

REVISIONS TO THE
CARBON MONOXIDE STATE IMPLEMENTATION PLAN
FOR EL PASO COUNTY TO INCORPORATE A
VEHICLE IDLE EMISSIONS
INSPECTION/MAINTENANCE PROGRAM

Texas Air Control Board Staff

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D. CARBON MONOXIDE

1. 1979 CARBON MONOXIDE STATE IMPLEMENTATION PLAN (SIP)
REVISIONS FOR EL PASO COUNTY

a. - f. (No Change)

2. POST 1982 CARBON MONOXIDE SIP REVISIONS FOR EL PASO
COUNTY

a. - h. (No Change)

i. - j. (Delete and Replace by the Following)

i. Demonstration of Attainment and Associated
Implications (New)

1) Attainment Demonstration Calculations

Modified rollback modeling calculations indicate that the 1982 carbon monoxide (CO) emissions inventory must be reduced by 28.7 percent in order to demonstrate attainment by December 31, 1987. The total CO emissions rate of 137,561 tons per year must, therefore, be reduced to 98,081 tons per year. This results in a reduction estimate of 42,097 tons per year (including 2,617 tons per year to account for projected minor, area, and non-highway mobile source growth) by 1987.

Table 6 presents the reduction estimates for each of the categories of controls previously discussed. The total emissions reductions projected to result from these control measures are not sufficient to demonstrate attainment of the standard by 1987. The total reductions of 31,991 tons per year are 10,106 tons less than the amount needed for a demonstration of attainment, after adjustments for projected growth. These calculations do not consider any emissions changes in Ciudad Juarez, Mexico.

Table 6.

CO EMISSIONS CHANGES FOR EL PASO COUNTY
1982-1987

	CO Reductions		CO Increases		Net Emissions Change	
	Tons	%*	Tons	%*	Tons	%
Federal Motor Vehicle Control Program	19,406	14.1				
Transportation Control Measures	2,488	1.8				
Vehicle Inspection and Maintenance	10,097	7.4				
Non-Highway Mobile Growth			2,139	1.6		
Area and Minor Source Growth			478	0.3		
Total	31,991	23.3	2,617	1.9	29,374	21.4

* Percent of 1982 Emissions Inventory (137,561 tons).

2) Additional Requirements for Areas Not Demonstrating Attainment by December 31, 1987 and Texas Air Control Board (TACB) Response

In the January 27, 1984 guidelines, the Environmental Protection Agency (EPA) recognized that some areas might be unable to demonstrate attainment of the CO and/or ozone standards by December 31, 1987. The guidelines specify a number of additional requirements that must be met by the affected areas in order to avoid sanctions. The TACB, in SIP revisions adopted on July 26, 1985, responded to each of these requirements by demonstrating prior compliance or offering additional commitments. Satisfaction of these requirements, however, is no longer necessary since additional measures sufficient to demonstrate attainment are included in Section D.3. The previous contents of Section D.2.i.2), therefore, have been deleted.

The TACB is committing to request that the Department of Public Safety (DPS) implement an idle emissions inspection/maintenance (I/M) program in El Paso County in early 1987. El Paso elected officials representing the city council and commissioner's court previously expressed their desire for this type of program by passing resolutions requesting that it be implemented. Section D.3., Vehicle Idle Emissions I/M Program for Carbon Monoxide in El Paso County, addresses all elements required by EPA I/M policy. Emission reductions predicted to result from implementation of the idle I/M program in El Paso are sufficient to demonstrate attainment of the CO standard in El Paso by December 31, 1987 and to exceed Reasonably Available Control Technology (RACT)

Technology (RACT) criteria. Therefore, further commitments by the TACB to adopt or implement additional programs or control measures beyond the idle I/M program are not necessary to satisfy EPA requirements.

3. VEHICLE IDLE EMISSIONS I/M PROGRAM FOR CARBON MONOXIDE IN EL PASO COUNTY (New)

a. General

Part of El Paso County, Texas was first designated by the U. S. Environmental Protection Agency (EPA) as nonattainment for the carbon monoxide (CO) National Ambient Air Quality Standard (NAAQS) on March 3, 1978. In response, the Texas Air Control Board (TACB) developed and adopted revisions to the Texas State Implementation Plan (SIP) on March 30, 1979. The revisions included control strategies to reduce CO emissions to acceptable levels by the end of 1982. EPA gave final approval of these SIP revisions on March 25, 1980.

Although control strategies were implemented in accordance with the provisions of the plan, CO levels above the NAAQS continued to be measured after December 31, 1982. On February 24, 1984, EPA notified the Governor of Texas of a call for additional SIP revisions to provide for attainment of the CO standard by December 31, 1987. The Guidance

Document for Correction of Part D SIPs for Nonattainment Areas was published on January 27, 1984 (Appendix AA). In response, the TACB adopted additional SIP revisions on July 26, 1985 for CO in El Paso County in accordance with these guidelines. Although these revisions (Section D.2.) proposed implementation of all reasonably available control measures which could be implemented expeditiously enough to achieve any significant emission reduction prior to the deadline, attainment could not be demonstrated. This strategy included a vehicle parameter I/M program. Such a program requires inspection of various emission control components (parameters) to detect and correct tampering and misfueling in 1980 and newer model year vehicles (automobiles and light-duty trucks). While the parameter I/M program is predicted to result in significant volatile organic compound (VOC) emission reductions, it is not predicted to provide sufficient reductions in CO emissions to demonstrate attainment of the NAAQS by the end of 1987.

