

REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP)
FOR THE CONTROL OF OZONE AIR POLLUTION

EL PASO COUNTY 8-HOUR OZONE MAINTENANCE PLAN

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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I. Site Specific (No change.)

J. Mobile Sources Strategies (No change.)

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LIST OF ACRONYMS**

CAMS - Continuous Air Monitoring System
CHIEF - Clearinghouse for Inventories and Emissions Factors
CO - carbon monoxide
CO₂ - carbon dioxide
DLC - Diagnostic Link Connector
DPS - Texas Department of Public Safety
EDMS - Emissions and Dispersion Modeling System
EGAS - Economic Growth Analysis System
EI - emissions inventory
EIQ - emissions inventory questionnaires
EPA - Environmental Protection Agency
ETI - Emissions Trend Inventory
FCAA - Federal Clean Air Act
FR - Federal Register
FMVECP - Federal Motor Vehicle Emission Control Program
HAP - hazardous air pollutant
I/M - inspection/maintenance
LIRAP - Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program
MPO - Metropolitan Planning Organization
MSA - Metropolitan Statistical Area
NAAQS - National Ambient Air Quality Standard
NEI - National Emissions Inventory
NO_x - nitrogen oxides
OBD - On-Board Diagnostic
PCBEIS-2 - Personal Computer Biogenic Emissions Inventory System
ppm - parts per million
ppb - parts per billion
REMI - Regional Economic Models, Incorporated
RVP - Reid Vapor Pressure
SIP - State Implementation Plan
SO₂ - sulfur dioxide
SO_x - sulfur oxides
STARS - State of Texas Air Reporting System
TCEQ - Texas Commission on Environmental Quality (formerly the TNRCC)
TIPI - Texas Industrial Production Index
TNRCC - Texas Natural Resource Conservation Commission (renamed the TCEQ)
tpd - tons per day
tpy - tons per year
TSI - Two-Speed Idle
TTI - Texas Transportation Institute
UAM - Urban Airshed Model
VMT - vehicle miles traveled
VOC - volatile organic compounds

EXECUTIVE SUMMARY

As a result of the Federal Clean Air Act (FCAA) Amendments of 1990, El Paso County was designated as nonattainment for the 1-hour ozone National Ambient Air Quality Standard (NAAQS). That standard is 0.12 ppm. El Paso County was classified as a serious nonattainment area with a FCAA mandated schedule for attainment of the ozone NAAQS by November 15, 1999. On April 15, 2004, the Environmental Protection Agency (EPA) designated El Paso County as attainment (effective date June 15, 2004) for the newer 8-hour ozone NAAQS of 0.08 ppm. Monitors in El Paso County currently reflect attainment of both the 1-hour and 8-hour ozone NAAQSs.

The EPA's Phase I Implementation Rule for the 8-hour ozone standard directs that areas designated as nonattainment for the 1-hour ozone standard but designated attainment for the 8-hour ozone standard must submit a maintenance plan for the 8-hour ozone standard by June 15, 2007. This maintenance plan must be consistent with §110(a)(1) of the FCAA. Guidance issued by the EPA on May 20, 2005, further specifies that states include the following components in the maintenance plan:

- attainment inventory;
- maintenance demonstration;
- ambient air quality monitoring;
- contingency plan; and
- verification of continued attainment.

With this State Implementation Plan (SIP) revision, the Texas Commission on Environmental Quality is submitting an 8-hour ozone maintenance plan that will ensure the County of El Paso remains in attainment of the 8-hour ozone NAAQS.

CHAPTER 1: GENERAL INFORMATION

1.1 PURPOSE OF PLAN

The purpose of this SIP revision is to submit an 8-hour ozone maintenance plan to ensure the County of El Paso continues to attain of the 8-hour ozone standard. In addition, the Texas Commission on Environmental Quality (TCEQ) is submitting evidence that El Paso County is in compliance with the 1-hour ozone standard.

1.2 BACKGROUND

1.2.1 1-hour Ozone in El Paso

The 1-hour ozone standard is 0.12 parts per million (ppm). A violation of the 1-hour ozone standard occurs when the annual average number of exceedances, over a three year period, recorded at a single monitoring site is greater than one. Four exceedances measured during a three-year period at a single air monitoring station equals one violation of the ozone standard. An exceedance is considered to be a monitored value of 125 ppb or greater due to rounding.

EPA designated the County of El Paso nonattainment for ozone for failing to meet the National Ambient Air Quality Standard (NAAQS) for ozone. An area is classified as moderate, serious, severe, or extreme depending on the percentage by which the area's design value exceeds the 1-hour NAAQS of 0.12 ppm. El Paso County was classified as a serious nonattainment area with a FCAA mandated schedule for attainment of the ozone NAAQS by November 15, 1999.

The FCAA requires states having ozone nonattainment areas with a classification of moderate or greater to reduce volatile organic compound (VOC) emissions in nonattainment areas by 15 percent from the 1990 level. The TCEQ submitted the SIP revision for the 15 percent reduction for El Paso County in two parts, with the first in November 1993 and the second part in May 1994. A demonstration that El Paso County can achieve the ozone NAAQS as a result of the 15 percent emissions reduction plan was submitted in July 1996. This demonstration was accomplished using the Urban Airshed Model (UAM).

El Paso County's adjacent proximity to Ciudad Juarez, Mexico, uniquely affects planning for ozone attainment. Section 818 of the 1990 FCAA Amendments incorporated a new §179B into the FCAA which contains special provisions for nonattainment areas that are affected by emissions emanating from outside the United States. This section is pertinent to El Paso County since the airshed encompasses Ciudad Juarez.

