REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP) FOR CARBON MONOXIDE (CO)

POST-1990 CO SIP FOR MODERATE AREA - EL PASO

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087

OCTOBER 1993

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D. CARBON MONOXIDE (CO) (Revised.)

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

(a)-(f) (No change.)

2. POST-1982 CO SIP REVISIONS FOR EL PASO COUNTY

(a)-(j) (No change.)

3. POST-1990 CO SIP REVISIONS FOR MODERATE AREA EL PASO

(a)-(h) (No change.)

i. Contingency measures (New.)

Under §179B of the Federal Clean Air Act (FCAA) (§818 of the 1990 FCAA Amendments), Texas may demonstrate that El Paso would meet the National Ambient Air Quality Standard (NAAQS) for carbon monoxide (CO) based on United States emissions alone. The Texas Natural Resource Conservation Commission (TNRCC) will submit such a demonstration by December 1994. If the demonstration for the 1995 attainment date shows projected CO levels in excess of the standard, then the TNRCC must implement contingency control

measures. These measures must be rules that are already passed and require no further rulemaking to implement. Contingency measures must reduce CO by at least an amount equal to that emitted by one year of growth in vehicle miles traveled. The TNRCC calculates that this figure is 10.4 tons of CO per day. The deadline for submitting CO contingency measures to the U.S. Environmental Protection Agency is November 15, 1993.

El Paso is currently classified as a moderate CO nonattainment area, and under this classification, requires only a basic inspection and maintenance (I/M) program. However, El Paso is also classified as a serious nonattainment area for ozone. This status requires the enhanced I/M program. The TNRCC proposes to use the difference in CO reduction between federally approved basic and enhanced I/M programs as a CO contingency measure. This additional credit will be claimed in subsequent attainment demonstrations should the first run with the basic credits not show attainment of the CO standard. The additional credit projected for the enhanced program versus the basic program is 52 tons of CO per day.

Contingency measures would go into effect should El Paso fail to attain the CO NAAQS by December 31, 1995. The contingency rule itself would immediately go into effect, but the implementation of the rule would require more time. For example, if the contingency measure were to be an increase in the oxygen content of

gasoline, it would not be possible to increase the oxygen content immediately on determining nonattainment. Several months would be needed to obtain additional oxygenate and blend it with existing fuel supplies. In fact, it would probably be necessary to wait until the next oxygenated fuel cycle the following winter. By this reasoning, TNRCC believes that a similar period of time should be allowed for I/M credits to build as contingency credits. Therefore, TNRCC will project I/M results through December 1996 to determine contingency credits.

The TNRCC has committed to the adoption of the enhanced I/M program in a previous SIP submittal and has accepted a proposal for initiating and managing the program. Documentation supporting the anticipated CO credits is found in Appendix AM.

REVISIONS TO THE STATE IMPLEMENTATION PLAN (SIP) FOR CARBON MONOXIDE (CO)

APPENDIX AM

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION
P.O. BOX 13087
AUSTIN, TEXAS 78711-3087

OCTOBER 1993

CONTINGENCY SPREADSHEET
RCC
OCTOBER 14, 1993

EMISSION FACTORS (SEE MOBILE5A DOCUMENTATION)
JANUARY 1, 1997 EVALUATION

	CO,GPM	0	DESCRIPTION	
RUN#1	22.43	NO-I/M	BASE CASE	
RUN#2	19.82	EPA STD	APPENDIX C	
RUN#3	20.92	ATP1	68-79; IDLE I/M	NOT USED
RUN#4	21.92	ATP2	80-95	NOT USED
RUN#5	15.97	IM240	TEXAS PROPOSAL	

STEP 1. CALCULATE EMISSION FACTOR BENEFITS

A) EPA STANDARD BENEFIT
RUN#1 - RUN#2 = 2.61 = EPB

B) TEXAS PROGRAM BENEFIT
RUN#1 - RUN#5 = 6.46 = TPB

C) CONTINGENCY BENEFIT
TPB - EPB = 3.85 = CB

STEP 2. CALCULATE TONS PER DAY CO CONTINGENCY

VMT*CB = 51.80991

CONTINGENCY = 51.81 TONS PER DAY

:hment: El Paso CO Contingency Analysis
: Natural Resource Conservation Commission
ity Division

sed: October 14, 1993

: Paso CO Run#1: no-I/M
[LE5a (26-Mar-93)

? Warning:
1.00 MYR sum not = 1. (will normalize)
? Warning:
1.00 MYR sum not = 1. (will normalize)
? Warning:
0.999 MYR sum not = 1. (will normalize)
? Warning:
0.999 MYR sum not = 1. (will normalize)
? Warning:
1.00 MYR sum not = 1. (will normalize)
? Warning:
1.00 MYR sum not = 1. (will normalize)
? Warning:
0.999 MYR sum not = 1. (will normalize)
Paso-03-Run

Minimum Temp: 26. (F) Maximum Temp: 63. (F)
Period 1 RVP: 11.6 Period 2 RVP: 11.6 Period 2 Yr: 1990
HC emission factors include evaporative HC emission factors.

ssion factors are as of Jan. 1st of the indicated calendar year.
r supplied veh registration distributions.

›ar: 1997	Region: Low	Altitude:	500. Ft.
	I/M Program: No	Ambient Temp:	51.1 / 51.1 / 51.1 F
	Anti-tam. Program: No	Operating Mode:	20.6 / 27.3 / 20.6
	Reformulated Gas: No		

. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
. Spd.:	35.9	35.9	35.9		35.9	35.9	35.9	35.9	35.9	
MT Mix:	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
posite Emission Factors (Gm/Mile)										
HC:	2.26	2.78	3.61	2.96	3.64	0.49	0.69	1.60	4.60	2.44
st CO:	21.09	26.13	31.88	27.35	40.61	0.97	1.12	6.89	14.88	22.43
st NOX:	2.15	2.53	3.00	2.63	6.18	1.44	1.65	12.89	1.23	2.73

```
11 El Paso CO Run#2:  EPA Basic Performance Standard
 MOBILE5a (26-Mar-93)
0
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
0I/M program selected:

0    Start year (January 1):              1983
     Pre-1981 MYR stringency rate:         20%
     First model year covered:            1968
     Last model year covered:             1989
     Waiver rate (pre-1981):               0.%
     Waiver rate (1981 and newer):         0.%
     Compliance Rate:                    100.%
     Inspection type:                     Test Only
     Inspection frequency                 Annual
     Vehicle types covered:               LDGV - Yes
                                         LDGT1 - No
                                         LDGT2 - No
                                          HDGV - No
     1981 & later MYR test type:          Idle
     Cutpoints, HC:  220.000   CO:    1.200   NOx:  999.000
0El Paso-03-Run
                    Minimum Temp: 26. (F)   Maximum Temp: 63. (F)
                    Period 1 RVP: 11.6      Period 2 RVP: 11.6 Period 2 Yr: 1990
0VOC HC emission factors include evaporative HC emission factors.
0_____________________________________________________________________________
0Emission factors are as of Jan. 1st of the indicated calendar year.
0User supplied veh registration distributions.
0Cal. Year: 1997          Region: Low          Altitude:  500. Ft.
                     I/M Program: Yes       Ambient Temp:   51.1 / 51.1 / 51.1 F
                Anti-tam. Program: No      Operating Mode:   20.6 / 27.3 / 20.6
                 Reformulated Gas: No
0Veh. Type:  LDGV  LDGT1  LDGT2  LDGT   HDGV   LDDV   LDDT   HDDV   MC   All Veh
+
 Veh. Spd.: 35.9   35.9   35.9          35.9   35.9   35.9   35.9   35.9
   VMT Mix:  0.686  0.197  0.053         0.020  0.003  0.001  0.036  0.004
0Composite Emission Factors (Gm/Mile)
 VOC    HC:  1.97   2.78   3.61   2.96   3.64   0.49   0.69   1.60   4.60   2.24
 Exhst  CO: 17.28  26.13  31.88  27.35  40.61   0.97   1.12   6.89  14.88  19.82
 Exhst NOX:  2.12   2.53   3.00   2.63   6.18   1.44   1.65  12.89   1.23   2.71
_____________________________________________________________________________
```

El Paso CO Run#3: Actual 1990 I/M Program Projection w/ATP1
E5a (26-Mar-93)

Warning:
1.00 MYR sum not = 1. (will normalize)
49 Warning:
1.00 MYR sum not = 1. (will normalize)
49 Warning:
0.999 MYR sum not = 1. (will normalize)
49 Warning:
0.999 MYR sum not = 1. (will normalize)
49 Warning:
1.00 MYR sum not = 1. (will normalize)
49 Warning:
1.00 MYR sum not = 1. (will normalize)
49 Warning:
0.999 MYR sum not = 1. (will normalize)
M program selected:

Start year (January 1):	1987
Pre-1981 MYR stringency rate:	18%
First model year covered:	1975
Last model year covered:	2020
Waiver rate (pre-1981):	0.%
Waiver rate (1981 and newer):	0.%
Compliance Rate:	73.%
Inspection type:	Computerized Test and Repair
Inspection frequency	Annual
Vehicle types covered:	LDGV - Yes
	LDGT1 - Yes
	LDGT2 - Yes
	HDGV - No
1981 & later MYR test type:	Idle

Cutpoints, HC: 220.000 CO: 1.200 NOx: 999.000

nctional Check Program Description:

ck	Start (Jan1)	Model Yrs Covered	Vehicle Classes Covered LDGV	LDGT1	LDGT2	HDGV	Inspection Type	Freq	Comp Rate
P	1986	1968-1979	Yes	Yes	Yes	No	Test & Repair	Annual	73.0%

r pump system disablements:	Yes	Catalyst removals:	No
el inlet restrictor disablements:	No	Tailpipe lead deposit test:	No
R disablement:	Yes	Evaporative system disablements:	Yes
V system disablements:	Yes	Missing gas caps:	Yes

Paso-03-Run

Minimum Temp: 26. (F) Maximum Temp: 63. (F)
Period 1 RVP: 11.6 Period 2 RVP: 11.6 Period 2 Yr: 1990
C HC emission factors include evaporative HC emission factors.

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ission factors are as of Jan. 1st of the indicated calendar year.
er supplied veh registration distributions.
t. Year: 1997 Region: Low Altitude: 500. Ft.
I/M Program: Yes Ambient Temp: 51.1 / 51.1 / 51.1 F
Anti-tam. Program: Yes Operating Mode: 20.6 / 27.3 / 20.6
Reformulated Gas: No

