

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

TO MODIFY THE INSPECTION/MAINTENANCE PROGRAM FOR  
EL PASO, AND HOUSTON/GALVESTON IN  
OZONE NONATTAINMENT AREAS

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

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## B. OZONE CONTROL STRATEGY

1.-7. (No Change)

8. MOBILE SOURCE (Revised)

The Federal Clean Air Act (FCAA) Amendments of 1990 authorized the U.S. Environmental Protection Agency (EPA) to designate areas failing to meet the National Ambient Air Quality Standard (NAAQS) for ozone as nonattainment and to classify them according to severity. The four areas in Texas and their respective classification include Houston/Galveston (severe), Beaumont/Port Arthur (serious), El Paso (serious), and Dallas/Fort Worth (moderate). Programs to control mobile source emissions are required in those areas to contribute toward mandatory reductions and attainment of the standards.

a. Vehicle Inspection/Maintenance (I/M) Program  
(Revised)

Texas is required to submit a revision to the State Implementation Plan (SIP) for each area no later than November 15, 1993 which includes an I/M program to control emissions from motor vehicles. Inspection and maintenance programs are already in place in Harris, El Paso, Dallas, and Tarrant Counties, but the FCAA Amendments require substantial enhancements to the existing

programs. A basic program, as outlined in the FCAA Amendments in §182(a)(2)(B)(ii), is required in marginal and moderate ozone nonattainment areas or in serious, severe, or extreme ozone nonattainment areas with an urbanized population less than 200,000. An enhanced I/M program is required, as outlined in the FCAA Amendments in Section 182(c)(3), in areas which are classified as serious, severe, or extreme ozone nonattainment areas and have an urbanized population of 200,000 or more.

The I/M program will reduce hydrocarbon emissions, which include volatile organic compounds (VOC), that react with nitrogen oxides (NO<sub>x</sub>) to form ground level ozone. Ground level ozone is an irritant to the lungs and especially impacts children, older citizens, and others that may have decreased lung capacity. Ozone contributes to lower crop yield. Some hydrocarbon (HC) emissions include VOC such as benzene, formaldehyde, and 1,3-butadiene, which are air toxics. They cause cancer and have other adverse health effects.

The I/M program will reduce carbon monoxide (CO) which interferes with the oxygen-carrying capacity of the blood. Exposure aggravates angina and other aspects of coronary heart disease and decreases exercise tolerance in persons with cardiovascular problems. Infants, fetuses, elderly persons, and individuals with respiratory diseases are also particularly susceptible to CO

poisoning. Inspection and maintenance programs will reduce CO emissions.

The I/M program will reduce NO<sub>x</sub>, including nitrogen dioxide (NO<sub>2</sub>) and nitrous oxide, which irritates the lungs, lowers resistance to respiratory infections, and contributes to the development of emphysema, bronchitis, and pneumonia. NO<sub>x</sub> contribute to ozone formation (ground level) and visibility degradation and can also react chemically in the air to form nitric acid. NO<sub>x</sub> reductions will be achieved in enhanced I/M programs; basic I/M program areas are required to implement programs that result in no NO<sub>x</sub> increases.

On November 5, 1992, EPA published the final rules for I/M programs; [See Appendix A; Federal Register Part VII, EPA, 40 CFR Part 51, I/M Program Requirements; Final Rule (EPA's Final I/M Rule)]. These rules establish performance standards and other requirements for basic and enhanced in-use vehicle I/M programs.

On November 10, 1993 the TNRCC adopted an I/M SIP revisions which were intended to satisfy the requirements for all new and existing I/M program areas based on compliance with performance standards established by EPA. The I/M model years requirements for enhanced areas included high-tech testing for 1990 and newer model years for the first two years of emission testing. In Houston, high-tech testing was to be extended to 1986 and newer

model years for following test years. Public hearings were held during the week of August 23-26, 1993, regarding proposed SIP revisions for the vehicle I/M program in ozone nonattainment areas.

The EPA presented testimony stating that additional model years covered by high-tech testing or tighter than recommended emissions standards were necessary in the El Paso and Houston/Galveston areas to meet the enhanced I/M performance standard.

This I/M SIP revision address EPA's concerns by requiring high-tech testing beginning from the start of the program for the following:

- o model years 1988 and newer in El Paso; and
- o model years 1984 and newer in the Houston\Galveston area.