Under §179B, the EPA shall approve a SIP for El Paso County if the Texas Natural Resource Conservation Commission (renamed the TCEQ) establishes to the EPA's satisfaction that implementation of the plan would achieve timely attainment of the NAAQS but for emissions emanating from Ciudad Juarez. This provision prevents El Paso County from being reclassified to a higher level of nonattainment should monitors continue to record ozone concentrations in excess of the NAAQS.

1.2.2 8-hour Ozone in El Paso County

In a Federal Register (FR) notice published April 30, 2004, (69 FR 23858), the EPA designated and classified areas for the 8-hour ground-level ozone NAAQS. El Paso County was designated attainment with an effective date of June 15, 2004.

1.3 PUBLIC HEARING INFORMATION

The commission held public hearings to consider this revision of the Texas State Implementation Plan and to solicit public comment. The hearings were held at the following times and locations:

City	Date	Time	Location
El Paso	September 1, 2005	2 p.m. 6 p.m.	Texas Commission on Environmental Quality Region 6 401 E. Franklin Ave., Ste. 560 El Paso, Texas

A question and answer session was held 30 minutes prior to each hearing. Written comments were accepted via mail, fax, or e-mail. The public comment period closed at 5:00 p.m. on September 6, 2005.

1.4 SOCIAL AND ECONOMIC CONSIDERATIONS

Because rulemaking was not a part of this SIP revision, there are no changes that would require an analysis of social and economic considerations.

1.5 FISCAL AND MANPOWER RESOURCES

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

CHAPTER 2: EMISSIONS INVENTORY

2.1 OVERVIEW

The Consolidated Emissions Reporting Rule (67 FR 39602, June 10, 2002) requires that emissions inventories (EIs) be prepared for ozone nonattainment areas. Because ozone is produced by photochemical reactions in the atmosphere when VOCs are mixed with nitrogen oxides (NO_x) in the presence of sunlight, the planning agency must compile information on the important sources of these precursor pollutants. The EI is comprised of the source types present in an area, the amount of each pollutant emitted, and the types of processes and control devices employed at each plant or source category. The EI provides data for a variety of air quality planning tasks, including establishing baseline emission levels, calculating reduction targets, control strategy development for achieving the required emission reductions, emission inputs into air quality simulation models, and tracking actual emission reductions against the established emissions growth and control budgets. The total inventory of emissions of VOC and NO_x for an area is summarized from the estimates developed for five general categories of emissions sources, which are each explained below.

For purposes of an attainment emissions inventory, the TCEQ selected 2002 as the baseline attainment year since it is one of the three years on which the 8-hour ozone designation was based. The final year, 2014, was selected based on the statutory requirement for a maintenance plan to demonstrate maintenance of the 8-hour ozone NAAQS for ten years beyond the effective date of the attainment designation. The intermediate EI year, 2008, was chosen because it is half way between 2002 and 2014.

2.2 POINT SOURCES

The commission requires emissions inventories from accounts that meet any one of the several reporting requirements outlined in 30 Texas Administrative Code (TAC) §101.10, Emissions Inventory Requirements. This section discusses the different reporting thresholds potentially applicable to sources in the El Paso County serious 1-hour ozone nonattainment area.

Per 30 TAC §101.10, any account (site) located in an ozone nonattainment area that emits a minimum of 10 tons per year (tpy) of VOC or 25 tpy of NO_x (both are ozone precursors) must submit an EI to the commission. Furthermore, 30 TAC §101.10 also mandates that any account meeting the definition of a major facility/stationary source as outlined in 30 TAC §116.12, Nonattainment Review Definitions, must submit an EI. Under §116.12, in El Paso County, accounts that have the potential to emit at least 50 tpy of VOC must submit an EI. (Generally, in serious ozone nonattainment areas, this 50 tpy threshold would also apply to NO_x emissions, because NO_x is also an ozone precursor. However, for El Paso County, under 30 TAC §116.150, New Major Source or Major Modification in Ozone Nonattainment Areas, the Nonattainment New Source Review (NNSR) rules apply to sources of VOC, but not to sources of NO_x because of a 182(f) waiver in place for El Paso County). Therefore, because the ozone precursor emissions thresholds for accounts located in ozone nonattainment areas are more stringent in §101.10 (10 tpy of VOC or 25 tpy of NO_x) than in Rule 116.12 (50 tpy of VOC), the actual emissions thresholds outlined in Rule 101.10 take precedence for EI reporting purposes.

Under 30 TAC §101.10, any stationary source that emits or has the potential to emit a minimum of 100 tpy of any criteria pollutant likewise must submit an EI, regardless of the attainment status of the area where the account is located. Additionally, any account in the state that generates or has the potential to generate at least 10 tpy of any single hazardous air pollutant (HAP) or 25 tpy of aggregate HAPs is also required to submit an EI to the commission.

To collect emissions and industrial process operating data, EI questionnaires (EIQs) are mailed to all accounts in the state identified as having met any one of the reporting requirements of 30 TAC §101.10. Accounts are required to report not only emissions data for all emissions-generating units and emission points, but also the amount of materials used in emissions-generating processes for a representative sample of sources. The EIQ also collects information on process equipment descriptions, operation schedules, emissions control devices currently in use, abatement device control efficiency, and stack parameters such as location, height, and exhaust gas flow rate. All data submitted via the EIQ are then subjected to quality assurance procedures and entered into the State of Texas Air Reporting System (STARS).

The 2002 ozone season EI data obtained from STARS comprised the base year used for growing point source emissions to the appropriate years. Point source NO_x and VOC projections for the years 2008 and 2014 were developed using the August 2005 Texas Industrial Production Index (TIPI)-derived factors where available and supplemented with Economic Growth Analysis System (EGAS) 4.0 factors where necessary. According to the Federal Reserve Bank of Dallas, the TIPI is a value-added index (based on a weighted average of employment, worked hours, and some production data). The underlying process to derive the TIPI data is the same as the Bureau of Economic Analysis gross-state product. A better surrogate would have been local survey data based on production. However, no such data currently exist for the state of Texas, and resources are not available to conduct such a survey. For further information on the TIPI see <http://www.dallasfed.org/data/data/mi5000.tab.htm>.