h. Type:	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
h. Spd.:	35.9	35.9	35.9		35.9	35.9	35.9	35.9	35.9	
VMT Mix:	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
mposite Emission Factors (Gm/Mile)										
C HC:	2.14	2.62	3.41	2.79	3.64	0.49	0.69	1.60	4.60	2.31
hst CO:	19.60	24.40	29.27	25.43	40.61	0.97	1.12	6.89	14.88	20.92
hst NOX:	2.11	2.44	2.92	2.54	6.18	1.44	1.65	12.89	1.23	2.68

```
11 El Paso CO Run#4:  ATP2 (no I/M)
 MOBILE5a (26-Mar-93)
0
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+                1.00     MYR sum not = 1. (will normalize)
-M 49 Warning:
+               0.999     MYR sum not = 1. (will normalize)
0Functional Check Program Description:
0Check Start   Model Yrs  Vehicle Classes Covered        Inspection        Comp
      (Jan1)  Covered    LDGV   LDGT1  LDGT2  HDGV    Type       Freq      Rate

 ATP   1986    1980-2020  Yes    Yes    Yes    No  Test & Repair Annual    73.0%
0Air pump system disablements:       Yes  Catalyst removals:                  Yes
 Fuel inlet restrictor disablements: Yes  Tailpipe lead deposit test:         Yes
 EGR disablement:                    Yes  Evaporative system disablements:    Yes
 PCV system disablements:            Yes  Missing gas caps:                   Yes
0El Paso-03-Run
                     Minimum Temp: 26. (F)   Maximum Temp: 63. (F)
                     Period 1 RVP: 11.6      Period 2 RVP: 11.6 Period 2 Yr: 1990
0VOC HC emission factors include evaporative HC emission factors.
0
0Emission factors are as of Jan. 1st of the indicated calendar year.
0User supplied veh registration distributions.
0Cal. Year: 1997          Region: Low          Altitude:  500. Ft.
                     I/M Program: No        Ambient Temp:   51.1 / 51.1 / 51.1 F
                Anti-tam. Program: Yes     Operating Mode:   20.6 / 27.3 / 20.6
                 Reformulated Gas: No
0Veh. Type:  LDGV  LDGT1  LDGT2   LDGT   HDGV   LDDV   LDDT   HDDV   MC   All Veh
+
 Veh. Spd.: 35.9   35.9   35.9          35.9   35.9   35.9   35.9   35.9
   VMT Mix:  0.686  0.197  0.053         0.020  0.003  0.001  0.036  0.004
0Composite Emission Factors (Gm/Mile)
 VOC    HC:  2.22   2.63   3.44   2.80   3.64   0.49   0.69   1.60   4.60   2.37
 Exhst  CO: 20.76  25.03  30.59  26.21  40.61   0.97   1.12   6.89  14.88  21.91
 Exhst NOX:  2.12   2.48   2.97   2.58   6.18   1.44   1.65  12.89   1.23   2.70
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```
El Paso CO Run #5:  Annual Revised IM240 Program
BILE5a (26-Mar-93)

   Warning:
              0.999     MYR sum not = 1. (will normalize)
49 Warning:
               1.00     MYR sum not = 1. (will normalize)
49 Warning:
               1.00     MYR sum not = 1. (will normalize)
49 Warning:
              0.999     MYR sum not = 1. (will normalize)
M program #1 selected:                          I/M program #2 selected:

art year (Jan 1):  1987                         Start year (Jan 1):  1987
e-1981 stringency: 20%                          Pre-1981 stringency: 20%
rst MYR covered:   1968                         First MYR covered:   1988
st MYR covered:    2020                         Last MYR covered:    2020
iver (pre-1981):    3.%                         Waiver (pre-1981):    3.%
iver (1981+):       3.%                         Waiver (1981+):       3.%
mpliance Rate:     96.%                         Compliance Rate:     96.%
spection type:                                  Inspection type:
st Only                                         Test Only
spection frequency: Annual                      Inspection frequency: Annual
M program #1 vehicle types                      I/M program #2 vehicle types
   LDGV - Yes                                       LDGV - Yes
  LDGT1 - Yes                                      LDGT1 - Yes
  LDGT2 - Yes                                      LDGT2 - Yes
   HDGV - Yes                                       HDGV - No
981 & later MYR test type:                      1981 & later MYR test type:
   2500 rpm / Idle                                  IM240 test
utpoints, HC:   220.000                         Cutpoints, HC:     1.200
utpoints, CO:     1.200                         Cutpoints, CO:    20.000
utpoints, NOx:  999.000                         Cutpoints, NOx:    2.500

unctional Check Program Description:
heck Start   Model Yrs  Vehicle Classes Covered        Inspection        Comp
     (Jan1)  Covered    LDGV   LDGT1  LDGT2  HDGV    Type      Freq      Rate

ress 1995    1971-2020  Yes    Yes    Yes    Yes Test Only    Annual    96.0%
urge 1995    1988-2020  Yes    Yes    Yes    No  Test Only    Annual    96.0%
TP   1986    1968-2020  Yes    Yes    Yes    Yes Test Only    Annual    96.0%
ir pump system disablements:       No   Catalyst removals:                  Yes
uel inlet restrictor disablements: Yes  Tailpipe lead deposit test:         No
GR disablement:                    No   Evaporative system disablements:    No
CV system disablements:            No   Missing gas caps:                   No
l Paso-03-Run
                    Minimum Temp: 26. (F)   Maximum Temp: 63. (F)
                    Period 1 RVP: 11.6      Period 2 RVP: 11.6 Period 2 Yr: 1990
OC HC emission factors include evaporative HC emission factors.

mission factors are as of Jan. 1st of the indicated calendar year.
ser supplied veh registration distributions.
al. Year: 1997          Region: Low          Altitude:  500. Ft.
                   I/M Program: Yes       Ambient Temp:   51.1 / 51.1 / 51.1 F
              Anti-tam. Program: Yes     Operating Mode:   20.6 / 27.3 / 20.6
               Reformulated Gas: No
eh. Type:  LDGV  LDGT1  LDGT2  LDGT   HDGV   LDDV   LDDT   HDDV   MC   All Veh

eh. Spd.: 35.9   35.9   35.9          35.9   35.9   35.9   35.9   35.9
 VMT Mix:  0.686  0.197  0.053         0.020  0.003  0.001  0.036  0.004
omposite Emission Factors (Gm/Mile)
OC    HC:  1.64   1.90   2.65   2.06   3.26   0.49   0.69   1.60   4.60   1.78
xhst  CO: 14.95  18.23  21.11  18.84  34.80   0.97   1.12   6.89  14.88  15.97
xhst NOX:  1.98   2.27   2.79   2.38   6.10   1.44   1.65  12.89   1.23   2.55
```

```
1          PROMPT
1 El Paso CO Run#1:  no-I/M
1          TAMFLG  - Default: Tampering Rates
1          SPDFLG  - User input: one speed for all vehicle types
3          VMFLAG  - User input: single Vmt mix for all scenario
3          MYMRFG  - Default: AMAR, User input: Reg. Distributions
1          NEWFLG  - Default Basic ehaust rates,used.
1          IMFLAG  - na
1          ALHFLG  - No additional correction factors
1          ATPFLG  - na
5          RLFLAG  - Zero-out refueling emissions
2          LOCFLG  - User input: one LAP record for all scenarios
1          TEMFLG  - MOBILE5A calculates exhaust temperatures
4          OUTFMT  - 80-column descriptive format
4          PRTFLG  - Print HC, CO and NOX emission factors
1          IDLFLG  - No idle emissions calculated or printed
3          NMHFLG  - Print  HC = Volatile organic compounds (VOC)
1          HCFLAG  - Print Total HC (overridden by prtflg)
.686.197.053.020.003.001.036.004   VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063  July,1996 .LDGV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013  Vehicle                 11-20
 .009 .006 .006 .006 .013                           Registrations            21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDGT1.MY AGES 1-10
 .062 .051 .046 .031 .030 .029 .022 .027 .025 .021                           11-20
 .017 .011 .013 .012 .027                                                    21-25
 .064 .082 .079 .077 .046 .037 .042 .050 .047 .031            .LDGT2.MY AGES 1-10
 .048 .037 .037 .027 .031 .024 .020 .042 .035 .032                           11-20
 .027 .023 .021 .017 .023                                                    21-25
 .042 .056 .057 .058 .037 .039 .035 .031 .029 .034            .HDGV..MY AGES 1-10
 .049 .054 .044 .027 .035 .030 .044 .050 .041 .033                           11-20
 .023 .033 .030 .027 .061                                                    21-25
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063            .LDDV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013                           11-20
 .009 .006 .006 .006 .013                                                    21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDDT..MY AGES 1-10
 .062 .051 .046 .031 .030 .029 .022 .027 .025 .021                           11-20
 .017 .011 .013 .012 .027                                                    21-25
 .047 .062 .062 .062 .017 .029 .039 .030 .035 .052            .HDDV..MY AGES 1-10
 .059 .067 .053 .036 .039 .055 .062 .036 .035 .027                           11-20
 .014 .016 .016 .020 .030                                                    21-25
 .026 .042 .049 .054 .060 .041 .045 .044 .030 .032            .MC....MY AGES 1-10
 .061 .515 .000 .000 .000 .000 .000 .000 .000 .000                           11-20
 .000 .000 .000 .000 .000                                                    21-25
El Paso-03-Run   B  26. 063. 11.6 11.6 90 1 1 1              LAP rec: SCNME,MNTMP,MXTMP,RVP1,RVP2,RVP2SY
1 97 35.9 50.7 20.6 27.3 20.6                                RGN,CY,SPD,AMBTMP,PCCN,PCHC,PCCC
0000000000000000000000000000000000000000000000000000000000000000000000
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        PROMPT
:' Paso CO Run#2:  EPA Basic Performance Standard
        TAMFLG  - Default: Tampering Rates
        SPDFLG  - User input: one speed for all vehicle types
        VMFLAG  - User input: single Vmt mix for all scenario
        MYMRFG  - Default: AMAR, User input: Reg. Distributions
        NEWFLG  - Default Basic ehaust rates,used.
        IMFLAG  - Uses one I/M program
        ALHFLG  - No additional correction factors
        ATPFLG  - na
        RLFLAG  - Zero-out refueling emissions
        LOCFLG  - User input: one LAP record for all scenarios
        TEMFLG  - MOBILE5A calculates exhaust temperatures
        OUTFMT  - 80-column descriptive format
        PRTFLG  - Print HC, CO and NOX emission factors
        IDLFLG  - No idle emissions calculated or printed
        NMHFLG  - Print  HC = Volatile organic compounds (VOC)
        HCFLAG  - Print Total HC (overridden by prtflg)
36.197.053.020.003.001.036.004   VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
045 .063 .066 .069 .071 .067 .058 .073 .071 .063  July,1996 .LDGV..MY AGES 1-10
056 .053 .048 .030 .028 .025 .021 .022 .019 .013  Vehicle                 11-20
009 .006 .006 .006 .013                           Registrations          21-25
055 .071 .069 .068 .047 .047 .046 .056 .064 .054          .LDGT1.MY AGES 1-10
062 .051 .046 .031 .030 .029 .022 .027 .025 .021                         11-20
017 .011 .013 .012 .027                                                  21-25
064 .082 .079 .077 .046 .037 .042 .050 .047 .031          .LDGT2.MY AGES 1-10
048 .037 .037 .027 .031 .024 .020 .042 .035 .032                         11-20
027 .023 .021 .017 .023                                                  21-25
042 .056 .057 .058 .037 .039 .035 .031 .029 .034          .HDGV..MY AGES 1-10
049 .054 .044 .027 .035 .030 .044 .050 .041 .033                         11-20
023 .033 .030 .027 .061                                                  21-25
045 .063 .066 .069 .071 .067 .058 .073 .071 .063          .LDDV..MY AGES 1-10
056 .053 .048 .030 .028 .025 .021 .022 .019 .013                         11-20
009 .006 .006 .006 .013                                                  21-25
055 .071 .069 .068 .047 .047 .046 .056 .064 .054          .LDDT..MY AGES 1-10
062 .051 .046 .031 .030 .029 .022 .027 .025 .021                         11-20
    011 .013 .012 .027                                                   21-25
    .062 .062 .062 .017 .029 .039 .030 .035 .052          .HDDV..MY AGES 1-10
059 .067 .053 .036 .039 .055 .062 .036 .035 .027                         11-20
014 .016 .016 .020 .030                                                  21-25
026 .042 .049 .054 .060 .041 .045 .044 .030 .032          .MC....MY AGES 1-10
061 .515 .000 .000 .000 .000 .000 .000 .000 .000                         11-20
000 .000 .000 .000 .000                                                  21-25
 20 68 89 00 00 100 1 1 2111 1111 220. 1.20 999.          I/M record strt yr 1996(existin prg.st.yr used for tampering deterent
fect)
 Paso-03-Run   B  26. 063. 11.6 11.6 90 1 1 1             LAP rec: SCNME,MNTMP,MXTMP,RVP1,RVP2,RVP2SY
97 35.9 50.7 20.6 27.3 20.6                               RGN,CY,SPD,AMBTMP,PCCN,PCHC,PCCC
```