In addition, MOBILE5a inputs needed revision in several areas in order for the I/M SIP to meet EPA's performance standards, therefore, the Technical Supplement I required revisions in the following additional areas:

- o new emission standards, changing the carbon monoxide (CO) threshold cutpoint;

- o new purge testing inclusion years, reflecting changes in the model-year coverages;
- o new pre-1981 model year stringency levels; and,
- o new compliance levels and other miscellaneous revisions.

These SIP revisions are intended to satisfy the performance standards in El Paso and Houston/Galveston nonattainment areas based on performance standards established by EPA.

1) Applicability

a) General (No Change.)

b) Program Summary (Revised)

TABLE 1 shows the key features of each area's I/M Program.

2)-22) (No Change.)

TABLE 1  
SUMMARY OF TEXAS I/M PROGRAMS

	D/FW	B/PA	EL PASO	H/G
STARTING DATE	July 1, 1994	July 1, 1994	January 1, 1995	January 1, 1995
MODEL YEARS (GASOLINE)	1968 and newer	1968 and newer	1968 and newer	1968 and newer
TEST TYPES - PROGRAM START				
TWO-SPEED IDLE	Heavy-Duty and dedicated four-wheel drive only			
LOADED TWO-SPEED	1968 to 1985	All Light- Duty	1968 to 1989	1968 to 1989
HIGH-TECH & PURGE	1986 & newer	None	1988 & newer	1984 & newer
TEST TYPES - IN 1997	Same	Same	Same	1984 & newer High-Tech & Purge
PRESSURE TEST	1971 +	1971 +	1971 +	1971 +
EMISSION CONTROL DEVICE (VISUAL) INSPECTION	Fuel inlet restrictor and catalyst			
WAIVER RATE	3%	1%	3%	3%
TEST FREQUENCY	Biennial	Biennial	Biennial	Biennial

(Revised February 16, 1994)

TECHNICAL SUPPLEMENT (Revised)

THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION (TNRCC),  
"BASIC AND ENHANCED PERFORMANCE STANDARDS" AND THE TNRCC  
MODELING INPUTS FOR PROPOSED INSPECTION/MAINTENANCE PROGRAMS

FEBRUARY 16, 1994

## TECHNICAL SUPPLEMENT

### INSPECTION/MAINTENANCE (I/M) PERFORMANCE STANDARDS FOR BASIC AND ENHANCED PROGRAM AREAS (§§51.351 and 51.352)

#### a. Overview

The Texas Natural Resource Conservation Commission (TNRCC) commits to implementing I/M programs which meet or exceed the minimum emission reductions required in the basic (§51.352) and enhanced (§51.351) performance standards contained in the U.S. Environmental Protection Agency's (EPA's) final I/M rule promulgated on date. A performance standard is the targeted motor vehicle emission reduction generated from specific I/M program input parameters (design elements) using EPA's current MOBILE emissions computer model. The TNRCC's most recent computer modeling indicates the proposed I/M programs meet or exceed the required I/M performance standard for applicable air pollutants. This version of the Technical Supplement includes the modeling inputs, procedures, and results and revises information provided in an earlier document dated November 10, 1993.

A state is required to meet or exceed the applicable performance standard for any I/M nonattainment area. There are two performance standards for I/M nonattainment areas: basic and enhanced. The Beaumont/Port Arthur and Dallas/Fort Worth nonattainment

areas are required to implement basic I/M programs, while the Houston/Galveston and El Paso nonattainment areas are required to implement enhanced I/M programs. The basic performance standard is less stringent than the enhanced performance standard and, thus, provides greater I/M program parameter flexibility. However, if one input parameter for a proposed I/M program design is more lax than the applicable performance standard parameter, the proposed I/M program design must compensate by being more restrictive in another input parameter in order to meet the performance standard. The Texas I/M program design is an equilibrium of the applicable performance standard parameters and compensations.

The TNRCC modeled the four Texas nonattainment areas using the most current version of EPA's mobile source emission model, MOBILE5a, released on March 23, 1993. For each pollutant and measurement milestone year, the TACB has provided the emission factor for (grams per mile (gpm)) for the following scenarios:

- 1) a no-I/M scenario, which is a base case;
- 2) the EPA performance standard; and
- 3) the Texas I/M program commitment.

Local parameters used in the MOBILE5a input include data collected on a county-wide basis. Modeling for all nonattainment areas included use of class B volatility gasoline. No refueling

emissions were modeled for I/M program purposes since they are considered to be area (stationary source, not mobile source) emissions in the TNRCC inventory.