The TIPI was used, where possible, because its data are more recent than those in the EGAS 4.0 model. For those categories in the Texas EI not covered by the TIPI, EGAS 4.0 factors were used. The EGAS model was last updated on January 26, 2001, and uses data and data models that date from the early 1980s to 1999. The Regional Economic Models, Incorporated (REMI) model, which is the economic basis of EGAS 4.0, uses economic data dating from 1969 to 1996. Also, EGAS uses historical emissions data from the National Emissions Inventory (NEI) ranging from 1972 to 1992. (See the EGAS 4.0 Reference Manual, available on EPA's Clearinghouse for Inventories and Emissions Factors (CHIEF) website).

The data from point sources (Table 2-1: *El Paso County NO_x and VOC Emission Inventory Baseline (2002) and Projection 2008, 2014*) predict increases in NO_x and VOC emissions, resulting from increased levels of population and economic activity. Details of the El Paso County point source EI for VOC and NO_x may be found in Appendix B: *El Paso County Area, Nonroad Mobile, and Point Source Emissions Inventory Detail*.

2.3 AREA SOURCES

To capture information about emissions sources that fall below the point source reporting levels and are too numerous or too small to identify individually, emissions from these "area" sources are estimated on a source category or group basis. Area sources include commercial, small-scale industrial, and residential categories of sources that use materials or operate processes that can generate emissions. Area sources can be divided into two groups characterized by the emission mechanism: hydrocarbon evaporative emissions or fuel combustion emissions. Examples of sources of evaporative losses include printing, industrial coatings, degreasing solvents, house paints, leaking underground storage tanks, gasoline service station underground tank filling, and vehicle refueling operations. Fuel combustion sources include stationary source fossil fuel combustion at residences and businesses, as well as outdoor burning, structural fires, and wildfires. These emissions, with some exceptions, may be calculated by

multiplication of an EPA established emission factor (emissions per unit of activity) times the appropriate activity or activity surrogate responsible for generating emissions. Population is the most commonly used activity surrogate for many area source categories while other activity data include amount of gasoline sold in an area, employment by industry type, and acres of cropland.

The 2002 ozone season EI data obtained from Texas Air Emissions Repository comprised the base year used for growing area source emissions to the appropriate years. After reviewing EGAS 4.0, REMI EGAS (an older version of EGAS but updated with local economic factors), and the Emission Trends Inventory (ETI), the TCEQ determined that the variations between the three were minimal. Because the EGAS 4.0 factors are considered the most accurate, these factors were used for the bulk of the forecasting. The projected EIs were compiled by using EGAS growth factors for each area source category, as the standard and accepted method for developing future year EIs. The EGAS contains individual growth factors for each category for each forecasting year. There were exceptions to the use of EGAS 4.0 for growing emissions. For some fireplace categories, ETI data were used to project growth for 2008. However, for 2014 EGAS 4.0 applied growth factors were used for the same categories.

Review of the projected emissions data in Table 2-1 indicate a gradual rise in NO_x and VOC emissions. This rise is to be expected because area source emissions grow as the population increases in the majority of instances. Details of the El Paso County area source EI for VOC and NO_x may be found in Appendix B: *El Paso County Area, Nonroad Mobile, and Point Source Emissions Inventory Detail*.

2.4 NONROAD MOBILE SOURCES

This category includes aircraft operations, railroad locomotives, and a very broad range of nonroad equipment that includes 600-horsepower engines mounted on construction equipment to 1-horsepower string trimmers. Calculation methods for emissions from nonroad engine sources are based on information about equipment population, engine horsepower, load factor, emission factor, and annual usage. EPA's NONROAD model is used to calculate emissions from all nonroad mobile categories except aircraft, airport ground support equipment, and locomotives. The Emissions and Dispersion Modeling System (EDMS) model is used to calculate aircraft emissions. Emissions data from airport ground support equipment and locomotives were developed by consultants conducting surveys of equipment populations and usage as well as collecting other relevant activity data associated with these categories.

For the categories not included in the NONROAD model (Aircraft, Airport Ground Support Equipment, and Locomotives) the 2002 Periodic Emissions Inventory was grown to 2008 and 2014 using EGAS 4.0 growth factors. For all the categories that have emissions data developed by the NONROAD model, the model was run for the selected future years to generate those emissions projections. The data for nonroad mobile categories (Table 2-1) reflect decreases in NO_x and VOC emissions, resulting from federal rules that are expected to reduce emissions. Details of the El Paso County nonroad mobile source EI for VOC and NO_x may be found in Appendix B: *El Paso County Area, Nonroad Mobile, and Point Source Emissions Inventory Detail*.

2.5 ONROAD MOBILE SOURCES

Onroad mobile sources consist of automobiles, trucks, motorcycles, and other motor vehicles traveling on public roadways. Combustion-related emissions are estimated for vehicle engine exhaust, and evaporative hydrocarbon emissions are estimated for the fuel tank and other evaporative leak sources on the vehicle. Emission factors have been developed using the newest version of EPA's mobile emissions

factor model, MOBILE6.2. Various inputs are provided to the model to simulate the vehicle fleet driving in each particular nonattainment area. Inputs include such parameters as vehicle speeds by roadway type, vehicle registration by vehicle type and age, percentage of vehicles in cold start mode, percentage of miles traveled by vehicle type, type of inspection and maintenance (I/M) program in place, and gasoline vapor pressure. All of these inputs have an impact on the emission factor calculated by the MOBILE6.2 model, and every effort is made to input parameters reflecting local conditions. To complete the emissions estimate, the emission factors calculated by the MOBILE6.2 model must then be multiplied by the vehicle miles traveled (VMT). The level of vehicle travel activity is developed from travel demand models run by the Texas Transportation Institute (TTI). The travel demand models have been validated against a large number of ground counts of traffic passing over counters placed in various locations throughout each nonattainment county. Estimates of VMT are often calibrated to outputs from the federal Highway Performance Monitor System, which is a model built from a smaller number of traffic counters. Finally, roadway speeds, which are required for the MOBILE6.2 model's input, are calculated by a post-processor to the travel demand model.