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0000000000000000000000000000000000000000000000000000000000000000
1          PROMPT
1 El Paso CO Run#3:  Actual 1990 I/M Program Projection w/ATP1
1          TAMFLG  - Default: Tampering Rates
1          SPDFLG  - User input: one speed for all vehicle types
3          VMFLAG  - User input: single Vmt mix for all scenario
3          MYMRFG  - Default: AMAR, User input: Reg. Distributions
1          NEWFLG  - Default Basic ehaust rates,used.
2          IMFLAG  - 73% comp.
1          ALHFLG  - No additional correction factors
2          ATPFLG  - ATP1
5          RLFLAG  - Zero-out refueling emissions
2          LOCFLG  - User input: one LAP record for all scenarios
1          TEMFLG  - MOBILE5A calculates exhaust temperatures
4          OUTFMT  - 80-column descriptive format
4          PRTFLG  - Print HC, CO and NOX emission factors
1          IDLFLG  - No idle emissions calculated or printed
3          NMHFLG  - Print  HC = Volatile organic compounds (VOC)
1          HCFLAG  - Print Total HC (overridden by prtflg)
.686.197.053.020.003.001.036.004   VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063  July,1996 .LDGV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013  Vehicle                 11-20
 .009 .006 .006 .006 .013                           Registrations            21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054           .LDGT1.MY AGES 1-10
 .062 .051 .046 .031 .030 .029 .022 .027 .025 .021                          11-20
 .017 .011 .013 .012 .027                                                   21-25
 .064 .082 .079 .077 .046 .037 .042 .050 .047 .031           .LDGT2.MY AGES 1-10
 .048 .037 .037 .027 .031 .024 .020 .042 .035 .032                          11-20
 .027 .023 .021 .017 .023                                                   21-25
 .042 .056 .057 .058 .037 .039 .035 .031 .029 .034           .HDGV..MY AGES 1-10
 .049 .054 .044 .027 .035 .030 .044 .050 .041 .033                          11-20
 .023 .033 .030 .027 .061                                                   21-25
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063           .LDDV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013                          11-20
 .009 .006 .006 .006 .013                                                   21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054           .LDDT..MY AGES 1-10
 .062 .051 .046 .031 .030 .029 .022 .027 .025 .021                          11-20
 .017 .011 .013 .012 .027                                                   21-25
 .047 .062 .062 .062 .017 .029 .039 .030 .035 .052           .HDDV..MY AGES 1-10
 .059 .067 .053 .036 .039 .055 .062 .036 .035 .027                          11-20
 .014 .016 .016 .020 .030                                                   21-25
 .026 .042 .049 .054 .060 .041 .045 .044 .030 .032           .MC....MY AGES 1-10
 .061 .515 .000 .000 .000 .000 .000 .000 .000 .000                          11-20
 .000 .000 .000 .000 .000                                                   21-25
87 18 75 20 00 00 073 2 1 2221 1111 220. 1.20 999.          I/M record strt yr 1996(existin prg.st.yr used for tampering deterer
effect)
86 68 79 2221 21 073. 21112222                              ATP record (2spd idle
El Paso-03-Run   B  26. 063. 11.6 11.6 90 1 1 1             LAP rec: SCNME,MNTMP,MXTMP,RVP1,RVP2,RVP2SY
1 97 35.9 50.7 20.6 27.3 20.6                               RGN,CY,SPD,AMBTMP,PCCN,PCHC,PCCC
```