In anticipation of the failure to demonstrate attainment, the Texas Legislature on May 27, 1985 passed Senate Bill 725 which authorized the Texas Public Safety Commission to establish any other motor vehicle inspection program required by federal law. In addition, local elected officials and citizen groups in El Paso submitted formal resolutions and other correspondence requesting the TACB to implement additional

vehicle emission inspection procedures. The TACB, therefore, committed to request that the Texas Department of Public Safety (DPS) implement a vehicle idle emissions I/M program in early 1987 to supplement the parameter program. The I/M program will require the testing of exhaust emissions, while the vehicle is run at idle, to detect vehicles which have been poorly maintained or have experienced major equipment malfunctions resulting in excessive CO emissions.

The July, 1985 SIP revisions also included control strategies to reduce VOC in order to demonstrate attainment of the NAAQS for ozone. A parameter I/M program is predicted to provide sufficient VOC emission reductions to demonstrate attainment of the ozone standard without adding idle I/M program requirements. Therefore, the program to be implemented in El Paso County needs to address only the identification and repair of vehicles which exceed specified CO emissions standards. Such a program will achieve the same CO reductions as a conventional I/M program for both CO and hydrocarbon (HC). Also, according to EPA analysis of similar "CO only" idle I/M programs, VOC reduction benefits will result even without specified HC emission standards.

b. Program Description

The El Paso County CO idle I/M program satisfies basic EPA criteria to demonstrate necessary emissions reductions while

providing for effective and timely implementation by incorporating the new I/M procedures into the existing administrative structure of the decentralized state safety inspection program. This program is administered by the DPS and supported by appropriate legislation and authorized funding. Statutory authority for the program is provided by the Texas Clean Air Act, Section 3.10(d), by Article XV of the Texas Vehicle Inspection Act, Sections 140-142, and by Senate Bill 725 passed by the Texas Legislature on May 27, 1985.

TACB and DPS will coordinate revisions of the applicable rules and regulations to assure that all 1975 and newer model year automobiles and light-duty trucks under 8500 pounds, gross vehicle weight, registered and operated in El Paso County are inspected as part of this program. The program will be implemented early in 1987 and will include enhanced quality controls, data handling and assessment procedures, and voluntary mechanic training and public information programs, as well as requirements for annual testing of vehicle exhaust emissions.

The El Paso vehicle idle emissions I/M program described in this section addresses all elements listed in EPA's 1982 SIP Vehicle Inspection and Maintenance Program policy published in the Federal Register on January 22, 1981. The procedures include various requirements and quality controls to ensure

the effectiveness, credibility, and fairness of the program. Each of the program elements emphasizes the importance of effective vehicle repair and maintenance to control in-use vehicle emissions. Requirements for mandatory annual inspections are included to ensure the continued effectiveness of the program. Table 7 summarizes specific inspection and quality control procedures and data handling requirements.

1) Inspection Test Procedures

A January 19, 1981 memorandum from EPA Deputy Assistant Administrator for Mobile Source Air Pollution Control to Air and Hazardous Material Division Directors, Regions I-X, defines the objectives of the inspection procedures included in state vehicle inspection programs to be the identification of high emitting vehicles in need of maintenance and the verification, through post-maintenance retest, that proper maintenance has been performed.

The Texas Vehicle Inspection Act, Article XV - Inspection of Vehicles V.C.S. 6701d, Uniform Act Section 140 (Appendix X), requires that all vehicles operating on the public roads of Texas be inspected annually to determine conformity with DPS Rules and Regulations concerning inspection procedures (Appendix X). These regulations require inspectors to visually inspect the emission control system for all 1968 and newer

Table 7.

EL PASO I/M PROGRAM PROCEDURES

<u>Inspection Procedures</u>	<u>Quality Controls</u>	<u>Data Reporting</u>
1) Vehicle is presented for annual inspection at an authorized inspection station prior to expiration of current certificate,	1) TACB approval of analyzers,	1) Number of initial inspections performed and failed for each vehicle model year and type,
2) Visual safety and parameter inspections are performed,	2) Certification of stations,	2) Number of retests and referee tests performed and failed,
3) Probe of analyzer is placed into tail pipe to determine levels of CO while at idle,	3) Automatic accuracy checks prior to each test,	3) Number of one-year waivers granted for each model year and type,
4) Presence of leaks in the exhaust system which may dilute emissions is checked (inspection discontinued if leaks detected),	4) Automatic leak checks weekly,	4) Average CO concentrations for initial inspection failures and retests for each vehicle model year and type, and
5) Copy of inspection results is provided to motorist with a notification of pass or fail,	5) Calibration weekly,	5) Statistics on the number of failures per inspection station.
6) If pass, a new inspection certificate is issued,	6) DPS audits quarterly for analyzers with automated data recovery and storage,	
7) If fail, documentation of the reasons for the failure and required corrective action is provided to the motorist, and	7) Announced and unannounced DPS inspections of stations, and	
8) Vehicle is presented for retest upon completion of corrective action.	8) Certification and verification of standard gases used to calibrate monitors.	
		<u>Data Assessment</u>
		1) Quarterly data tape retrieval and submittal by DPS to TACB,
		2) Quarterly data analysis by TACB,
		3) Quarterly summary reporting by TACB to EPA,
		4) Periodic review of the number of failures at each station, and
		5) Annual review of program effectiveness to identify necessary adjustments.