The El Paso County onroad mobile source EI was developed under contract by TTI. Appendix A: *El Paso County Maintenance Mobile Source Emissions Inventory Documentation* provides detailed information on how the inventories for VOC and NO_x were developed. NO_x and VOC information are in Task 1 and Task 3 of the report. Input and summary output files for the link-based mobile source emissions inventory work are also found in Appendix A.

2.6 BIOGENIC SOURCES

Biogenic sources are another subset of area sources that includes hydrocarbon emissions from crops, lawn grass, and forests, as well as a small amount of NO_x emissions from soils. Plants are sources of VOCs such as isoprene, monoterpene, and alpha-pinene. Tools such as satellite imaging for mapping of vegetative types, field biomass surveys, and computer modeling of emissions estimates based on emission factors by plant species (PCBEIS-2) are used to provide the best estimates possible. Because emissions from biogenic sources are not considered to be controllable, they are, using the latest information, subtracted from the inventory prior to determining any required reductions for a rate of progress plan. However, the biogenic emissions are important in determining the overall emissions profile of an area and therefore are required for regional air quality dispersion modeling. El Paso County attains the 8-hour ozone NAAQS even when biogenic sources are taken into consideration.

2.7 EMISSIONS INVENTORY SUMMARY

Table 2-1: *El Paso County NO_x and VOC Emission Inventory Baseline (2002) and Projection 2008, 2014* summarizes the attainment year and projected ozone season emissions inventories for El Paso County. Biogenic emissions are not included in this summary since they are not anthropogenic in origin. The initial year, 2002, had total VOC emissions of approximately 52 tpd and NO_x emissions of 61 tpd. Future years all demonstrate a steadily decreasing inventory for the county.

Table 2-1: El Paso County NO_x and VOC Emission Inventory Baseline (2002) and Projection 2008, 2014

SOURCES/YEAR	NO _x (tpd)			VOC (tpd)		
	2002	2008	2014	2002	2008	2014
Nonroad Mobile	12.68	10.47	7.94	5.94	4.75	3.94
Area	2.39	2.55	2.71	22.85	25.15	27.77
Point	11.57	12.44	12.44	2.36	2.51	2.51
Onroad Mobile	34.23	23.55	13.80	21.29	15.12	10.39
Total	60.87	49.01	36.89	52.44	47.53	44.61

CHAPTER 3: ATTAINMENT OF THE OZONE STANDARD

3.1. ATTAINMENT OF THE 1-HOUR OZONE STANDARD

The NAAQS for 1-hour ground-level ozone is 0.12 ppm based on a 1-hour average sample. Because of rounding, a 1-hour monitor reading of 125 parts per billion (ppb) is considered an exceedance of the 1-hour ozone standard, whereas a reading of 124 ppb is not. A violation of the standard occurs when three exceedances occur at the same monitor.

The most recent three years of ozone monitoring data (2002-2004) for El Paso County demonstrate compliance with the 1-hour NAAQS for ground-level ozone. Figure 3-1: *Ozone 1-hour Design Values for El Paso County (1990-2004)* depicts the county's 2002 design value as 122 ppb, the 2003 design value as 117 ppb, and the 2004 design value as 111 ppb.

Table 3-1: *El Paso County 1-Hour Ozone Exceedances 1999-2004* shows the number of exceedances of the 1-hour ozone standard from 1999-2004 at monitors in El Paso County. There were three exceedances of the 1-hour standard in 2002 but this did not constitute a violation since the exceedances were at two separate monitors. There were no exceedances of the 1-hour standard in 2003 or 2004. El Paso County monitors compliance for the 1-hour ozone NAAQS.

Table 3-1: El Paso County 1-Hour Ozone Exceedances 1999-2004

1-Hour Ozone Standard	1999	2000	2001	2002	2003	2004
CAMS # & Monitor Location	Number of readings > NAAQS					
UTEP C12	None	1	1	1	None	None
Ascarate Park C37	None	None	None	None	None	None
Chamizal C41	1	None	1	2	None	None
Socorro C49	None	None	None	None	None	None
Skyline Park C72	None	None	None	None	None	None
Ivanhoe C414	None	None	None	None	None	None

3.2 ATTAINMENT OF THE 8-HOUR OZONE STANDARD

The NAAQS for 8-hour ground-level ozone is 0.08 ppm based on the three-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area.

Because of rounding, an 8-hour monitor reading of 85 ppb is considered an exceedance of the 8-hour ozone standard and a reading of 84 ppb is not.

In a Federal Register (FR) notice published April 30, 2004, (69 FR 23858), El Paso County was designated attainment for the 8-hour ozone NAAQS.

Current El Paso County ozone monitor locations are shown in Figure 3-2: *Location of El Paso County Ozone Monitors*. As shown in Table 3-2: *El Paso County Ozone Monitoring Values - 8-Hour Compliance*, the most recent three years of ozone monitoring data (2002-2004) for the El Paso County area demonstrate compliance with the 8-hour NAAQS for ground-level ozone. Figure 3-3: *Ozone 8-hour Design Values for El Paso County (1990-2004)* depicts the county's 2002 design value as 81 ppb, the 2003 design value as 79 ppb, and the 2004 design value as 78 ppb. Indeed, Figure 3-2 shows that El Paso County has monitored attainment of the 8-hour ozone NAAQS since 1997.