```
00000000000000000000000000000000000000000000000000000000000
      PROMPT
   o CO Run#4:  ATP2 (no I/M)
      TAMFLG  - Default: Tampering Rates
      SPDFLG  - User input: one speed for all vehicle types
      VMFLAG  - User input: single Vmt mix for all scenario
      MYMRFG  - Default: AMAR, User input: Reg. Distributions
      NEWFLG  - Default Basic ehaust rates,used.
      IMFLAG  - na
      ALHFLG  - No additional correction factors
      ATPFLG  - ATP2
      RLFLAG  - Zero-out refueling emissions
      LOCFLG  - User input: one LAP record for all scenarios
      TEMFLG  - MOBILE5A calculates exhaust temperatures
      OUTFMT  - 80-column descriptive format
      PRTFLG  - Print HC, CO and NOX emission factors
      IDLFLG  - No idle emissions calculated or printed
      NMHFLG  - Print  HC = Volatile organic compounds (VOC)
      HCFLAG  - Print Total HC (overridden by prtflg)
.197.053.020.003.001.036.004   VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
5 .063 .066 .069 .071 .067 .058 .073 .071 .063  July,1996 .LDGV..MY AGES 1-10
6 .053 .048 .030 .028 .025 .021 .022 .019 .013  Vehicle                  11-20
9 .006 .006 .006 .013                           Registrations            21-25
5 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDGT1.MY AGES 1-10
2 .051 .046 .031 .030 .029 .022 .027 .025 .021                           11-20
7 .011 .013 .012 .027                                                    21-25
4 .082 .079 .077 .046 .037 .042 .050 .047 .031            .LDGT2.MY AGES 1-10
8 .037 .037 .027 .031 .024 .020 .042 .035 .032                           11-20
7 .023 .021 .017 .023                                                    21-25
2 .056 .057 .058 .037 .039 .035 .031 .029 .034            .HDGV..MY AGES 1-10
9 .054 .044 .027 .035 .030 .044 .050 .041 .033                           11-20
3 .033 .030 .027 .061                                                    21-25
5 .063 .066 .069 .071 .067 .058 .073 .071 .063            .LDDV..MY AGES 1-10
6 .053 .048 .030 .028 .025 .021 .022 .019 .013                           11-20
9 .006 .006 .006 .013                                                    21-25
5 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDDT..MY AGES 1-10
  051 .046 .031 .030 .029 .022 .027 .025 .021                            11-20
  .011 .013 .012 .027                                                    21-25
7 .062 .062 .062 .017 .029 .039 .030 .035 .052            .HDDV..MY AGES 1-10
9 .067 .053 .036 .039 .055 .062 .036 .035 .027                           11-20
4 .016 .016 .020 .030                                                    21-25
6 .042 .049 .054 .060 .041 .045 .044 .030 .032            .MC....MY AGES 1-10
1 .515 .000 .000 .000 .000 .000 .000 .000 .000                           11-20
0 .000 .000 .000 .000                                                    21-25
0 20 2221 21 073. 22222222                                ATP record (2spd idle
aso-03-Run   B  26. 063. 11.6 11.6 90 1 1 1               LAP rec: SCNME,MNTMP,MXTMP,RVP1,RVP2,RVP2SY
 35.9 50.7 20.6 27.3 20.6                                 RGN,CY,SPD,AMBTMP,PCCN,PCHC,PCCC
00000000000000000000000000000000000000000000000000000000000
```