model year vehicles. Effective January 1, 1986, inspectors in El Paso County must also perform an enhanced parameter inspection of all 1980 or newer model year vehicles to detect tampering with the specified emission control systems and illegal fueling with leaded gasoline. These additional requirements and associated emission reductions are described in SIP Section D.2., Post-1982 Carbon Monoxide Revisions for El Paso County.

The DPS will adopt, upon request by the TACB, additional revisions to the provisions of the DPS inspection procedures to require the testing of the exhaust emissions of all applicable 1975 or newer model year vehicles in El Paso County. Testing will be performed, while the vehicle motor is at idle, by a certified inspector using an approved infrared emissions analyzer during the annual vehicle inspection administered by the DPS. Pertinent vehicle information will be obtained and recorded to determine the appropriate emission standard and any preconditioning requirements. Testing will be conducted to minimize the influence and responsibility of the inspector over the inspection results. Other necessary information will also be recorded with each inspection report to enable program officials to assess the reliability of the test results and to detect systematic problems within the program. Copies of the test results, pass/fail determinations, and repair status of each vehicle will be provided to the motorist

and retained by the inspection station. Inspection stations will also be required to report at least quarterly to DPS officials.

Inspection procedures, emission standards, and equipment specifications will be reviewed by DPS and TACB annually and amended, as necessary. Amended procedures will be submitted to EPA as proposed SIP revisions. DPS will provide training for inspectors necessary to implement appropriate inspection procedures.

2) Emission Standards (pass/fail criteria)

The previously referenced January, 1981 EPA policy memorandum requires that emission standards, or pass/fail criteria, must be included in a state's vehicle emission I/M program. These standards or criteria determine, in part, the emission reductions to be credited for program implementation.

The emission standards and pass/fail criteria used by inspectors to determine compliance of vehicles in Texas will be defined in DPS Rules and Regulations concerning inspection procedures. These rules, in addition to specific equipment maintenance and anti-tampering requirements included in the safety and parameter programs, will require that, beginning in 1987, applicable 1975 or newer model year vehicles must

be rejected if the concentration of CO in the exhaust gases exceeds the emission standards listed in Table 8.

Table 8.

IDLE EMISSIONS STANDARDS

<u>Model Years</u>	<u>CO Emission Standard</u>
1975 - 1977	7.5%
1978	6.5%
1979	6.0%
1980	4.0%
1981 or newer	1.2%

The Texas Vehicle Inspection Act, Article XV-Inspection of Vehicles V.C.S. 6701d, Uniform Act, Section 140(d) Compulsory Inspection (Appendix X), provides that if an inspection indicates a deficiency in the exhaust emission system, the vehicle shall be adjusted or repaired before a certificate is issued. Reinspection within 15 days at the same inspection station shall be available free of charge after adequate repairs have been made.

Emission standards established by DPS will be reviewed by DPS and TACB annually and amended, as necessary, to ensure program effectiveness and to provide current emission standards for all applicable model year vehicles. These rule amendments will be submitted to EPA as proposed SIP revisions following adoption by DPS. DPS will provide updated

inspection procedures and emission standards in inspector training materials.

A design CO failure rate of 13.3% for all affected pre-1981 model year vehicles was used in determining the emission reduction to be credited for program implementation (see SIP Section D.3.c.). Initial emission standards are adjusted to include a buffer to compensate for potential shortfalls in the design failure rate. Subsequent alteration of standards will be made, if necessary, after actual program data is obtained.

3) Inspection Station and Inspector Licensing Requirements

EPA policy (July 17, 1978 EPA memorandum from David Hawkins to Regional Administrators) requires all inspection facilities to be licensed. A representative of the facility must have received instruction in the proper use of the instruments and in vehicle testing methods and must have demonstrated proficiency in these methods. The facility must agree to maintain records and to submit to inspection of the facility. The appropriate government agency must have provisions for penalties for facilities which fail to follow prescribed procedures and for misconduct.

All licensing procedures required by EPA for vehicle I/M programs are satisfied through the provisions of the Texas Vehicle Inspection Act, Article XV-Inspection of Vehicles V.C.S. 6701d, Uniform Act, Section 141 State Appointed Inspection Stations (Appendix X). DPS Rules and Regulations Section A - Station Licensing and Operation (Appendix X), define the criteria for approval of inspection stations. Under these rules and the provisions of the statute, DPS trains and certifies all inspectors and licenses all inspection stations. All inspectors and each of the inspection stations must be recertified every two years. DPS can require additional inspector training at any time. The DPS will provide additional reference diagrams, written procedures, and training to inspectors to enable them to determine if originally installed emission control systems are in place and operating and to properly perform the emission testing and quality controls required. The inspection stations will be required to provide handbooks which include all necessary vehicle information to enable inspectors to perform the annual inspections.

