the commission.

Subchapters G and H of the TCAA authorize the TCEQ to establish vehicle inspection and maintenance programs in certain areas of the state, consistent with the requirements of the Federal Clean Air Act; coordinate with federal, state, and local transportation planning agencies to develop and implement transportation programs and measures necessary to attain and maintain the NAAQS; establish gasoline volatility and low emission diesel standards; and fund and authorize participating counties to implement vehicle repair assistance, retrofit, and accelerated vehicle retirement programs.

Applicable Law

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

Statutes

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

TEXAS HEALTH & SAFETY CODE, Chapter 382

September 1, 2009

TEXAS WATER CODE

September 1, 2009

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)

Subchapter M: Environmental Permitting Procedures (§5.558 only)

Chapter 7: Enforcement

Subchapter A: General Provisions (§§7.001, 7.002, 7.0025, 7.004, and 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 30 Texas Administrative Code, as of the following latest effective dates:

Chapter 7: Memoranda of Understanding, §§7.110 and 7.119

December 13, 1996 and May 2, 2002

Chapter 19: Electronic Reporting

March 15, 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); 39.601-39.605	June 24, 2010
Chapter 55: Requests for Reconsideration and Contested Case Hearings; Public Comment, §§55.1; 55.21(a) - (d), (e)(2), (3), and (12), (f) and (g); 55.101(a), (b), and (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	June 24, 2010
Chapter 101: General Air Quality Rules	October 27, 2011
Chapter 106: Permits by Rule, Subchapter A	May 15, 2011
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	May 14, 2009
Chapter 114: Control of Air Pollution from Motor Vehicles	August 11, 2011
Chapter 115: Control of Air Pollution from Volatile Organic Compounds	December 29, 2011
Chapter 116: Permits for New Construction or Modification	March 17, 2011
Chapter 117: Control of Air Pollution from Nitrogen Compounds	May 15, 2011
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

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 - 3. PM₁₀ Group I Area (No change)
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LIST OF ACRONYMS

AQS	Air Quality System
CFR	Code of Federal Regulations
EPA	United States Environmental Protection Agency
FCAA	Federal Clean Air Act
FRM	Federal Reference Method
FR	<i>Federal Register</i>
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NAAQS	National Ambient Air Quality Standards
NEAP	Natural Events Action Plan
PM	Particulate matter
PM _{2.5}	Particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers; or particulate matter of 2.5 microns or less; or fine particulate matter
PM ₁₀	Particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers; or particulate matter of 10 microns or less; or coarse particulate matter
RACM	Reasonably Available Control Measures
RAP	Reclaimed asphalt pavement
RWCD	Residential wood combustion device
SIP	State Implementation Plan
TAC	Texas Administrative Code
TACB	Texas Air Control Board
TCAA	Texas Clean Air Act
TCEQ	Texas Commission on Environmental Quality (commission)
TNRCC	Texas Natural Resource Conservation Commission
TSP	Total suspended particles
TWC	Texas Water Code
µg/m ³	Micrograms per cubic meter

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CHAPTER 1: INTRODUCTION (REVISED)

1.1 BACKGROUND (NEW)

The History of the Texas State Implementation Plan, a comprehensive overview of the state implementation plan (SIP) revisions submitted to the United States Environmental Protection Agency (EPA) by the State of Texas, is available on the [Introduction to the SIP Web page](http://www.tceq.texas.gov/airquality/sipintro.html#History) (<http://www.tceq.texas.gov/airquality/sipintro.html#History>) on the [Texas Commission on Environmental Quality \(TCEQ\) Web site](http://www.tceq.texas.gov/) (<http://www.tceq.texas.gov/>).

1.2 TEXAS PARTICULATE MATTER HISTORY, 1970 THROUGH 1990 (REVISED)

In 1970, the Federal Clean Air Act (FCAA) required the EPA to establish and periodically revise National Ambient Air Quality Standards (NAAQS). The NAAQS for particulate matter (PM), measured as total suspended particles (TSP), was promulgated in 1971.

In 1987, the EPA promulgated a new particulate NAAQS. The new standard replaced TSP with particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀). The 24-hour PM₁₀ NAAQS was 150 micrograms per cubic meter (µg/m³), not to be exceeded more than once per year averaged over a three-year period. The annual PM₁₀ NAAQS was 50 µg/m³ calculated as the arithmetic mean of 24-hour concentrations.