```
*          PROMPT
  l Paso CO Run #5:  Annual Revised IM240 Program
           TAMFLG  - Default: Tampering Rates
.          SPDFLG  - User input: one speed for all vehicle types
3          VMFLAG  - User input: single Vmt mix for all scenario
3          MYMRFG  - Default: AMAR, User input: Reg. Distributions
1          NEWFLG  - Default Basic ehaust rates,used.
3          IMFLAG  - Uses Two I/M programs and  mobile5 models impact on emission
1          ALHFLG  - No additional correction factors
8          ATPFLG  - ATP AND PRESSURE AND PURGE TEST
5          RLFLAG  - Zero-out refueling emissions
2          LOCFLG  - User input: one LAP record for all scenarios
1          TEMFLG  - MOBILE5A calculates exhaust temperatures
4          OUTFMT  - 80-column descriptive format
4          PRTFLG  - Print HC, CO and NOX emission factors
1          IDLFLG  - No idle emissions calculated or printed
3          NMHFLG  - Print  HC = Volatile organic compounds (VOC)
1          HCFLAG  - Print Total HC (overridden by prtflg)
.686.197.053.020.003.001.036.004   VMT mix: LDGV,LDGT1,LDGT2,HDGV,LDDV,LDDT,HDDV,MC
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063  July,1996 .LDGV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013  Vehicle                  11-20
 .009 .006 .006 .006 .013                           Registrations             21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDGT1.MY AGES 1-10
 .062 .051 .046 .031 .030 .029 .022 .027 .025 .021                           11-20
 .017 .011 .013 .012 .027                                                    21-25
 .064 .082 .079 .077 .046 .037 .042 .050 .047 .031            .LDGT2.MY AGES 1-10
 .048 .037 .037 .027 .031 .024 .020 .042 .035 .032                           11-20
 .027 .023 .021 .017 .023                                                    21-25
 .042 .056 .057 .058 .037 .039 .035 .031 .029 .034            .HDGV..MY AGES 1-10
 .049 .054 .044 .027 .035 .030 .044 .050 .041 .033                           11-20
 .023 .033 .030 .027 .061                                                    21-25
 .045 .063 .066 .069 .071 .067 .058 .073 .071 .063            .LDDV..MY AGES 1-10
 .056 .053 .048 .030 .028 .025 .021 .022 .019 .013                           11-20
 .009 .006 .006 .006 .013                                                    21-25
 .055 .071 .069 .068 .047 .047 .046 .056 .064 .054            .LDDT..MY AGES 1-10
    2 .051 .046 .031 .030 .029 .022 .027 .025 .021                           11-20
    7 .011 .013 .012 .027                                                    21-25
  047 .062 .062 .062 .017 .029 .039 .030 .035 .052            .HDDV..MY AGES 1-10
 .059 .067 .053 .036 .039 .055 .062 .036 .035 .027                           11-20
 .014 .016 .016 .020 .030                                                    21-25
 .026 .042 .049 .054 .060 .041 .045 .044 .030 .032            .MC....MY AGES 1-10
 .061 .515 .000 .000 .000 .000 .000 .000 .000 .000                           11-20
 .000 .000 .000 .000 .000                                                    21-25
87 20 68 20 03 03 096 1 1 2222 2111 220. 1.20 999.           I/M record
87 20 88 20 03 03 096 1 1 2221 4211 1.20 20.0 2.50           I/M 240
86 68 20 2222 11 096. 12211111                               ATP record (2spd idle
95 71 20 2222 11 096.                                        PRESSURE TEST
95 88 20 2221 11 096.                                        PURGE TEST
El Paso-03-Run   B  26. 063. 11.6 11.6 90 1 1 1              LAP rec: SCNME,MNTMP,
1 97 35.9 50.7 20.6 27.3 20.6                                RGN,CY,SPD,AMBTMP,PCCN,PCHC,PCCC
0000000000000000000000000000000000000000000000000000000000000000000000
```

Explanation of El Paso Carbon Monoxide (CO)
Peak Season Emission Rate

MOBILE5A was used to determine the 1996 CO peak season emission factor in grams per mile for each vehicle type. The model parameter inputs are either internal program national average default data or modeler-input locality-specific data. Inspection and maintenance (I/M) program parameters came from The Texas Air Control Board (TACB) Mobile Source Division. Temperature data was obtained from the TACB's Modeling Division. January 1996 was evaluated using 1990 conditions, i.e. 1990 I/M and anti-tampering programs (ATP).

A limitation of the MOBILE5A program required three runs to model El Paso 1990 CO peak season emission rate. The three runs were required to model the overall El Paso I/M program which consists of a two-part anti-tampering program (ATP1 and ATP2) and a tail pipe emissions measurement test (I/M). Each of these programs receives emission rate credits when modeled with MOBILE5A. The modeler is constrained though, in that the program will accept only one set of ATP parameters per run. To incorporate credits from ATP1, ATP2, and I/M into individual emission factors, the following procedure was used.

First a MOBILE5A run, Run 1, was performed with the 1990 I/M program and ATP1. Next a MOBILE5A run, Run 2, was performed with

no I/M and ATP2. Finally, a MOBILE5A run, Run 3, was performed with no I/M and no ATP. To obtain the combined factor that includes ATP1, ATP2 and I/M, the following equation was used:

Run 1 + Run 2 - Run 3 = Combined Emission Factor

33.14 + 34.66 - 35.40 = 32.40 grams/mile

A more detailed explanation of the combined emission factor methodology is contained in the 1990 El Paso Base Year Carbon Monoxide Emission Inventory, Final Submittal, November 1992.

MOBILE5A Inputs Used

MOBILE5A default tampering rates

One speed for all vehicle types (22.3 mph)

Projected 1996 VMT mix used as calculated by TACB Emissions Inventory Division

Projected 1996 vehicle registrations from Texas Transportation Institute used

No refueling emissions were calculated

MOBILE5A calculates exhaust temperatures

No idle emissions calculated

1990 Basic I/M Program Information

Start year: 1987

Stringency level: 18%

First model year covered: 1975

Last model year covered: 2020

Waiver rate: 0%

Compliance rate: 73%

Program type: decentralized

Inspection frequency: annual

Vehicle type subject to inspection: LDGV, LDGT1, LDGT2

Test type: idle test

Default cutpoints:

Reid vapor pressure used: 11.6 psia

The above input was based on the 1990 existing program.

1996 Enhanced I/M Program Information

Start year: 1987

Stringency level: 20%

First model year covered: 1968 I/M record

1990 I/M 240

Last model year covered: 1989 I/M record

2020 I/M 240

Waiver rate: 3%

Compliance rate: 95%

Program type centralized

Inspection frequency: annual

Vehicle type subject to inspection: LDGV, LDGT1, LDGT2, HDGV

Test type: 2500 rpm/idle I/M record

I/M 240 test

Cutpoints: 220, 1.20, 999 I/M record

1.20, 20.0, 2.50 I/M 240

Reid Vapor Pressure used: 11.6

1990 speed was used for the above run.

MOBILE5A OUTPUT FOR THE BASIC PROGRAM