For modeling and attainment demonstration purposes, nonattainment areas designated as moderate for ozone must model vehicle emission reductions for 1997; serious ozone nonattainment areas must model vehicle emission reductions for 1997 and 2000; and severe ozone nonattainment areas must model vehicle emission reductions for 2000, 2003, 2006, and 2008. All carbon monoxide (CO) nonattainment areas must model vehicle emission reductions for 2001.

b. Modeling Analysis for Basic I/M Programs

1) Network type

a) Performance Standard

A state must model the performance standard for each basic I/M program area using a test-only (centralized) I/M network design.

b) Texas I/M Program

The proposed Texas I/M Program in both Dallas/Fort Worth and Beaumont/Port Arthur is a test-only network.

2) Start Date

a) Performance Standard

A state must model the performance standard for each basic I/M program area with a start date of 1983 for any nonattainment area having an existing I/M program; otherwise, a start date of 1994 applies toward any nonattainment area with a newly subject I/M program.

b) Texas I/M Program

The proposed I/M program for the Beaumont/Port Arthur nonattainment area was modeled with a start date of 1994 to reflect when the first I/M program for the nonattainment area will commence.

The proposed I/M program for the Dallas/Fort Worth nonattainment area was modeled with a start date of 1990 (in Dallas and Tarrant Counties) to reflect the start of the existing decentralized emission inspection program. The start year for Denton and Collin Counties was modeled for 1995.

3) Test Frequency

a) Performance Standard

A state must model the performance standard for each basic I/M program area with an annual emission inspection frequency.

b) Texas I/M Program

The proposed I/M program for each basic I/M program area will be biennial (once every two years) emission inspection program.

4) Model Year Coverage

a) Performance Standard

A state must model the performance standard for each basic I/M program area with an emissions inspection of 1968 and newer model year vehicles.

b) Texas I/M Program

Vehicle coverage for the proposed I/M program in each basic I/M program area includes an emission inspection of all 1968 and newer model year vehicles.

5) Vehicle Type Coverage

a) Performance Standard

A state must model the performance standard for each basic I/M program area for light-duty vehicles.

b) Texas I/M Program

The proposed I/M program for each basic I/M program area includes light-duty vehicles, light-duty trucks (types 1 and 2), and heavy-duty gasoline vehicles. Motorcycles are excluded from emission inspection requirements.

6) Exhaust Emission Test Type

a) Performance Standard

A state must model the exhaust emission test type in the performance standard for each basic I/M program as an idle exhaust emission test (the least sophisticated of EPA-approved steady-state exhaust emission tests).

b) Texas I/M Program

The exhaust emission type for the proposed I/M program in the Dallas/Fort Worth nonattainment area will include IM240 transient mass-emission test for 1986 and newer model year light-duty gasoline vehicles and trucks, steady-state loaded/idle exhaust emission testing for 1968 through 1985 model year light-duty

gasoline vehicles and trucks, and steady-state preconditioned two-speed idle exhaust emission testing for all model years of heavy-duty gasoline vehicles.

The exhaust emission type for the proposed I/M program in the Beaumont/Port Arthur nonattainment area will include steady-state loaded/idle exhaust emission testing of 1968 and newer model year light-duty vehicles and trucks, and steady-state preconditioned two-speed idle exhaust emission testing for all 1968 and newer model years of heavy-duty gasoline vehicles.

7) Emission Standards

a) Performance Standard

Modeling the performance standard for emission standards requires cutpoints no weaker than specified in 40 CFR Part 85, Subpart W (steady-state exhaust emission testing) for 1981 and newer model year light-duty vehicles and light-duty trucks.

b) Texas I/M Program

The emission standards in the proposed Texas I/M Program for steady-state exhaust emission testing are 220 parts per million (ppm) of hydrocarbon (HC) and 1.2 percent CO in accordance with 40 CFR Part 85, Subpart W. For modeling purposes, the

Dallas/Fort Worth I/M Program cutpoints in the year 1997 for IM240 transient mass-emission tests are 1.2 gpm volatile organic compounds (VOC), 20 gpm CO, and 2.5 gpm for oxides of nitrogen (NO<sub>x</sub>).

8) Emission Control Device Inspections

a) Performance Standard

No emission control device inspections are required when modeling the performance standard for basic I/M programs.

b) Texas I/M Program

The emission control device inspections for the proposed I/M program in the basic I/M programs include a visual inspection of the catalyst and fuel inlet restrictor.