Also in 1987, the EPA published a *Federal Register* notice categorizing areas in the country into three groups based on the probability that an area would violate the PM₁₀ NAAQS. Areas with 95% or greater probability of violating the NAAQS were classified as Group I. Areas where the probability of nonattainment was estimated at greater than 20%, but less than 95%, were classified as Group II. Areas with a low probability of nonattainment (less than 20%) were classified as Group III. Based on these classifications, the EPA identified El Paso as a Group I area and Harris, Dallas, Nueces, and Lubbock Counties as Group II areas. All other Texas counties were designated as Group III areas. In response to these designations, the Texas Air Control Board (TACB), a predecessor agency of the TCEQ, submitted Group II and III SIP revisions to the EPA in July 1988. Because of the unique issues arising from the international nature of the PM₁₀ problem in El Paso, the EPA allowed the TACB to submit an "Interim SIP" for that area in August 1989. In accordance with the EPA's guidelines, the SIP contained information on several issues, including a commitment to work with the EPA to continue studies to characterize the nature of the PM₁₀ being transported into El Paso from the Ciudad Juarez (Juarez), Mexico area.

On November 15, 1990, new FCAA amendments were enacted. The 1990 FCAA amendments specified that all former Group I areas and any areas violating the PM₁₀ NAAQS prior to January 1, 1989, were to be designated as nonattainment. The 1990 FCAA amendments defined two nonattainment categories: moderate and serious. All PM₁₀ nonattainment areas were initially classified as moderate at the time of enactment of the 1990 FCAA amendments, and for these areas, an attainment date of December 31, 1994, was established. The 1990 FCAA amendments further required that all areas which had attained the PM₁₀ NAAQS by the time of enactment be designated by the EPA as unclassifiable.

According to the EPA, El Paso and Lubbock were the only areas in Texas that had not attained the PM₁₀ NAAQS by the time of enactment of the 1990 FCAA amendments and, thus, were designated as moderate nonattainment areas. On August 8, 1991, the EPA published a *Federal Register* notice reclassifying Lubbock as unclassifiable for PM₁₀.

1.3 EL PASO MODERATE NONATTAINMENT AREA, 1991 THROUGH 2001 (NEW)

The City of El Paso was designated nonattainment for the PM₁₀ NAAQS and classified as a moderate nonattainment area upon enactment of the 1990 FCAA Amendments. On November 15, 1991, Texas submitted to the EPA a SIP revision for the El Paso moderate nonattainment area to demonstrate that the area would attain the PM₁₀ NAAQS no later than December 31, 1994. This revision included air quality and meteorological analyses, including data from a special December 1990 study that demonstrated the international scope of the PM₁₀ air quality problem in El Paso. Air dispersion modeling of United States emissions indicated that the nonattainment area would have been in attainment in 1991, and at the 1994 deadline, if not for emissions transported from outside the United States.

Although the area modeled attainment with United States emissions only, the TACB adopted fugitive dust control measures to minimize impacts from United States sources. The international impacts provision in FCAA, §179B, provides that an area does not have to meet the moderate nonattainment deadline if the state demonstrates attainment but for emissions emanating from outside the United States. Based on this provision, the TACB determined that there should be no requirement for a reasonable further progress demonstration for the El Paso SIP revision. Also, due to lack of adequate information regarding the relative contribution of El Paso and Juarez to the problem in the shared air basin, no contingency plan was required to be included in the SIP revision.

The 1991 SIP revision included PM control measures in 30 Texas Administrative Code (TAC) Chapter 111, Control of Air Pollution from Visible Emissions and Particulate Matter, Subchapter A, Division 4, Materials Handling, Construction, Roads, Streets, Alleys, and Parking Lots. The control measures adopted in 30 TAC §111.147 required paving as a method of dust control in the El Paso area for specified roads and added a requirement that alleys be paved at the rate of 15 miles per year. Section 111.147 also set frequencies for street sweeping in designated sections of the El Paso area. On November 5, 1991, a Memorandum of Understanding (MOU) between the City of El Paso local government (the City) and the TACB was signed to outline the responsibilities and regulatory requirements for both parties. This MOU was submitted to the EPA as Appendix Q: *Memorandum of Understanding with the City of El Paso* of the 1991 El Paso PM₁₀ attainment demonstration SIP revision. On January 18, 1994, the EPA published in the *Federal Register* (FR) approval of the El Paso PM₁₀ SIP revision, including the MOU, effective February 17, 1994 (59 FR 02532).