DPS requires each inspection station to keep records of all inspections performed, to maintain a copy of such records at the inspection station, and to submit to DPS reports and data recording tapes on inspections performed (see Record Keeping and Record Submittal Requirements). DPS takes corrective action against noncomplying inspectors and inspection stations,

including filing of misdemeanor charges and revoking inspector or inspection station licenses.

4) Equipment Specifications

EPA vehicle I/M program policy (July, 1978 and January, 1981) requires specifications to be established for testing instruments to ensure that accurate inspections are conducted.

The DPS has authority under the Texas Vehicle Inspection Act, Article XV (Appendix X) to define equipment specifications and maintenance requirements for instruments and/or equipment used in vehicle inspections. DPS Rules and Regulations concerning inspection procedures, will require inspectors to use an emissions analyzer approved by the TACB to measure the concentration of CO, HC, carbon dioxide, and oxygen in the exhaust gases of all vehicles included in the inspection program. The analyzer shall satisfy all the design, manufacture, and operational specifications included by reference in TACB Regulation IV, Control of Air Pollution from Motor Vehicles. The analyzer must also qualify for use under the Federal Vehicle Design and Defects Warranty and the Federal Vehicle Performance Warranty programs described in the Federal Clean Air Act, Section 207(b), and Subpart W of Part 85 of Chapter I, Title 40 of the Code of Federal Regulations.

The analyzer shall have, at least, the following capabilities:

- a) Automatic warm-up,
- b) Automatic calibration,
- c) Automatic zero-span,
- d) Automatic leak check,
- e) Automatic operation check (flow, dilution, idle speed, etc.),
- f) Automatic disengagement of manual functions during testing cycle,
- g) Automatic internal timer and inspection counter,
- h) Automatic data recording of all inspection results, vehicle and station information, and quality control functions, and
- i) Automatic printouts of vehicle information, inspection results, and required corrective actions.

All features shall be protected by a lockout safeguard system to make the analyzer inoperable if tampering with any of the automated systems is attempted. This lockout system shall be sufficient to prevent the operator from accidentally or purposefully bypassing any quality control requirement, or altering test data and results.

The analyzer shall be designed for maximum operational simplicity with a minimum of operational decisions required in the performance of a complete exhaust emission analysis. Analyzers shall be equipped with a microprocessing unit with an alphanumeric keyboard, a visual display screen, a printer, and a data recording device. Each step of the data entry and emission testing procedure shall be displayed to the inspector by an appropriate visual prompt including necessary instructions and error messages. All analyzers must record vehicle information and test results in a data array compatible with TACB data retrieval requirements.

All manufacturers and/or suppliers of analyzers used in the idle I/M program in El Paso shall provide adequate training, consultation, and other support to inspection stations and inspectors to ensure the proper use and operation of purchased equipment. Annual equipment maintenance agreements, as presented in the specifications included by reference in TACB Regulation IV, shall be provided by the equipment manufacturers and/or suppliers to the purchasers to ensure prompt repair or replacement of necessary equipment or components.

Inspection station operators shall be required to purchase and use appropriate standard gases for analyzer calibrations, span checks, and other quality control procedures to ensure the accuracy and reliability of emission test results. Minimum specifications for standard gases shall be of sufficient

quality and necessary concentration required by the equipment manufacturer for proper calibration and maintenance of analyzer systems and must satisfy the requirements of the Federal Vehicle Design and Defects Warranty and the Federal Vehicle Performance Warranty programs. Sufficient quantities of all necessary gases shall be available at the inspection station to provide uninterrupted service to the public during normal working hours.

5) Record Keeping and Record Submittal
Requirements

Although EPA has not established specific data collection and reporting requirements for vehicle I/M programs, annual reports on program implementation and enforcement are required to document the effectiveness of the program and to demonstrate emission reductions.

The TACB will monitor the results of the vehicle idle I/M program in El Paso County to determine the effectiveness of the program and the reasonableness of emission standards. An annual report will be published based on data collected by DPS certified inspection stations and compiled by the TACB. Automated data recording tapes will be removed from emissions analyzers at least once per calendar quarter by personnel authorized by DPS and submitted for processing. Inspection

information shall be retrieved and recorded in a TACB computer file for subsequent evaluation and reporting purposes. The format for data recording is included in the analyzer specifications included by reference in TACB Regulation IV, Control of Air Pollution from Motor Vehicles.

The following information shall be recorded on tape by the analyzer for each vehicle inspection performed. Automatic printouts of this information will be provided to the motorist upon completion of the inspection and retained by the inspection station operator. Station copies will be provided to the DPS trooper during periodic audits or upon request.

- a) Vehicle identification number,
- b) Vehicle make, model year, and type,
- c) Mileage odometer reading,
- d) Date and time of the inspection,
- e) Station and inspector identification,
- f) Initial, retest, or referee test designation,
- g) Parameter inspection results,
- h) Emissions test results,
- i) Pass/fail determination,
- j) Sequence number on the recording tape,
- k) Inspection certificate number, if issued, and
- l) Repair costs, if known (for retests and referee tests only.)