9) Evaporative System Function Checks

a) Performance Standard

No evaporative system function checks are required when modeling the performance standard for basic I/M programs.

b) Texas I/M Program

The proposed evaporative system function checks for the basic I/M programs includes an evaporative system integrity (pressure) test for all 1971 and newer model year vehicles. In addition, the Dallas/Forth Worth I/M Program proposal includes an evaporative system transient purge test for all 1986 and newer model year light-duty vehicles and light-duty trucks (types 1 and 2).

10) Stringency

a) Performance Standard

Modeling of the basic I/M performance standard requires a 20% emission test failure rate among pre-1981 model year vehicles.

b) Texas I/M Program

Modeling of the proposed I/M program in the basic I/M areas includes a 20% emission test failure rate among pre-1981 model year vehicles.

11) Waiver Rate

a) Performance Standard

No waivers are assumed when modeling the performance standard for a basic I/M program.

b) Texas I/M Program

The waiver rate for the proposed I/M program provides a 1% waiver for the Beaumont/Port Arthur nonattainment area and a 3% waiver rate for the Dallas/Fort Worth nonattainment area. The waiver rate is higher in the Dallas/Fort Worth nonattainment area than in the Beaumont/Port Arthur nonattainment area because the Dallas/Fort Worth nonattainment area will implement an IM240 transient mass-emission test.

12) Compliance Rate

a) Performance Standard

Modeling the performance standard requires a 100% compliance rate of the covered vehicles in an I/M program.

b) Texas I/M Program

The proposed I/M program for the basic I/M areas is modeled with a compliance rate of 96%.

13) Evaluation Date

a) Performance Standard

Modeling the performance standard for a basic I/M program requires an evaluation date of 1997.

b) Texas I/M Program

The proposed I/M program for the basic I/M areas is modeled with an evaluation date of 1997 for ozone nonattainment areas for moderate ozone nonattainment areas (Dallas/Fort Worth). Evaluation dates for Beaumont/Port Arthur are 1997 and 2000 (serious ozone nonattainment area).

c. Modeling Analysis for Enhanced I/M Programs

1) Network Type

a) Performance Standard

A state must model the performance standard for each enhanced I/M program area using a test-only (centralized) I/M network design.

b) Texas I/M Program

The proposed Texas I/M programs in both Houston/Galveston and El Paso is a test-only network. In El Paso, the existing decentralized I/M program and the proposed test-only I/M program will co-exist for one year in 1995. During that period, 1968 through 1987 model year light-duty vehicles and light-duty trucks will report to decentralized facilities for emissions inspections, while 1988 and newer model year light-duty vehicles, light-duty trucks (types 1 and 2), and heavy-duty vehicles will report to contractor-operated test-only facilities for emissions inspection. The existing decentralized I/M program in El Paso will phase out December 31, 1995. Beginning January 1, 1996, all 1968 and newer light-duty vehicles, light-duty trucks (types 1 and 2), and heavy-duty vehicles will be inspected in the test-only network.

2) Start Date

a) Performance Standard

A state must model the performance standard for each enhanced I/M program area with a start date of 1983 for any nonattainment area having an existing I/M program, otherwise, a start date of 1995 applies toward any nonattainment area with a newly subject I/M program.

b) Texas I/M Program

The proposed I/M program for the El Paso nonattainment area was modeled with the a start date of 1987 to reflect the commencement of the existing decentralized I/M program. The proposed I/M program for the Houston/Galveston nonattainment area was modeled with a start date of 1995 to reflect when the start of the first I/M program for the nonattainment area would commence.

3) Test Frequency

a) Performance Standard

A state must model the performance standard for each enhanced I/M program area with an annual emission inspection frequency.

b) Texas I/M Program

The proposed I/M program for each enhanced I/M program area is a biennial (once every two years) emission inspection program.

4) Model Year Coverage

a) Performance Standard

A state must model the performance standard for each enhanced I/M program area with an emission inspection of 1968 and newer model year vehicles.

b) Texas I/M Program

Vehicle coverage for the proposed I/M program in each enhanced I/M program area includes an emission inspection of all 1968 and newer model year vehicles.

5) Vehicle Type Coverage

a) Performance Standard

A state must model the performance standard for each enhanced I/M program area for light-duty vehicles and light-duty trucks (types 1 and 2).

b) Texas I/M Program

The proposed I/M program for each enhanced I/M program area includes light-duty vehicles, light-duty trucks (types 1 and 2), and heavy-duty gasoline vehicles. Motorcycles are excluded from emission inspection requirements.