On October 9, 2001, the 1991 MOU was replaced with a Memorandum of Agreement (MOA). Because MOUs are typically used only for agreements between two state agencies, and this agreement was between an agency and a city, an MOA was considered more appropriate. Although the MOA was submitted to the EPA in a letter dated February 19, 2002, it is unclear whether the EPA accepted it as a SIP revision.

1.4 EL PASO NATURAL EVENTS ACTION PLAN (NEW)

On February 21, 2007, in response to uncontrollable exceedances of the PM₁₀ NAAQS caused by natural events, the TCEQ, in conjunction with the City of El Paso, the *Joint Advisory Committee for the Improvement of Air Quality in the Ciudad Juárez, Chihuahua, El Paso, Texas, and Doña Ana County, New Mexico Air Basin*, and community stakeholders, adopted a Natural Events Action Plan (NEAP) for El Paso County. The El Paso NEAP is a plan for managing the exceedances of the PM standards that can be attributed to uncontrollable natural events such as unusually high winds. The NEAP includes documentation and analysis of the PM monitoring data, descriptions of local public outreach programs, and steps to limit public exposure to PM emissions during natural events episodes. The NEAP describes the requirements for flagging of

high PM days due to natural events, to allow for removal of those days when calculating the area's design value.

1.5 CURRENT SIP REVISION (NEW)

The purpose of this SIP revision is to incorporate changes to 30 TAC §111.147 as adopted in a separate rulemaking (Rule Project No. 2010-046-111-EN) and incorporate a revised MOA between the City of El Paso and the TCEQ (Project No. 2011-026-MIS-NR) into the El Paso PM₁₀ SIP. The 2001 MOA with the City has been revised to reflect the alternative control measures in the revisions to §111.147 and the respective responsibilities of the City and TCEQ under the SIP.

For the site reporting Federal Reference Method (FRM) PM₁₀ data for all three years from 2007 through 2009 (Socorro AQS ID 481410057), there were no exceedances of the PM₁₀ 24-hour NAAQS. The inventory of unpaved alleys has decreased from 66% in 1991 to 16% in 2010, with approximately 23 miles of unpaved alleys remaining. City action to reduce airborne PM₁₀ has also reduced the need to sweep streets at the frequencies specified under the current 30 TAC §111.147 rule. Details regarding the City of El Paso paved alley inventory can be found in Appendix R: *City of El Paso Alley Information*.

The TCEQ has a separate rulemaking to amend 30 TAC §111.147(1)(E) to remove the requirement for alleys in the City of El Paso to be paved at the specified rate of 15 miles per year and replace it with the following requirements:

- all new alleys must be paved;
- unpaved alleys may not be used for residential garbage and recycling collection; and
- the use of reclaimed asphalt pavement (RAP) may be used as an alternate means of PM control for alleys.

The rulemaking also amends 30 TAC §111.147(2) to change the sweeping frequency requirement from four times per year to three times per year in the city limits and from six times per week to four times per week in the central business district.

The City has demonstrated that the unpaved alley inventory will not increase due to a city ordinance that requires developers to pave any new alleys. Furthermore, alleys have not been used for residential garbage collection since 1997, so the traffic in alleys has been dramatically reduced. Finally, RAP has been used to cover some unpaved alleys, which has proven to be as effective as paving to control PM emissions. In addition, the City continues to include paving and sweeping in its annual budget. Additional information regarding the FCAA, §110(l) demonstration for these rule amendments can be found in the preamble to the 30 TAC §111.147 rulemaking accompanying this SIP revision.

The 2001 MOA with the City has been revised to reflect these changes to 30 TAC §111.147. The current SIP revision incorporates the revised MOA into the El Paso PM₁₀ SIP. The revised MOA can be found in Appendix S: *Revised Memorandum of Agreement with the City of El Paso (Project No. 2011-026-MIS-NR)*.

1.6 PUBLIC HEARING INFORMATION (NEW)

The commission offered a public hearing for the proposed SIP revision in El Paso on September 27, 2011. A question and answer session was held 30 minutes prior to the meeting. The hearing was not officially opened, because no party indicated a desire to give comment.

The public comment period opened on September 2, 2011, and closed on October 3, 2011. Written comments were accepted via mail, fax, and through the [eComments](http://www5.tceq.texas.gov/rules/ecomments) (<http://www5.tceq.texas.gov/rules/ecomments>) system. Two comments were received, both from the City of El Paso. A summary of the comments and the TCEQ response is provided as part of this SIP revision in the *Response to Comments*.