Table 3-2 shows the annual fourth highest daily maximum 8-hour average ozone concentrations for 2002, 2003, and 2004 at monitors in the El Paso County area. The last column is the three-year average for each ozone monitor demonstrating that all El Paso County ozone monitors met the 8-hour ozone standard in 2004.

Table 3-2: El Paso County Ozone Monitoring Values - 8-Hour Compliance

8 Hour Ozone Standard (85 ppb)	2002	2003	2004	Three year Average as of 12/31/04
Monitor	4 th Highest	4 th Highest	4 th Highest	
UTEP C12	77	79	70	78
Ascarate Park C37	88	71	76	78
Chamizal C41	89	74	73	78
Socorro C49	75	65	74	71
Skyline Park C72	70	76	82	76
Ivanhoe C414	83	66	74	74

Figure 3-1: Ozone 1-hour Design Values for El Paso County (1990-2004)

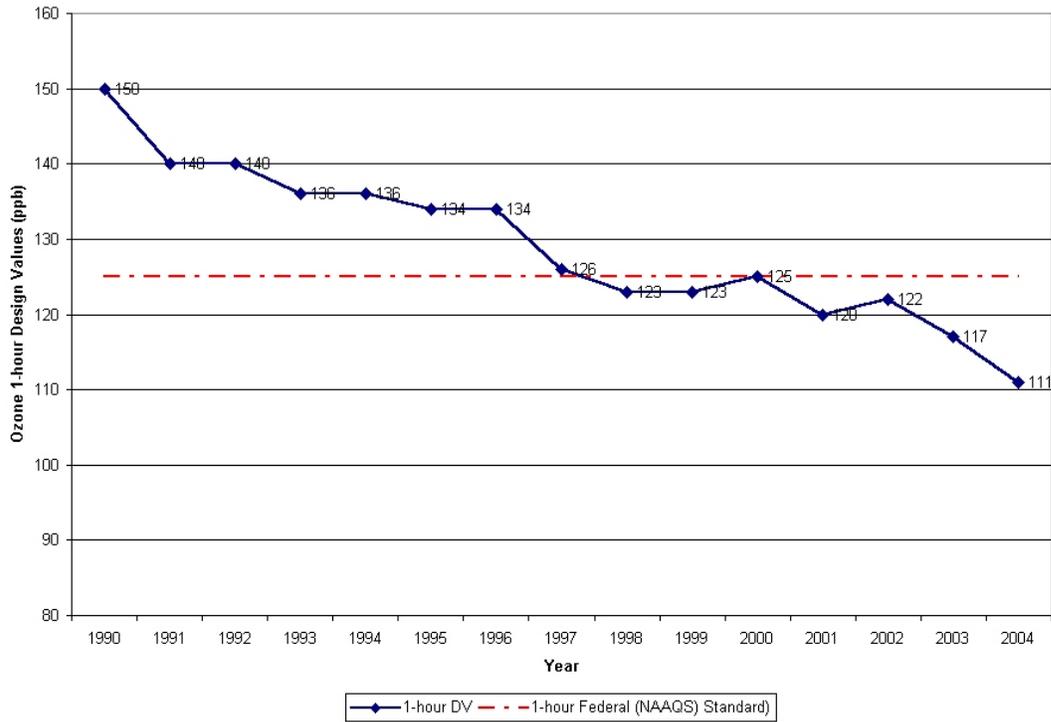
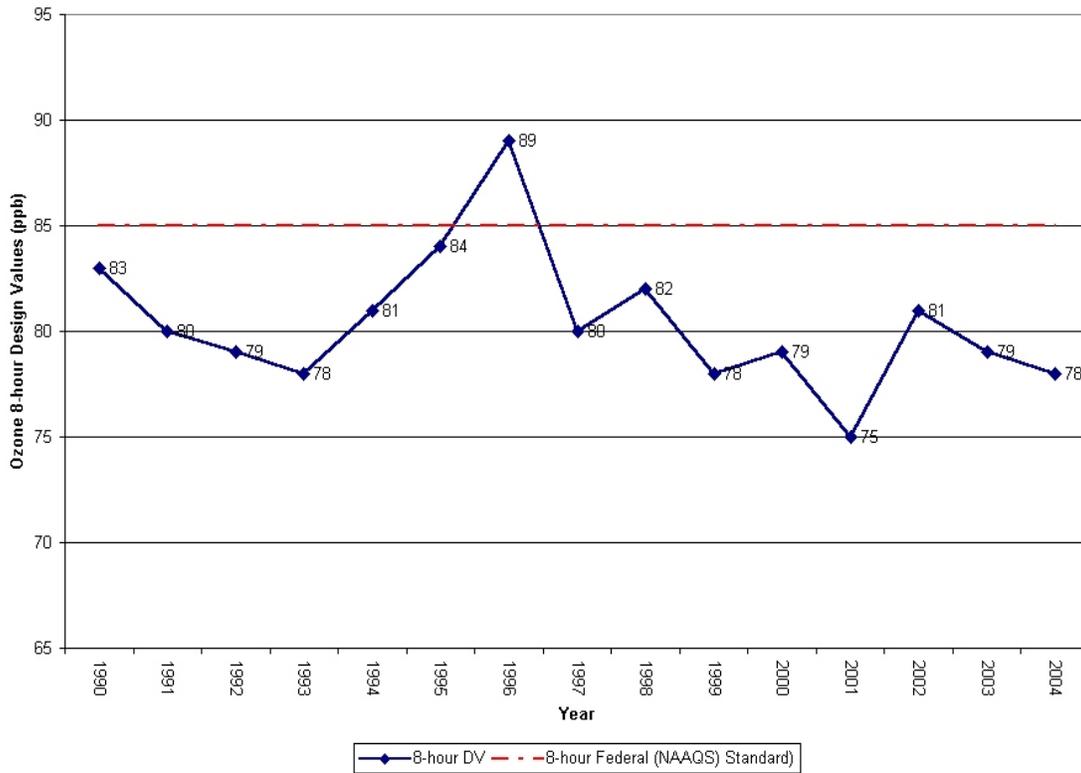