```
11 El Paso, CO Season - Run #1 Existing Program
            (1996-Includes  I/M and 68-79 ATP)

MOBILE5A (26-Mar-93)
     0
     - M 135 Warning:
     +                        All effects of the 1990 Clean Air Act
                              Amendments have been disabled.
     -M 49 Warning:
     +        1.00            MYR sum not = 1. (will normalize)
     -M 49 Warning:
              1.00            MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999            MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999            MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00             MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00             MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999            MYR sum not = 1. (will normalize)
```

I/M Program Selected

with Tier I

Start year (January 1):	1987
Pre-1981 model year stringency rate:	18%
First model year covered:	1975
Last model year covered:	2020
Waiver rate (pre-1981):	0%
Waiver rate (1981 and newer):	0%
Compliance Rate:	73%
Inspection type:	Computerized Test and Repair
Inspection frequency	Annual
Vehicle types covered:	LDGV - Yes
	LDGT1 - Yes
	LDGT2 - Yes
	HDGV - No
1981 & later model year test type:	Idle
Cutpoints, HC: 220.000	
Cutpoints, CO: 1.200	
Cutpoints, NOx: 999.000	

Functional Check Program Description:

with Tier I

Check Start (Jan 1)	Model Year Covered	Vehicle Classes Covered				Inspection Type	Compliance	
		LDGV	LDGT1	LDGT2	HDGV		FREQUENCY	RATE
ATP 1986	1968-1979	Yes	Yes	Yes	No	Computerized Test and Repair	Annual	73.0%

Air pump system disablements:	Yes	Catalyst removals:	No
Fuel inlet restrictor disablements:	No	Tailpipe lead deposit test:	No
EGR disablement:	Yes	Evaporative system disablements:	Yes
PCV system disablements:	Yes	Missing gas caps:	Yes

El Paso-CO-Run # 1

Minimum Temp: 30°F Maximum Temp: 58°F

Period 1 RVP: 11.6 psia Period 2 RVP: 11.6 psia

Period 2 Yr: 1990

VOC HC emission factors include evaporative HC emission factors.

Emission factors are as of January 1 of the indicated calendar year.

User supplied vehicle registration distributions.

Calendar Year: 1996 Region: Low Altitude: 500 feet

I/M Program: Yes Ambient Temp: 49.6 / 49.6 / 49.6°F

Anti-tampering Program: Yes Operating Mode: 20.6 / 27.3 / 20.6

Reformulated Gas: No

	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	ALL VEH
Vehicle Speed	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3		
VMT Mix	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
VOC HC	3.00	3.68	4.85	3.92	5.83	0.73	1.03	2.50	4.75	3.27
Exhaust CO	31.20	37.53	45.02	39.12	72.14	1.56	1.80	11.32	25.76	33.14
Exhaust NOx	2.15	2.48	2.81	2.55	5.72	1.59	1.84	14.93	1.01	2.77

Composite Emission Factors (grams/mile)

11 El Paso, CO Season - Run #2 with Tier I

(1996-Includes 80-20 ATP)

```
MOBILE5A (26-Mar-93)
     0
     -M 135 Warning:
     +                    All effects of the 1990 Clean Air Act
                          Amendments have been disabled.
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
     -M 153 Error:
     Warning:  Refueling emissions in grams-per-gallon are only
      available using the 120 column descriptive output option
      (OUTFMT = 3 or 5).  See MOBILE5 Users.
     Guide chapters 2.1.15, 2.1.19 and 2.1.20 for more informa-
     tion.
```

Functional Check Program Description:

with Tier I

Check Start (Jan 1)	Model Year Covered	Vehicle Classes Covered				Inspection Type	Compliance	
		LDGV	LDGT1	LDGT2	HDGV		FREQUENCY	RATE
ATP 1986	1980-2020	Yes	Yes	Yes	No	Computerized Test and Repair	Annual	73.0%

Air pump system disablements:	Yes	Catalyst removals:	Yes
Fuel inlet restrictor disablements:	Yes	Tailpipe lead deposit test:	Yes
EGR disablement:	Yes	Evaporative system disablements:	Yes
PCV system disablements:	Yes	Missing gas caps:	Yes

El Paso-CO-Run # 2

Minimum Temp: 30°F Maximum Temp: 58°F

Period 1 RVP: 11.6 psia Period 2 RVP: 11.6 psia

Period 2 Yr: 1990

VOC HC emission factors include evaporative HC emission factors.

Emission factors are as of January 1 of the indicated calendar year.

User supplied veh registration distributions.

Calemdar Year: 1996 Region: Low Altitude: 500 feet

I/M Program: No Ambient Temp: 49.6 / 49.6 / 49.6°F

Anti-tampering Program: Yes Operating Mode: 20.6 / 27.3 / 20.6

Reformulated Gas: No

	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	ALL VEH
Vehicle Speed	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3		
VMT Mix	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
VOC HC	3.13	3.71	4.91	3.96	5.83	0.73	1.03	2.50	4.75	3.36
Exhaust CO	32.96	38.53	47.25	40.38	72.14	1.56	1.80	11.32	25.76	34.66
Exhaust NOx	2.17	2.52	2.86	2.59	5.72	1.59	1.84	14.93	1.01	2.80

Composite Emission Factors (grams/mile)

11 El Paso, CO Season- Run #3 with Tier I (1996- No I/M, No ATP)