An electronic version of this SIP revision and appendices can be found at the TCEQ's [State Implementation Plan](http://www.tceq.texas.gov/airquality/sip/) (<http://www.tceq.texas.gov/airquality/sip/>) Web page.

1.7 SOCIAL AND ECONOMIC CONSIDERATIONS (NEW)

For a detailed explanation of the social and economic issues involved with the revised 30 TAC §111.147, please refer to the preamble that precedes the rule package accompanying this SIP revision.

1.8 FISCAL AND MANPOWER RESOURCES (NEW)

The state has determined that its fiscal and manpower resources are adequate and will not be adversely affected through implementation of this plan.

CHAPTER 2: PM₁₀ GROUP II AND GROUP III AREAS (NO CHANGE)

CHAPTER 3: PM₁₀ GROUP I AREA (NO CHANGE)

CHAPTER 4: 1991 PM₁₀ SIP FOR MODERATE AREA – EL PASO (REVISED)

4.1 MODERATE AREA PM₁₀ SIP REQUIREMENTS (NO CHANGE)

4.2 DEFINITION OF MODERATE AREA BOUNDARY AND AIR QUALITY STATUS (NO CHANGE)

4.3 SPECIAL RECEPTOR MODELING STUDIES (NO CHANGE)

4.4 PM₁₀ EMISSIONS INVENTORY (NO CHANGE)

4.5 DISPERSION MODELING (NO CHANGE)

4.6 CONTROL PLANS (REVISED)

This State Implementation Plan (SIP) revision updates the control plan for particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀) in the El Paso nonattainment PM₁₀ area. The dispersion modeling performed with the El Paso County PM₁₀ emissions inventory for the 1991 El Paso PM₁₀ SIP revision indicated that the designated El Paso PM₁₀ nonattainment area would be in attainment of the NAAQS by the 1994 attainment deadline based on United States emissions alone. Analyses of the spatial trends in PM₁₀ concentrations, along with trajectory analyses, provided strong evidence that PM₁₀ concentrations measured in El Paso are influenced by emissions from Ciudad Juarez, Mexico.

However, the Texas Air Control Board (TACB) adopted several new or enhanced control measures to help minimize PM₁₀ impacts from El Paso sources. Those control measures reflected the requirements for Reasonably Available Control Measures (RACM) and Reasonably Available Control Technology specified in the United States Environmental Protection Agency (EPA) April 2, 1991, *PM₁₀ Moderate Area SIP Guidance: Final Staff Work Product*.¹

4.6.1 Area Source Control (Revised)

The 1990 emissions inventory established that area sources are clearly El Paso's most significant source of PM₁₀. In accordance with the United States Environmental Protection Agency (EPA) guidance on RACM, fugitive dust control measures, residential wood combustion control measures, and prescribed burning control measure were reviewed for the 1991 El Paso PM₁₀ SIP revision. Many of the prescribed control measures were previously adopted in TACB Regulation I and were required to be effective as soon as possible, but no later than December 31, 1991. All control measures were evaluated for their appropriateness in El Paso, and where control or additional control was deemed reasonable, revisions to the TACB regulations were made. Control requirements were extended to include Fort Bliss Military Reservation, except for tactical training areas, by modification of 30 Texas Administrative Code (TAC) §111.141, concerning Geographic Areas of Application and Date of Compliance, effective February 12, 1992.

4.6.1.1 Fugitive Dust Control Measures (Revised)

All reasonable fugitive dust control measures for the City of El Paso, including items on the EPA's List of Available Control Measures, were reviewed as part of the 1991 El Paso PM₁₀ SIP revision. Control of fugitive dust in the City of El Paso is clearly linked to the control of reentrained dust from vehicle traffic. Regulations requiring reasonable controls were adopted effective July 18, 1989. For the 1991 El Paso PM₁₀ SIP revision, some of the rules were amended to be effective February 12, 1992, to expand applicability and to enhance effectiveness, as follows:

¹ EPA, PM-10 Moderate Area SIP Guidance: Final Staff Work Product, memorandum from John Calcagni, 2 April 1991.