Figure 3-2: Location of El Paso County Ozone Monitors



Figure 3-3: Ozone 8-hour Design Values for El Paso County (1990-2004)



CHAPTER 4: 8-HOUR OZONE MAINTENANCE PLAN

4.1 MAINTENANCE PLAN GENERAL

The EPA's Phase I Implementation Rule for the 8-hour ozone standard directs that areas designated as nonattainment for the 1-hour ozone standard but designated attainment for the 8-hour ozone standard must submit a maintenance plan for the 8-hour ozone standard by June 15, 2007. This maintenance plan must be consistent with §110(a)(1) of the FCAA.

Guidance¹ issued by the EPA on May 20, 2005, further specifies that states must include the following components in the maintenance plan:

- attainment inventory;
- maintenance demonstration;
- ambient air quality monitoring;
- contingency plan; and
- verification of continued attainment.

4.2 ATTAINMENT INVENTORY

The guidance document suggests that the attainment inventory should be based on actual "typical summer day" emissions of VOCs and NO_x. For purposes of an attainment emissions inventory, the TCEQ selected 2002 as the baseline attainment year since it is one of the three years on which the 8-hour ozone designation was based.

Table 4-1: El Paso County 8-hour Ozone Attainment Inventory 2002 depicts the total NO_x and VOCs for El Paso County for 2002. Total NO_x is 60.87 tons per day (tpd) and VOCs total to 52.44 tpd.

Table 4-1: El Paso County 8-hour Ozone Attainment Inventory 2002

SOURCE	NO _x (tpd)	VOC (tpd)
Nonroad Mobile	12.68	5.94
Area	2.39	22.85
Point	11.57	2.36
Onroad Mobile	34.23	21.29
Total	60.87	52.44

4.3 MAINTENANCE DEMONSTRATION

The maintenance plan must demonstrate that the area will remain in compliance with the 8-hour ozone standard for the 10 year period following the effective date of designation. The end projection year is 10 years from the effective date of the attainment demonstration. The maintenance demonstration is

¹Office of Air Quality Planning and Standards, United States Environmental Protection Agency, *Maintenance Plan Guidance Document for Certain 8-Hour Ozone Areas Under Section 110(a)(1) of Clean Air Act* (2005).

satisfied if the state demonstrates that future EIs are consistently less than the attainment or baseline EI. El Paso County has an effective date of designation of June 15, 2004, which means that maintenance must be demonstrated through 2014. Table 2-1 demonstrates that 2002 anthropogenic VOC and NO_x emissions in El Paso County were greater than comparable emissions are predicted to be in 2008. Likewise, 2008 anthropogenic VOC and NO_x emissions in El Paso County are predicted to be greater than comparable emissions in 2014. Consequently, future emissions levels are expected not to exceed emissions levels from the attainment year.

4.4 AMBIENT AIR QUALITY MONITORING

To verify maintenance of the 8-hour ozone standard in El Paso County, the TCEQ will continue to operate an appropriate air monitoring network. The air monitoring results will reveal changes in the ambient air quality as well as assist the TCEQ in determining whether or not implementation of any contingency measures is necessary. The state will continue to work with the EPA through the air monitoring network review process, as required by 40 CFR Part 58, to determine: 1) the adequacy of the ozone monitoring network; 2) if additional monitoring is needed; and 3) when monitoring can be discontinued. Air monitoring data will continue to be quality assured according to the requirements in the EPA regulations.

4.5 CONTINGENCY PLAN

The 8-Hour Ozone Phase 1 Rule requires the §110(a)(1) maintenance plan include contingency provisions to promptly address any violation of the NAAQS that occurs. The contingency plan will ensure that the contingency measures are adopted expeditiously once they are triggered.

4.5.1 Contingency Measure Trigger

If air quality monitoring data indicate that the 8-hour ozone NAAQS was violated, the TCEQ will first analyze available data regarding the air quality, meteorology, international transport and related activities in the airshed to determine the cause of the violation. If this analysis determines that the violation was caused by actions that cannot be controlled by regulatory actions within the jurisdiction of the TCEQ, such as emissions from Mexico, the TCEQ will notify EPA of the findings and request EPA actions to promptly correct the cause of the ozone violation. If, after this analysis is complete, TCEQ determines that the violation was caused by events that can be controlled by regulatory actions, the TCEQ will develop measures that will reduce the ozone levels to the extent necessary to comply with the NAAQS.

4.5.2 Contingency Measures

On December 4, 2002, the commission adopted a revision to the I/M SIP. This revision added OBD testing to the low-enhanced I/M program in El Paso County as a contingency measure to be implemented in the event such measures became necessary to maintain attainment of the ozone NAAQS in the El Paso area. On October 26, 2005, the commission adopted revisions to the I/M program rules and SIP that added OBD testing as an active control measure to the established I/M program described in Section 4.8.1 and withdrew OBD testing as a contingency measure from the I/M SIP. This contingency measure is being replaced by the commitment described below.

Since the implementation of potential contingency measures would not be expected to take place until well in the future, the identification of specific detailed measures is not practical. The most appropriate contingency measures may be significantly different from the measures mentioned below due to technological, societal, economic, and political factors that are impossible to predict.