```
MOBILE5A (26-Mar-93)
     0
     -M 135 Warning:
     +                    All effects of the 1990 Clean Air Act
                          Amendments have been disabled.
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       1.00         MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +       0.999        MYR sum not = 1. (will normalize)
```

El Paso-CO-Run # 3

Minimum Temp: 30°F Maximum Temp: 58°F

Period 1 RVP: 11.6 psia Period 2 RVP: 11.6 psia

Period 2 Yr: 1990

VOC HC emission factors include evaporative HC emission factors.

Emission factors are as of January 1 of the indicated calendar year.

User supplied vehicle registration distributions.

Calendar Year: 1996 Region: Low Altitude: 500 feet

I/M Program: No Ambient Temp: 49.6 / 49.6 / 49.6° F

Anti-tampering Program: No Operating Mode: 20.6 / 27.3 / 20.6

Reformulated Gas: No

	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	ALL VEH
Vehicle Speed	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3		
VMT Mix	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
VOC HC	3.20	3.92	5.11	4.17	5.83	0.73	1.03	2.50	4.75	3.47
Exhaust CO	33.47	40.05	48.79	41.90	72.14	1.56	1.80	11.32	25.76	35.40
Exhaust NOx	2.19	2.56	2.89	2.63	5.72	1.59	1.84	14.93	1.01	2.82

Composite Emission Factors (grams/mile)

MOBILE5A Output for the Enhanced Program

```
11 El Paso,  CO Season -  1996 Project Control Centralized
             (Winter Run)

MOBILE5A (26-Mar-93)
     0
     -M 49 Warning:
     +        1.00      MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        1.00      MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        0.999     MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        0.999     MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        1.00      MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        1.00      MYR sum not = 1. (will normalize)
     -M 49 Warning:
     +        0.999     MYR sum not = 1. (will normalize)
```

(12/1/92) Guidance Memo Credits being used for Tier 1 vehicles

I/M Program #1 Selected:

Start year (Jan 1): 1987

Pre-1981 stringency: 20%

First MYR covered: 1968

Last MYR covered: 1989

Waiver (pre-1981): 3%

Waiver (1981+): 3%

Compliance Rate: 95%

Inspection type:

Test Only

Inspection frequency: Biennial

I/M program #1 vehicle types:

LDGV - Yes

LDGT1 - Yes

LDGT2 - Yes

HDGV - Yes

1981 & later MYR test type:

2500 rpm/Idle

Cutpoints, HC: 220.000

Cutpoints, CO: 1.200

Cutpoints, NOx: 999.000

I/M Program #2 selected:

Start year (Jan 1): 1987

Pre-1981 stringency: 20%

First MYR covered: 1990

Last MYR covered: 2020

Waiver (pre-1981): 3%

Waiver (1981+): 3%

Compliance Rate: 95%

Inspection type:

Test Only

Inspection frequency: Biennial

I/M program #2 vehicle types:

LDGV - Yes

LDGT1 - Yes

LDGT2 - Yes

HDGV - Yes

1981 & later MYR test type:

IM240 test

Cutpoints, HC: 1.200

Cutpoints, CO: 20.000

Cutpoints, NOx: 2.500

Functional Check Program Description:

1996 Projected Control Centralized (Winter Run)

Check Start (Jan 1)	Model Year Covered	Vehicle Classes Covered				Inspection Type	Compliance	
		LDGV	LDGT1	LDGT2	HDGV		FREQUENCY	RATE
Press 1995	1971-2020	Yes	Yes	Yes	Yes	Test Only	Biennial	95.0%
Purge 1995	1990-2020	Yes	Yes	Yes	Yes	Test Only	Biennial	95.0%
ATP 1995	1971-2020	Yes	Yes	Yes	Yes	Test Only	Biennial	95.0%

Air pump system disablements:	No	Catalyst removals:	Yes
Fuel inlet restrictor disablements:	Yes	Tailpipe lead deposit test:	No
EGR disablement:	No	Evaporative system disablements:	No
PCV system disablements:	No	Missing gas caps:	No

El Paso-03-Run

Minimum Temp:	30°F	Maximum Temp:	58°F
Period 1 RVP:	11.6 psia	Period 2 RVP:	11.6 psia
Period 2 Yr:	1990		

VOC HC emission factors include evaporative HC emission factors.

Emission factors are as of Jan. 1st of the indicated calendar year.

User supplied vehicle registration distributions.

Calendar Year: 1996 Region: Low Altitude: 500 feet

I/M Program: Yes Ambient Temp: 49.6 / 49.6 / 49.6°F

Anti-tampering Program: Yes Operating Mode: 20.6 / 27.3 / 20.6

Reformulated Gas: No

	LDGV	LDGT1	LDGT2	LDGT	HDGV	LDDV	LDDT	HDDV	MC	ALL VEH
Vehicle Speed	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3	
VMT Mix	0.686	0.197	0.053		0.020	0.003	0.001	0.036	0.004	
VOC HC	2.48	2.91	4.17	3.17	5.44	0.73	1.03	2.50	4.75	2.72
Exhaust CO	25.26	30.26	35.76	31.42	65.35	1.56	1.80	11.32	25.76	27.01
Exhaust NOx	2.07	2.32	2.76	2.41	5.67	1.59	1.84	14.93	1.01	2.68

Composite Emission Factors (grams/mile)