Program effectiveness will be determined through analysis of vehicle inspection reports. The following statistics will be obtained and reported by the TACB at least quarterly:

a) Number of vehicles inspected by vehicle model year and type,

b) Number of initial tests performed and failed by vehicle model year and type,

c) Number of retests performed and failed,

d) Number of referee tests performed and failed,

e) Number of one-year waivers granted by vehicle model year and type,

f) Average of the results of initial test failures by vehicle model year and type,

g) Average of retest results,

h) Average percentage and standard deviation of failures per inspection station,

i) Identification of all stations with a failure rate of more than two standard deviations above or below the average percentage of failures per inspection station, and

j) Other available statistics, as necessary, to assess and ensure the effectiveness of the program.

A record of the following information will also be maintained by the DPS for a minimum of 5 years:

- a) The number of certifications issued to vehicle inspection stations and inspectors,
- b) The number of noncompliance citations issued to vehicle inspectors and inspection station certifications revoked,
- c) The number of citations issued by DPS to motorists for failure to display a valid inspection certificate with green numeral insert on vehicles registered and operated in El Paso County,
- d) Data obtained by DPS during roadside pullovers, covert investigations, and other enforcement activities, and
- e) Data obtained by DPS regarding improper registration of vehicles outside of El Paso County.

This information shall be available to TACB upon request.

6) Quality Control, Audit, and Surveillance Procedures

EPA policy (July, 1978) states that vehicle I/M programs must include a quality assurance program consisting of periodic audits to assure that the inspection facilities are observing

the proper test procedures, record keeping practices, and equipment calibration requirements.

DPS Rules and Regulations, Section A - Station Licensing and Operation, and Section B - General Inspection Requirements (Appendix X), specify quality control procedures to be followed by licensed inspection facilities and individual inspectors. Official vehicle inspection stations and qualified persons in Texas are certified by the DPS every two years. Certified inspectors are required to attend specified training courses, pass qualified examinations, and demonstrate their ability to conduct an acceptable inspection. Stations must meet specific requirements for proper facilities, adequate equipment, and qualified personnel before a certificate can be granted or renewed. Up-to-date inspection records must be available for examination by DPS troopers during normal business hours.

DPS troopers will visit, announced or unannounced, each inspection station at least on a quarterly basis. Gas calibration audits of emission analyzers will be performed by the troopers during these quarterly visits. Failure of this audit will require corrective action before the inspection station may continue vehicle inspections. Execution of inspection procedures by the inspectors will also be observed during these quarterly visits and during periodic covert

visits in unmarked vehicles. Retraining and/or administrative action will be required if improper procedures are followed.

DPS Rules and Regulations concerning inspection procedures will require inspection station operators to follow routine quality control procedures to ensure the accuracy and proper maintenance of the emissions analyzer and to monitor the performance of the inspectors. Operating procedures established by the manufacturer of each analyzer shall be followed during use, calibration, and maintenance of the analyzer. These procedures shall include:

- a) Weekly gas calibration using an approved standard gas,
- b) Weekly leak checks to ensure the integrity of the sampling and analyzer system, and
- c) Zero-span checks (or internal electronic accuracy checks) prior to each test.

Certification of calibration gases will also be checked by the DPS troopers during periodic visits. Inspection stations must ensure that all standard gases used to calibrate and span the emissions analyzer are certified by the supplier to satisfy the minimum quality standards described in DPS Rules and Regulations concerning official vehicle inspection

stations and certified inspectors, and conform to analyzer manufacturer's requirements.

In addition, the DPS investigates complaints in accordance with procedures specified in the Rules and Regulations concerning official vehicle inspection stations and certified inspectors to determine whether there has been a violation of the Vehicle Inspection Act or Regulations. Violations may be punishable by fines not to exceed \$200. Under authority of the Texas Vehicle Inspection Act, Article XV - Inspection of Vehicles V.C.S. 6701d, Uniform Act, Section 141, (Appendix X), DPS can and does revoke the certification of any facility or certificate of any individual inspector found to be out of compliance with the agency's Rules and Regulations.

7) Referee Facilities and Procedures

The DPS will operate and maintain a facility equipped with an approved emissions analyzer to provide independent referee inspections when a vehicle has undergone previous testing at an authorized inspection station, and the vehicle owner believes the results of the testing were incorrect. The referee facility will be required to satisfy all maintenance and quality control procedures required to be performed by a licensed inspection station. The results of an inspection by the referee facility will be used to determine the final

compliance status of the vehicle. The outcome of a referee inspection will be final. No fee will be charged for these inspections.

8) Temporary Waivers/Required Repairs

The DPS office in El Paso may grant a temporary waiver for a specified vehicle to allow the owner additional time to complete the mandatory repair requirements of the program if the following conditions are met:

a) The vehicle has failed the initial emissions inspection and the mandatory retest,

b) All tampering has been corrected in accordance with the provisions of the vehicle parameter inspection program, and

c) Repair of all malfunctions authorized under the Federal Vehicle Design and Defects Warranty Program or the Federal Vehicle Performance Warranty Program,

d) All of the following reasonable repairs and adjustments with a combined cost of less than or equal to \$250 have been satisfactorily performed to manufacturer's specifications and certified in writing.