The TCEQ currently has VOC contingency measures in 30 TAC Chapter 115 that have been approved by EPA that address El Paso County's potential for violation of the NAAQS. The following contingency measures would be among the possible strategies evaluated by the TCEQ to return the area to compliance with the 8-hour ozone standard:

- 30 TAC Chapter 115 Subchapter B: General Volatile Organic Compound Sources, Division 2: Vent Gas Control. This rule would place restrictions on processes at certain facilities including bakeries that generate VOC emissions.
- 30 TAC Chapter 115 Subchapter F: Miscellaneous Industrial Sources, Division 3: Degassing or Cleaning of Stationary, Marine, and Transport Vehicles. This rule would place restrictions on the release of VOC emissions during degassing or cleaning of certain storage and transportation vessels.
- 30 TAC Chapter 115 Subchapter F: Miscellaneous Industrial Sources, Division 4: Petroleum Dry Cleaning Systems. This rule would require the owner or operator of any dry cleaning facility that uses petroleum-based solvents to operate while limiting VOC emissions.

These measures or other strategies that would reduce the ozone precursor levels to the extent necessary to comply with the NAAQS would be proposed and implemented within 18 months of the commission publishing notification in the *Texas Register* of its determination that this contingency action is necessary to attain the NAAQS.

4.6 VERIFICATION OF CONTINUED ATTAINMENT

In order to track the progress of this maintenance plan, the TCEQ will continue to periodically update the EI. In addition to EIs for the attainment year of 2002 and the last year of the maintenance plan of 2014, an interim year of 2008 was selected to show a trend analysis for maintenance of the standard. Table 4-1 depicts the EIs that will be used to compare against the attainment inventory to ensure compliance with the 8-hour ozone standard.

4.7 POINT AND AREA SOURCE CONTROL STRATEGIES

This maintenance plan continues all applicable control strategies, including those adopted under 30 TAC Chapter 115, such as Stage 1 and 2 vapor recovery requirements.

4.8 ONROAD SOURCE CONTROL STRATEGIES

This maintenance plan includes two TCEQ established strategies to control emissions from onroad mobile sources: the inspection and maintenance program and the Reid Vapor Pressure (RVP) gasoline program for El Paso County.

4.8.1 Vehicle Inspection and Maintenance (I/M) Program

The El Paso County I/M program has conducted Two-Speed Idle (TSI) testing since January 1, 1987. Beginning January 1, 2007, in El Paso County, gasoline-powered vehicles model year 1995 and older will continue emissions testing using TSI and model year vehicles 1996 and newer will be tested using On-Board Diagnostics (OBD). Additionally, all vehicle emissions inspection stations in the El Paso County program area will offer both tests.

Applicability

All gasoline powered vehicles 2 to 24 years old, registered and primarily operated in the I/M program area (El Paso County), will be required to undergo an annual emissions inspection test in conjunction with the annual safety inspection. Emissions inspection tests are conducted at public safety inspection stations. The program does not apply to vehicles registered as antique or parade vehicles, motorcycles, or slow moving vehicles, as defined by Section 547.001, Transportation Code.

Vehicle Emissions Inspection Requirements

OBD testing will be implemented for 1996 model year and newer vehicles. The OBD system monitors emissions performance components to ensure that the vehicle runs as cleanly as possible. If a problem is detected, the OBD system illuminates a "Check Engine" or "Service Engine Soon" warning light on the vehicle's instrument panel. The system stores information about the detected malfunction so that a repair technician can accurately diagnose and fix the problem.

Model year 1996 and newer vehicles are required to meet EPA specifications for collection and transfer of emissions control data during each driving cycle. The Diagnostic Link Connector (DLC) cable on the emissions test analyzer is connected to the DLC located in the vehicle. When the vehicle's OBD system has checked the emissions control systems and detected a problem with the vehicle, this information is stored in the vehicle's on-board computer. The OBD test transmits this data to the analyzer and the vehicle fails the inspection. The Vehicle Inspection Report indicates which emissions control systems were checked and displays the description of the fault codes retrieved from the vehicle's computer.

The TSI testing program will be used to test 1995 model year and older vehicles. The TSI test uses a tailpipe probe exhaust gas analyzer to measure hydrocarbons and CO while the vehicle is idling at a low and a high rate.

Control Requirements

Affected vehicles are required to comply with the air pollution emission control requirements included in the annual vehicle safety inspection administered by DPS, the vehicle emissions inspection and maintenance requirements, and the onroad emissions test requirements. Federal government agencies must require vehicles driven by federal employees on property under the jurisdiction of the agency and located in El Paso County to comply with the vehicle emissions requirements. If a vehicle fails the emissions inspection test, the failure will be indicated on the Vehicle Inspection Report. The vehicle can be returned to the same inspection station within 15 days for a free re-test. A passing emissions inspection test (or test waiver) is required in order to receive a safety inspection sticker. Test on resale is required for all vehicles from counties without I/M programs that are sold or registered in El Paso County. The DPS conducts onroad testing, also known as remote sensing, that is used to identify high emitting vehicles. State, governmental, and quasi-governmental agencies that fall outside the normal registration or inspection process must comply with all vehicle emissions I/M program testing requirements in El Paso County.

Waivers and Extensions

The following waivers and extensions as specified in 37 TAC §23.93, relating to Vehicle Emissions Inspection Requirements, will be available to all qualifying vehicle owners/operators through the Texas Department of Public Safety (DPS):

- Individual Vehicle Waiver – In order to address unusual cases where a vehicle cannot meet

emissions standards, an Individual Vehicle Waiver may be issued to a vehicle owner whose vehicle has failed its initial emissions inspection and re-inspection, and in which at least \$600 in emissions related repairs have been performed.