6) Exhaust Emission Test Type

a) Performance Standard

A state must model the exhaust emission test type in the performance standard for each enhanced I/M program as an idle exhaust emission test for pre-1981 model year vehicles, a two-speed exhaust emission test for 1981 through 1985 model year vehicles, and transient mass-emission testing for 1986 and newer model year vehicles.

b) Texas I/M Program

The proposed I/M program exhaust emission type in the Houston/Galveston area will include IM240 transient mass-emission tests for 1984 and newer model year light-duty gasoline vehicles and trucks, steady-state loaded/idle exhaust testing for 1968 through 1983 model year light-duty gasoline vehicles and trucks, and a steady-state preconditioned two-speed idle exhaust testing for 1968 and newer model years of heavy-duty gasoline vehicles. In El Paso, proposed I/M program exhaust emission type will include IM240 testing for 1988 and newer light-duty gasoline vehicles and trucks, steady-state loaded/idle exhaust testing for 1968-1987 model year light-duty gasoline vehicles and trucks, and steady-state preconditioned two-speed idle exhaust testing for 1968 and newer heavy-duty gasoline vehicles.

7) Emission Standards

a) Performance Standard

Extensive emission standards are provided by EPA's final I/M rule for the enhanced performance standard. For the purposes of modeling, however, the enhanced performance standard was modeled with 220 ppm of HC and 1.2% CO for steady-state exhaust emission testing and 0.8 gpm of HC, 15 gpm of CO, and 2.0 gpm of NO<sub>x</sub> for IM240 transient mass-emission testing.

b) Texas I/M Program

For 1997, the proposed I/M program in enhanced areas was modeled with 220 ppm of HC and 1.2% CO for steady-state exhaust emission testing and 1.2 gpm of HC, 20 gpm of CO, and 2.5 gpm of NO<sub>x</sub> for IM240 transient mass-emission testing. For 2000 and later, the proposed I/M program in enhanced areas was modeled with 220 ppm of HC and 1.2% CO for steady-state exhaust emission testing and 0.8 gpm of HC, 15 gpm of CO, and 2.0 gpm of NO<sub>x</sub> for IM240 transient mass-emission testing.

8) Emission Control Device Inspections

a) Performance Standard

A state must model the enhanced performance standard to include a visual inspection of the catalyst and inlet restrictor.

b) Texas I/M Program

The emission control device inspection for the proposed I/M program in the enhanced area includes a visual inspection of the catalyst and fuel inlet restrictor.

9) Evaporative System Function Checks

a) Performance Standard

A state must model the enhanced performance standard to include an evaporative system integrity (pressure) test on 1983 and later model year vehicles and an evaporative system transient purge test on 1986 and newer model year vehicles.

b) Texas I/M Program

The proposed evaporative system function checks for the enhanced I/M programs includes an evaporative system integrity (pressure) test for all 1971 and newer model year vehicles and an evaporative system transient purge test for all 1984 (Houston/Galveston) and 1988 (El Paso) and newer model year light-duty vehicles and light-duty trucks (types 1 and 2).

10) Stringency

a) Performance Standard

Modeling of the enhanced I/M performance standard requires a 20% emission test failure rate among pre-1981 model year vehicles.

b) Texas I/M Program

Modeling of the proposed I/M program in the first phase includes a 20% emission test failure rate among pre-1981 model year vehicles. Commencing on January 1, 1998, the stringency rate may be 40% for pre-1981 light-duty gasoline vehicles and trucks.

11) Waiver Rate

a) Performance Standard

The enhanced performance standard includes a 3% waiver rate provision modeling purposes.

b) Texas I/M Program

The waiver rate for the proposed I/M program provides a 3% waiver for the Houston/Galveston and El Paso nonattainment areas.

12) Compliance Rate

a) Performance Standard

Modeling the enhanced performance standard requires a 96% compliance rate of the covered vehicles in an I/M program.

b) Texas I/M Program

The proposed I/M program for the enhanced areas is modeled with a compliance rate of 96%.