(1) Low emissions tune-up including timing adjustment, spark plug replacement (if necessary), idle speed adjustment, fuel mixture adjustment (if applicable),

and all other emission-related adjustments or replacements recommended by the vehicle manufacturer under normal maintenance procedures,

(2) Examination and replacement (if necessary) of air cleaner filter,

(3) Examination and repair (if necessary) of the positive crankcase ventilation system and related components,

(4) Diagnosis of all computer controls and closed-loop systems and repair of all malfunctions not covered by the Federal Warranty Programs specified in (c), and

(5) Diagnosis of any other malfunctions which may have resulted in or contributed to elevated concentrations of CO above the applicable emissions standard and repair of all malfunctions.

Vehicles which have been granted a temporary waiver by the DPS office indicating that these conditions have been satisfied, and otherwise have passed all other inspection requirements, will be issued a punched inspection certificate.

Certificates will not be reissued to such vehicles at the next annual inspection unless one of the following conditions is met:

e) The vehicle passes all inspection requirements including an applicable idle emission test, or

f) The owner provides evidence to the DPS office in El Paso that all additional diagnosed malfunctions, which cost less than or equal to \$450 when combined with the cost of repairs performed in accordance with d)(1)-(5) of this section, have been properly repaired to manufacturer's specifications and certified in writing, since the temporary waiver was granted. In addition, all of the annual maintenance and diagnosed repair requirements identified in d)(1)-(5) of this section must again be performed during the current annual inspection cycle. After meeting these requirements, a vehicle may receive another temporary waiver and punched certificate from the DPS office.

A temporary waiver may also be granted to those vehicles which EPA has identified as "pattern case failures." Pattern case failures are specific vehicle models which conform to all necessary design and performance requirements under the Federal Test Procedures but have demonstrated a higher than expected percentage of failures in operating idle I/M programs. A vehicle identified as a potential pattern case failure must continue to be inspected annually and must be maintained in accordance with the procedures established in b), c), and d)(1)-(3) of this section. Diagnosed repairs which are unrelated to the cause of the pattern case failure must also be performed and are subject to the cost limitations in d)(4)-(5) of this section. Violation of an applicable

emission standard based solely on the cause of the pattern case failure will require no additional action by the vehicle owner. However, vehicle owners will be required to make all necessary repairs or alterations specified in any EPA recall notice which may be issued for that model vehicle prior to the next scheduled inspection following the issuance of the recall notice. Information regarding the identification and status of pattern case vehicles will be supplied by EPA to DPS.

9) Warranty Procedures

This section provides general information regarding federal vehicle warranty programs and procedures. No state or local commitments to participate or intervene in these federal programs is included. However, the vehicle idle I/M program in El Paso County has been designed to satisfy the necessary criteria to enable motorists to qualify for available coverage under the warranty process.

All 1981 and newer model year vehicles with less than 5 years or 50,000 miles, whichever comes first, may be eligible for two federal vehicle warranty programs to assist with the cost of emission-related repairs:

a) The Design and Defects Warranty - requires manufacturers to assume the cost of all repairs or

adjustments to any primary emission control system or device which is found to be defective due to problems in the design or production of the vehicle.

b) The Performance Warranty - requires manufacturers to assume the cost of all repairs or adjustments to any primary emission control system or device necessary to pass an approved idle I/M program.

Vehicles with less than 2 years or 24,000 miles, whichever comes first, may also be eligible for similar protection against defects or poor performance of other engine components which indirectly affect emissions. If a vehicle manufacturer denies a claim for repairs under these two warranty programs, it must prove that tampering, illegal fueling with leaded gasoline, or lack of prescribed maintenance contributed to the idle I/M failure.

The design and implementation of the vehicle idle emissions I/M program in El Paso County are intended to satisfy the requirements of both federal warranty programs. Therefore, if a 1981 or newer model year vehicle fails the idle emission test and meets the mileage, age, and maintenance criteria established by the programs, the vehicle owner should contact the appropriate vehicle manufacturer representative for assistance. Manufacturers usually require repairs to be performed by authorized dealers or service mechanics. Inquiries regarding the warranty programs, vehicle eligibility,

or refusal of a manufacturer to honor a legitimate claim may also be directed to the EPA Field Operations and Support Division in Washington, D.C.

10) Procedures to Assure that Noncomplying
Vehicles Are Not Operated on the Public Road

EPA policy (January, 1981) states that an effective program must include provisions which ensure that noncomplying vehicles are not operated on public roads. Such provisions must be equally effective as prohibiting registration. The enforcement program must include identification of noncomplying vehicles, penalties, and enforcement procedures.

The Texas Vehicle Inspection Act, Article XV - Inspection of Vehicles V.C.S. 6701d, Uniform Act, Section 140 (Appendix X), requires that before a vehicle which was previously registered in another state may be initially registered and titled in the county of residence, the owner must have the vehicle inspected at a state certified inspection station and receive a verification from the permanent identification number of the vehicle. Inspection is required once annually. New vehicles are given a one-time extension which provides for reinspection two years after initial purchase only. All vehicles are required to display a valid inspection certificate.