- Low Mileage Waiver – A Low Mileage Waiver may be issued to a vehicle owner whose vehicle has failed both its initial emissions inspection and the re-inspection, and in which at least \$100 in emissions related repairs have been performed. The vehicle should have been driven less than 5,000 miles in the previous inspection cycle and anticipate being driven fewer than 5,000 miles before the next required safety inspection.
- Parts Availability Time Extension – A Parts Availability Extension may be issued for 30, 60, or 90 days to a vehicle owner whose vehicle fails the initial emission inspection and needs time to locate necessary vehicle emissions control parts.
- Low Income Time Extension – A Low Income Time Extension may be issued to a vehicle owner whose vehicle has failed its initial inspection and re-inspection, and the applicant's adjusted gross income is at or below the federal poverty level.

Prohibitions

The adopted rule prohibits misuse of vehicle emissions testing documents or certifications.

Equipment Evaluation Procedures for Vehicle Gas Analyzers

Guidelines have been established for approval of exhaust gas analyzers or analyzer systems for use in the I/M program.

Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program (LIRAP)

Counties that implement a vehicle emissions inspection program may elect to implement the Low Income Vehicle Repair Assistance, Retrofit, and Accelerated Vehicle Retirement Program (LIRAP). Vehicle owners/ operators whose vehicles fail the emissions inspection and who meet eligibility requirements may receive assistance through this program. The assistance can pay for emissions related repairs or be used toward a replacement vehicle. The assistance program is funded through a portion of the emissions inspection fee. The program is administered through a grant contract between the TCEQ and each participating county. By statute, no more than 5 percent of the funds provided to each county may be used for the administrative costs of the program. Assistance is limited to no more than \$600 for repairs or \$1,000 toward replacement of the vehicle.

In order to be eligible for LIRAP, the vehicle owner's total family income must be less than or equal to twice the amount of the Federal Poverty Guidelines for designated family units. (As of September 2004, \$24,980 for a family of two and \$37,700 for a family of four). A vehicle is eligible for repair assistance if the emissions inspection has been failed within 30 days prior to application, is currently registered, and has been registered in the program area for the two years preceding application, and it passes the safety inspection portion of the test. Repairs must be performed at a DPS-recognized repair facility. Vehicle retirement eligibility requirements are the same as for vehicle repairs except the vehicle must have passed a safety inspection within 15 months of the application.

Emissions Fee

The emissions portion of the test fee set by the TCEQ will remain \$14.00. However, if the El Paso County Commissioners Court elects to participate in LIRAP, the cost that motorists will pay for emissions test will increase by \$2.00, for an emissions test fee not to exceed \$16.00 in El Paso County. The safety inspection fee is \$12.50, so the combined inspection cost will not exceed \$28.50. Testing equipment costs estimated at \$15,000 per station are recouped through emission test fees. The equipment includes the TSI, the OBD analyzer testing system, gas cap tester, secured computer hard-drive, printer, and 2-D Bar Code scanner.

4.8.2 El Paso County Low Reid Vapor Pressure (RVP) Gasoline Program

Currently, low RVP gasoline is used in El Paso County during the summer months when ozone pollution is at its worst. The El Paso County Low RVP Program, which began May 1, 1996, requires that all gasoline in the area have a maximum RVP of 7.0 pounds per square inch absolute (psia) from May 1 through September 16 of each year. Gasoline-dispensing facilities are required to sell low RVP gasoline from June 1 through September 16 of each year. The specifics of this program are spelled out in 30 TAC Chapter 115, Subchapter C: Volatile Organic Compound Transfer Operations, Division 5: Control of Reid Vapor Pressure of Gasoline.

Control Requirements

For El Paso County, the following control requirements apply:

(1) No person shall place, store, or hold in any stationary tank, reservoir, or other container any gasoline that may ultimately be used in a motor vehicle in El Paso County with a RVP greater than 7.0 psia or that does not meet the EPA specifications for reformulated gasoline.

(2) No person shall transfer or allow the transfer of gasoline that may ultimately be used in a motor vehicle in El Paso County with a RVP greater than 7.0 psia or that does not meet EPA specifications for reformulated gasoline to or from any storage vessel or tank-truck tank at any gasoline terminal, bulk plant, or motor vehicle fuel dispensing facility.

(3) All adjustments in the operation of affected facilities and all transfers or alterations of noncompliant gasoline must be completed as necessary to conform with the provisions of this rule during the following periods of each calendar year:

(A) June 1 through September 16 of each year for motor vehicle fuel dispensing facilities; and

(B) May 1 through September 16 of each year for all other affected facilities.

Alternate Control Requirements.

For all affected persons in El Paso County, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria may be approved by the executive director if emission reductions are demonstrated to be substantially equivalent.

Approved Test Methods.

For El Paso County, the following testing requirements apply:

(1) Sampling Procedures for Fuel Volatility (40 Code of Federal Regulations, Part 80, Appendix D); and

(2) Tests for Determining Reid Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (40 Code of Federal Regulations, Part 80, Appendix E).

Record keeping Requirements.

For El Paso County, the owner or operator of any gasoline storage vessel, gasoline terminal, or gasoline bulk plant must maintain records of the RVP of all gasoline stored or transferred during the compliance period. All records must be maintained for two years and be made available for review by representatives of the executive director, EPA, and local air pollution control agencies.

Exemptions.

For El Paso County, the following exemptions apply:

- (1) Any stationary tank, reservoir, or other container used exclusively for the fueling of implements of agriculture is exempt from the requirements.
- (2) The owner or operator of a motor vehicle fuel dispensing facility is exempt from the record keeping requirements.
- (3) Any tank, reservoir, storage vessel, or other stationary container with a nominal capacity of 500 gallons (1,893 liters) or less is exempt from the requirements.

Counties and Compliance Schedules.

All affected persons in El Paso County were to be in compliance no later than May 1, 1996.