13) Evaluation Date

a) Performance Standard

Modeling the performance standard for an enhanced area requires an evaluation date of 2000 and for each three years thereafter, until the ozone attainment date is met. The performance standard is modeled for 2001 for CO nonattainment areas.

b) Texas I/M Program

The proposed I/M program for El Paso is modeled with an evaluation date of 2000 for ozone and 2001 for CO. The proposed I/M

program for Houston/Galveston is modeled for 2000, 2003, 2006, and 2008.

d. MOBILE5a Summary Output Tables

TABLES 1-4 reflect vehicle emission reductions calculated by EPA's MOBILE5a computer model for the proposed I/M program in each of the Texas nonattainment areas.

TABLE 1. Aggregated Beaumont/Port Arthur MOBILE5a Output

Jefferson County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	1.65	2.55	na
Performance Std.	1.55	2.55	na
Texas Program	1.37	2.52	na

Jefferson County

January 2000	VOC	NO <sub>x</sub>	CO
No-I/M	1.46	2.30	na
Performance Std.	1.37	2.29	na
Texas Program	1.18	2.26	na

Orange County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	1.50	2.66	na
Performance Std.	1.42	2.66	na
Texas Program	1.25	2.63	na

Orange County

January 2000	VOC	NO <sub>x</sub>	CO
No-I/M	1.31	2.40	na
Performance Std.	1.24	2.39	na
Texas Program	1.07	2.36	na

TABLE 2. Aggregated Dallas/Fort Worth MOBILE5a Output

Dallas County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	2.05	2.17	na
Performance Std.	1.92	2.15	na
Texas Program	1.55	1.97	na

TABLE 2B. Aggregated Dallas/Fort Worth MOBILE5a Output

Tarrant County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	1.94	2.09	na
Performance Std.	1.82	2.07	na
Texas Program	1.48	1.90	na

TABLE 2C. Aggregated Dallas/Fort Worth MOBILE5a Output

Collin County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	1.92	2.29	na
Performance Std.	1.81	2.27	na
Texas Program	1.49	1.12	na

TABLE 2D. Aggregated Dallas/Fort Worth MOBILE5a Output

Denton County

January 1997	VOC	NO <sub>x</sub>	CO
No-I/M	1.95	2.39	na
Performance Std.	1.84	2.37	na
Texas Program	1.51	1.21	na

TABLE 3A. Aggregated Houston/Galveston MOBILE5a Output

Galveston County

January 2000	VOC	NO <sub>x</sub>	CO
No-I/M	1.23	1.77	na
Performance Std.	0.81	1.50	na
Texas Program	0.80	1.48	na

January 2003	VOC	NO <sub>x</sub>	CO
No-I/M	1.12	1.65	na
Performance Std.	0.67	1.34	na
Texas Program	0.67	1.34	na

January 2006	VOC	NO <sub>x</sub>	CO
No-I/M	1.05	1.58	na
Performance Std.	0.59	1.24	na
Texas Program	0.61	1.26	na

TABLE 3A. Aggregated Houston/Galveston MOBILE5a Output  
(Continued)

Galveston County

January 2008	VOC	NO <sub>x</sub>	CO
No-I/M	1.02	1.55	na
Performance Std.	0.56	1.21	na
Texas Program	0.58	1.22	na

TABLE 3B. Aggregated Houston/Galveston MOBILE5a Output

Harris County

January 2000	VOC	NO <sub>x</sub>	CO
No-I/M	1.27	1.76	na
Performance Std.	0.84	1.49	na
Texas Program	0.83	1.47	na

January 2003	VOC	NO <sub>x</sub>	CO
No-I/M	1.16	1.64	na
Performance Std.	0.69	1.33	na
Texas Program	0.70	1.33	na

January 2006	VOC	NO <sub>x</sub>	CO
No-I/M	1.09	1.57	na
Performance Std.	0.61	1.23	na
Texas Program	0.63	1.25	na

TABLE 3B. Aggregated Houston/Galveston MOBILE5a Output  
(Continued)

Harris County

January 2008	VOC	NO <sub>x</sub>	CO
No-I/M	1.06	1.54	na
Performance Std.	0.58	1.20	na
Texas Program	0.60	1.22	na

TABLE 4. El Paso MOBILE5a Output

El Paso County

January 2000	VOC	NO <sub>x</sub>	CO
No-I/M	1.78	2.13	na
Performance Std.	1.28	1.96	na
Texas Program	1.21	1.86	na

TABLE 4. El Paso MOBILE5a Output (continued)

El Paso County

January 2001	VOC	NO <sub>x</sub>	CO
No-I/M	2.18	2.40	19.50
Performance Std.	1.44	2.12	12.90
Texas Program	1.42	2.08	12.66