DPS rules will include provisions to ensure that all 1975 or newer model year vehicles currently registered and operated in El Paso County are inspected under the idle emission inspection program. El Paso County registration will be confirmed whenever a 1975 or newer model year light-duty vehicle is presented for inspection in El Paso or the contiguous county by examining the number code printed on the rear license plate validation sticker and comparing it to a current list of validation sticker code numbers assigned to the El Paso County Tax Collector.

Any person operating a vehicle on the highways of Texas, other than a vehicle licensed in another state and being temporarily and legally operated under a valid reciprocity agreement, in violation of the provision of the Act including operation of a vehicle which does not display a valid inspection certificate, is guilty of a misdemeanor and on conviction shall be punished as provided in Article XVI - Penalties and Disposition of Fines and Forfeitures Section 143 - Penalties for Misdemeanors (Appendix X), with up to a \$200 fine. DPS Rules, TAC 23.91, will prohibit the operation on highways in El Paso County of a 1968 or newer model year vehicle registered in El Paso County which does not display a valid inspection certificate with green numeral insert. This rule is based on provisions of Texas Senate Bill 1205 and supported by a March 16, 1984 opinion by the Texas Attorney General (Appendix X). The Act provides for enforcement of these provisions by any peace

officer in the state and specific letters of commitment are being obtained from law enforcement agencies in and around El Paso County.

Currently, DPS issues inspection certificates with a red numeral insert to vehicles in El Paso County to indicate participation in the vehicle parameter I/M program. Beginning in January, 1987, the DPS shall begin issuing to vehicles inspected in El Paso County an inspection certificate with a green numeral insert to reflect the increased requirements of the exhaust emissions testing performed under the idle I/M program.

11) Public Awareness Plan

EPA policy (July, 1978) requires implementation of a public information program regarding the I/M program. The TACB will assure implementation of the public information program, in coordination with appropriate local agencies, to disseminate information on the vehicle idle I/M program, proper vehicle maintenance, and other related activities.

The DPS will post bulletins at all inspection stations in El Paso County in January, 1987 to explain the new inspection certificates and to inform the inspectors of the importance of properly performing vehicle emissions testing and quality

control procedures. Written information will also be provided to motorists at each inspection station during the initial implementation of the idle I/M program to inform them of the inspection and testing of the vehicle emission exhaust system. The TACB, in coordination with the DPS and local governments, will prepare and distribute brochures, news releases, and public service announcements.

Public information materials will include information on the need for proper maintenance of vehicle emission control systems, the emphasis being placed on the annual inspection of these components and the testing of exhaust emissions by the DPS inspectors, the anti-tampering requirements of TACB Regulation IV, and the mechanic training and certification program.

The main thrust of this public information program will be to inform motor vehicle owners and operators of the need for and advantages of maintaining their vehicle in good operating condition. Information regarding the penalties that could result from violation of the anti-tampering provisions of TACB Regulation IV and the vehicle operating restrictions of the annual DPS inspection program will be included.

Information regarding the mechanic training and certification program will be distributed to mechanics in the El Paso County

area and to the general public. This aspect of the public information program will provide assistance to citizens in selecting qualified mechanics with the training and experience to properly diagnose, repair, and maintain their vehicles. The certification provided to mechanics upon completion of the training program will serve as a recognizable sign of ability to perform proper maintenance on new technology vehicles including emission control systems and closed-loop computer systems.

12) Mechanic Training Program

In the January 19, 1981 policy statement, EPA strongly encouraged establishment of mechanic training programs in conjunction with I/M programs. The effectiveness of the vehicle idle I/M program is highly dependent on the mechanic's skill in identifying and correcting vehicle equipment problems due to malfunctions or poor maintenance to near manufacturer's specifications.

TACB will assure development of the mechanic training program. In 1984, Colorado State University (CSU), under contract with the TACB, developed the curricula for a basic and an advanced level course in the repair and maintenance of late model vehicles. Training of mechanics in El Paso County will be initiated in late 1986. This program will provide training

to service technicians and mechanics on how to repair and service computer-controlled vehicles. Emphasis will be given to proper maintenance and repair of the emission control components and other systems which most critically affect CO emissions from these vehicles. Certification of completion of this training will be provided.

The TACB and CSU will coordinate implementation of this mechanic training program with representatives of automobile manufacturers, mechanics and garage owner associations, local government, and local training institutions. The initial training curriculum will concentrate on post-1980 and newer model year vehicles. Periodic updates of the curriculum will provide new information relative to the new model year vehicles, or to 1975-1980 model year vehicles as resources allow.

The mechanic training program will include a performance test. If the mechanic satisfactorily completes the performance test, he will be issued a certificate. This certificate will be suitable for display. Through the public information program, citizens will be encouraged to have necessary vehicle repairs performed by these or other qualified mechanics.

Currently, EPA requires vehicle manufacturers to place under the hood of each new vehicle a label with general instructions on emission control systems and critical engine settings.