- 30 TAC §111.145, concerning Construction and Demolition, was expanded to add a requirement for the City of El Paso for paving or otherwise stabilizing construction and/or demolition access roads and eliminated the existing exemption for small construction and demolition sites.
- 30 TAC §111.147, concerning Roads, Streets, and Alleys was modified to require paving as the only acceptable method of dust control in El Paso for specified roads and added a requirement that alleys be paved at the rate of 15 miles per year. Section 111.147 was also expanded to require that all levee roads and access to such roads be paved or chemically stabilized, and to require removal of soil by mechanical sweepers or their equivalent from all paved public streets at least four times per year within the El Paso city limits and up to six times per week in the central business district. The rule requires spot cleaning of visibly dirty road areas and removal of sand used for snow and ice control in the City of El Paso. Records must be maintained to document the sweeping activities. These requirements were needed to enhance the feasible dust control measures for paved roads in El Paso. The executive director and the EPA were also given the option of granting a waiver from paving requirements for industrial roadways, provided the roadway owner can demonstrate that the cost of paving is economically unreasonable compared to other forms of dust control specified in 30 TAC §111.147(l).

All other fugitive dust control measures were determined to be sufficiently addressed by the existing regulations or were considered inappropriate for the El Paso area because of *de minimis* emissions or technological or economic infeasibility. Specific details of this analysis were included in Appendix N: *Evaluation of Available Fugitive Dust Control Measures* of the 1991 El Paso PM₁₀ attainment demonstration SIP revision.

On November 5, 1991, a Memorandum of Understanding (MOU) between the City of El Paso local government (the City) and the TACB was signed to outline the responsibilities and regulatory requirements for both parties. This MOU was submitted to the EPA as Appendix Q: *Memorandum of Understanding with the City of El Paso* of the 1991 El Paso PM₁₀ attainment demonstration SIP revision. On October 9, 2001, the 1991 MOU was replaced with a Memorandum of Agreement (MOA). Because MOUs are typically used only for agreements between two state agencies, and this agreement was between an agency and a city, an MOA was considered more appropriate. Although the MOA was submitted to the EPA in a letter dated February 19, 2002, it is unclear whether it was formally adopted as a SIP revision.

For the site reporting Federal Reference Method (FRM) PM₁₀ data for all three years from 2007 through 2009 (Socorro AQS ID 481410057), there were no exceedances of the PM₁₀ 24-hour NAAQS. The inventory of unpaved alleys has decreased from 66% in 1991 to 16% in 2010, with approximately 23 miles of unpaved alleys remaining. Additional city action to reduce airborne PM₁₀ has also reduced the need to sweep streets at the frequencies specified under the current 30 TAC §111.147 rule. Details regarding the City of El Paso paved alley inventory can be found in Appendix R: *City of El Paso Alley Information*.

The TCEQ has a concurrent rulemaking to amend 30 TAC §111.147(1)(E) to remove the requirement for the City of El Paso to pave alleys at the specified rate of 15 miles per year and replace it with the following requirements:

- all new alleys must be paved;
- unpaved alleys may not be used for residential garbage and recycling collection; and

- the use of reclaimed asphalt pavement (RAP) may be used as an alternate means of PM control for alleys.

The rulemaking also amends 30 TAC §111.147(2) to change the sweeping frequency requirement from four times per year to three times per year in the city limits and from six times per week to four times per week in the central business district.

The City has demonstrated that the unpaved alley inventory will not increase due to a city ordinance that requires developers to pave any new alleys. Furthermore, alleys have not been used for residential garbage collection since 1997, so the traffic in alleys has been dramatically reduced. Finally, RAP has been used to cover some unpaved alleys, which has proven to be as effective as paving to control PM emissions. In addition, the City continues to include paving and sweeping in its annual budget. Additional information regarding the FCAA, §110(l) demonstration for these rule amendments can be found in the preamble to the 30 TAC §111.147 proposed rulemaking accompanying this SIP revision.

The 2001 MOA with the City has been revised to reflect these changes to 30 TAC §111.147. The current SIP revision incorporates the revised MOA into the El Paso PM₁₀ SIP. The revised MOA can be found in Appendix S: *Revised Memorandum of Agreement with the City of El Paso (Project No. 2011-026-MIS-NR)*.

4.6.1.2 Control Measures for Residential Wood Combustion Devices (Revised)

All reasonable control measures for residential wood combustion devices (RWCD) in the City of El Paso, including items on the EPA's List of Available Control Measures, were reviewed as part of the 1991 El Paso PM₁₀ SIP. The evaluation of these control measures considered the fact that emissions from RWCDs in El Paso are *de minimis*.