The current requirement is very general and different manufacturers provide the required information in a variety of formats and at many different levels of detail. The TACB encourages EPA to revise the federal labeling regulations to require all manufacturers to present the information on the label affixed to each new vehicle in a consistent and easily understood format and that specific information on the label shall include:

a) the type and location of emission control systems and components required on the vehicle as a condition of the original vehicle certification, and

b) a list of the maintenance and parts replacements necessary to protect the federal warranty coverage.

Such labeling could substantially reduce the cost of providing technical support for the El Paso County vehicle I/M program and would provide every motorist and mechanic with the specific information necessary to maintain a vehicle at its designed emission performance level.

c. Estimated Carbon Monoxide Emission Reduction Credits

The guidelines for preparation of this SIP revision contained in the Guidance Document for Correction of Part D SIPs for

Nonattainment Areas (Appendix AA) references the EPA policy on vehicle I/M published in the January 22, 1981 Federal Register for 1982 SIP extension areas. In order to satisfy the requirements specified in these documents, the control strategy adopted in an approvable SIP revision must (1) provide sufficient emission reductions to demonstrate attainment of the NAAQS for CO by December 31, 1987 or as expeditiously as practicable, and (2) include a vehicle I/M program capable of achieving emission reduction credits equal to or greater than RACT.

The SIP revisions adopted on July 26, 1985 as Section D.2. of the Texas SIP, Post-1982 Carbon Monoxide SIP Revisions for El Paso County, projected a total reduction in CO emissions of 28.7% (or 42,097 tons per year) in El Paso County was necessary to demonstrate attainment by December 31, 1987.

However, a similar reduction in emissions from neighboring Ciudad Juarez, Mexico may also be necessary to achieve attainment. Emission reductions of only 31,991 tons per year are predicted to result from implementation of the control measures incorporated into the July, 1985 SIP revisions.

These reductions will result from implementation of various transportation control measures and the vehicle parameter I/M program, as well as the Federal Motor Vehicle Control Program. Therefore, an additional reduction of 10,106 tons of CO per year is required to provide El Paso's portion of

the emission reductions necessary to demonstrate attainment of the NAAQS.

In accordance with EPA guidance, the TACB used the Mobile Source Emission Control Model (MOBILE 3) to calculate the projected CO emission reductions from implementation of the idle I/M program in El Paso. MOBILE 3 inputs concerning vehicle data specific for El Paso County were the same used in the development of the emission estimates for the Post-1982 SIP revisions (Section D.2.). Specifically, this includes average vehicle speeds, hot and cold start information, and vehicle registration distribution, as provided by the State Department of Highways and Public Transportation. In addition, local tampering rates for El Paso County, as provided by EPA, have been used as MOBILE 3 inputs. The emission reductions projected to result from implementation of the program were calculated as of December 31 of each year by applying the upcoming years' vehicle emission factor to the past years' vehicle miles traveled.

Assuming a program start-up date of January 1, 1987, program emission reductions of 14,596 tons of CO per year by December 31, 1987 are calculated using the MOBILE 3 model. When added to the emission reductions estimated for other control measures implemented in El Paso County and considering the projected minor, area, and non-highway mobile source

growth, the total reduction in CO emissions is 4,490 tons per year more than needed to demonstrate attainment.

In El Paso County, based on county-specific MOBILE 3 inputs and EPA calculation methodology, the necessary RACT emission reduction requirement for El Paso County is 33.3%. The CO emission credits for the parameter I/M program alone, as calculated by these procedures, is 16.6%. However, when combined with the 14,596 tons per year of additional emission reductions from the proposed idle I/M program, an overall RACT credit of approximately 40.4% is achieved. This is sufficient to satisfy RACT.

Table 9 presents the reduction estimates included in Table 6 of Section D.2., Post-1982 Carbon Monoxide SIP Revisions for El Paso County with the addition of predicted emission reductions from the proposed vehicle idle I/M program. The total emission reductions projected to result from these control measures is sufficient to demonstrate attainment of the CO standard by December 31, 1987. These calculations do not consider any emissions or emission changes in Ciudad Juarez, Mexico. As mentioned previously, additional reductions in CO emissions from Ciudad Juarez may be necessary for attainment of the NAAQS for CO in El Paso.

Table 9.
CO EMISSIONS CHANGES FOR EL PASO COUNTY
1982-1987

	CO Reductions		CO Increases		Net Emissions Change	
	Tons	%*	Tons	%*	Tons	%*
Federal Motor Vehicle Control Program	19,406	14.1				
Transportation Control Measures	2,488	1.8				
Vehicle Parameter I/M Program	10,097	7.4				
Vehicle Idle I/M Program	14,596	10.6				
Non-Highway Mobile Growth			2,139	1.6		
Area and Minor Source Growth			478	0.3		
Total	46,587	33.9	2,617	1.9	43,970	32.0

*Percent of 1982 Emissions Inventory (137,561 tons).

In accordance with the January 27, 1984 EPA guidelines, emissions have been projected to 1992 and are shown in Appendix AI. Emissions are expected to continue to decrease as the result of ongoing mobile source emissions control programs.