As discussed in the evaluation of the EPA's List of Available Control Measures, many of these control measures could not be promulgated because the legislative authority to impose taxes or to require local agencies to impose taxes is lacking. Rules for an episodic curtailment program were added to 30 TAC §111.111(c), concerning Solid Fuel Heating Devices. These rules apply in the El Paso and Fort Bliss Military Reservation. The TACB rules are similar to an El Paso ordinance in that applicability extends to all residential solid fuel heating devices, rather than RWCDs only. These rules exceeded the EPA requirements for such a program. The TACB worked with the City of El Paso to establish an effective public information program to facilitate compliance with the rules. All other evaluated control measures were considered inappropriate for the El Paso area because of *de minimis* emissions from these sources.

As in the case of fugitive dust control measures, the November 5, 1991, MOU between the City and the TACB served as the basis for defining the division of responsibility and commitments to carry out the provisions of 30 TAC §111.111, concerning Solid Fuel Heating Devices. The revised MOA with the City to reflect the changes to 30 TAC §111.147 also includes the 30 TAC §111.111 provisions. The revised MOA can be found in Appendix S: *Revised Memorandum of Agreement with the City of El Paso (Project No. 2011-026-MIS-NR)*.

4.6.2 Prescribed Burning Control Measures (No change)

4.6.3 Point Source Control (No change)

4.6.4 Reasonable Further Progress (No change)

4.6.5 Contingency Measures (No change)

4.6.6 Test Methods (No change)

4.6.7 Revisions of TCEQ Rules and Regulations (Revised)

4.6.7.1 Revisions Effective February 12, 1992 (Revised)

In accordance with 40 Code of Federal Regulations (CFR) Part 51, Requirements for Preparation, Adoption, and Submittal of Implementation Plans, the TACB revised Regulation I, Control of Air Pollution from Visible Emissions and Particulate Matter, to incorporate rules to support the provisions of the 1991 El Paso PM₁₀ SIP revision. Specifically, the TACB adopted the following rule revisions:

- 30 TAC §111.111, concerning Visible Emissions, added a subsection that prohibits the use of solid fuel heating devices during periods of stagnation within the City of El Paso, including the Fort Bliss Military Reservation. The revision also contained exemptions for burn down periods, that is, periods of time not to exceed three hours for the cessation of combustion within the device, for buildings where the solid fuel heating device is the sole source of heat, and for periods of temporary power loss within the building.
- 30 TAC §111.141, concerning Geographic Areas of Application and Date of Compliance, added the Fort Bliss Military Reservation, except for tactical training areas, to the El Paso geographic area being addressed in the rules and added a separate compliance date of December 10, 1993, for the new controls being proposed in accordance with the EPA's *PM₁₀ Moderate Area SIP Guidance: Final Staff Work Product*, April 2, 1991.
- 30 TAC §111.145, concerning Construction and Demolition, added a requirement for El Paso for paving or otherwise stabilizing construction and/or demolition access roads and eliminated the exemption for small construction and demolition sites.
- 30 TAC §111.147, concerning Roads, Streets, and Alleys added a notation that, within the City of El Paso, paving is the only acceptable method of dust control for specified roads; added a requirement that city alleys be paved at the rate of 15 miles per year; added a requirement that all levee roads and access to such roads be paved or chemically stabilized; gave the executive director and the EPA the option of granting a waiver from paving requirements for industrial roadways, provided the roadway owner can demonstrate that the cost of paving is economically unreasonable compared to other forms of dust control specified in 30 TAC §111.147(l); deleted the exemption for removal of sand applied on public thoroughfares for snow or ice controls; and added specific street sweeping and recordkeeping requirements.

4.6.7.2 Current Revisions (New)

The TCEQ has a concurrent rulemaking to amend 30 TAC §111.147(1)(E) to remove the requirement for the City of El Paso to pave alleys at the specified rate of 15 miles per year and replace it with the following requirements:

- all new alleys must be paved;
- unpaved alleys may not be used for residential garbage and recycling collection; and

- the use of RAP may be used as an alternate means of PM control for alleys.

The rulemaking also amends 30 TAC §111.147(2) to change the sweeping frequency requirement from four times per year to three times per year in the city limits and from six times per week to four times per week in the central business district.

The City has demonstrated that the unpaved alley inventory will not increase due to a city ordinance that requires developers to pave any new alleys. Furthermore, alleys have not been used for residential garbage collection since 1997, so the traffic in alleys has been dramatically reduced. Finally, RAP has been used to cover some unpaved alleys, which has proven to be as effective as paving to control PM emissions. In addition, the City continues to include paving and sweeping in its annual budget. Additional information regarding the FCAA, §110(l) demonstration for these rule amendments can be found in the preamble to the 30 TAC §111.147 rulemaking accompanying this SIP revision.