

APPENDIX O

October 20, 2000 Environ Memo,  
*Comparison of Current and Revised SIP Highway Emissions Modeling*

Houston/Galveston Attainment Demonstration and  
Post-1999 Rate-of-Progress SIP

December 2000

**ENVIRON**

## MEMORANDUM

To: Lily Wells, Houston-Galveston Area Council  
From: Chris Lindhjem and Alison Pollack  
Date: 20 October 2000  
Subject: Comparison of Current and Revised SIP Highway Emissions Modeling

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## INTRODUCTION AND SUMMARY

TNRCC and HGAC agreed to regenerate the 2007 baseline on-road mobile source emission inventory to be used in the air quality modeling for the TNRCC December SIP submittal to EPA. In a series of conference calls with TNRCC, HGAC, TTI, and ENVIRON staff, the assumptions and data required for the inventory calculations were discussed and agreed upon. This revised inventory, now complete, is documented herein, and compared to the previous inventory prepared for the August 2000 SIP. The inventory calculations were done by TTI under the direction of George Dresser.

Included control programs were Inspection and Maintenance (I/M), Tier 2 Federal light-duty emission standards, low emission diesel fuel, and low sulfur gasoline. The I/M assumptions are described here and were included in the calculation of emission rates, and the adjustments for the other three control programs were made to the emission rates according to descriptions provided in the August SIP. Three control programs (truck idle restrictions, diesel emulsion, diesel NOx catalyst requirements) included in the former August 2000 SIP estimates were not included in the Revised SIP highway emissions inventory.

Overall, as shown in Table 1, the NOx emission estimates are lower and VOC emission estimates are slightly higher in the revised inventory than in the August 2000 SIP inventory when the same control programs are included. The NOx estimates are lower for three main reasons: (1) the overall vehicle miles traveled (VMT) is lower, (2) the vehicle mix favors light over heavy-duty vehicles, and (3) new emission standards are now applied for heavy-duty gasoline vehicles (HDGV).

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Table 1a. Weekday 2007 NO<sub>x</sub> emissions (TPD) by vehicle type for the August 2000 and Revised SIP inventories for the 8-county Houston nonattainment area.

Vehicle Type	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
Revised SIP	74.8	19.1	6.4	13.1	0.2	0.2	65.5	0.2	179.5
August 2000 SIP	94.3	19.2	6.2	22.4	0.5	0.2	67.4	0.2	210.2

Table 1b. Weekday 2007 VOC emissions (TPD) by vehicle type for the August 2000 and Revised SIP inventories for the 8-county Houston nonattainment area.

Vehicle Type	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
Revised SIP	44.5	12.2	3.5	5.0	0.0	0.0	10.0	0.7	76.0
August 2000 SIP	41.1	10.3	2.6	6.4	0.1	0.1	11.7	0.4	72.8

Highway emissions modeling depend upon several inputs including vehicle specific emission rates and vehicle miles traveled (VMT). The emission rates are gram per mile emission rates determined from EPA's MOBILE model and adjusted for various emission reduction programs either described in EPA guidance or through SIP described control programs. These emission rates are provided specific to seven vehicle types; light-duty gasoline cars (LDGV), light-duty gasoline small and larger trucks (LDGT1 and LDGT2), light duty diesel cars and trucks (LDDV and LDDT), and heavy-duty gasoline and diesel vehicles (HDGV and HDDV).

#### VMT ESTIMATES

The VMT estimates were derived from travel demand models calibrated with vehicle count information by the various vehicle types for different types of roadways for the year 2007. The August 2000 SIP estimates were derived from 1993 data adjusted to estimate the year 2007 (TTI, 1998), while the Revised SIP estimates were derived from data collected in 1997, 1998, and 1999 and also adjusted to the year 2007. Table 2 shows the August 2000 and revised VMT by vehicle type. The significant differences are the decrease in VMT for the LDGV, HDGV, and HDDV vehicle classes.

Table 2. Weekday 2007 VMT by vehicle type for the August 2000 and Revised SIP inventories for the 8-county Houston nonattainment area.

Vehicle Type	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC	TOTALS
Revised SIP	90,500,059	21,369,835	6,387,345	2,879,907	262,680	265,372	7,567,818	129,362	129,362,378
August 2000 SIP	97,287,739	21,980,326	6,359,457	4,408,214	418,403	139,468	8,734,709	139,468	139,467,784

#### VMT Mix

The VMT estimates are provided by individual link and incorporate the vehicle type mix by road type. The link information is used to allow the emissions to be geographically associated with individual grid cells for the CAMx ozone model. The vehicle mix determines the relative fraction of VMT by vehicle type and is applied by roadway type after the calculations by the MOBILE model are

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complete. A comparison between the August 2000 SIP and the Revised SIP estimates are shown in Table 3.

Table 3. Vehicle mix by roadway type for the August 2000 and Revised SIP inventories for the 8-county Houston nonattainment area.

Road Type	VMT Fraction	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
<b>August 2000 SIP</b>									
Collector	0.13	0.657	0.204	0.057	0.026	0.003	0.001	0.051	0.001
Arterial	0.41	0.683	0.165	0.048	0.033	0.003	0.001	0.066	0.001
Freeway	0.45	0.723	0.137	0.040	0.032	0.003	0.001	0.063	0.001
<b>Revised SIP Estimates</b>									
Collector	0.18	0.590	0.242	0.072	0.032	0.002	0.003	0.059	0.001
Arterial	0.38	0.699	0.170	0.050	0.021	0.002	0.002	0.055	0.001
Freeway	0.44	0.744	0.131	0.040	0.019	0.002	0.002	0.062	0.001

The most recent VMT mix was determined by TTI (2000) based on revised information from the August 2000 SIP estimates, which were derived by TTI (1998). The VMT and VMT mix for the August 2000 SIP were derived from vehicle counts developed during 1993 for the COAST study (TTI, 1998). For the Revised SIP, averages for the 1997, 1998, and 1999 period were used. The total VMT is determined by summing VMT across individual links; vehicle mix is determined from a combination of information derived from vehicle counts, standard vehicle apportionment, MOBILE defaults, and vehicle registration for heavy-duty vehicles as described by TTI (2000).

In brief, the vehicle counts are able to distinguish five of the MOBILE types of vehicles: passenger cars and motorcycles, 2-axle 4-tire single unit trucks (pickups), buses, 6-tire single unit vehicles, and other larger trucks. Nine individual classes of heavy-duty vehicles are distinguished by vehicle counts but all are aggregated into one class (other larger trucks) for this modeling effort. This information is used with standard apportionments into LDV, LDT1, LDT2, and HDV vehicle classifications as described in TTI (2000). The gasoline and diesel fractions are estimated with standard MOBILE defaults except for heavy duty trucks where state registration data is used to distinguish gasoline and diesel vehicles.

#### MOBILE5 B INPUT

The EPA MOBILE model requires some assumptions to be made and allows locally specific input data and control program assumptions in determining the emission rates. In versions of the MOBILE inputs provided for the Revised SIP, modifications to the default MOBILE input data have been made for vehicle registration, new emission standards, inspection and maintenance (I/M), daily temperatures (a required input), fuel volatility (a required input), trip length distributions, and cold start fractions. The MOBILE input information for vehicle registration distributions, I/M programs, and new emission standards for HDGV

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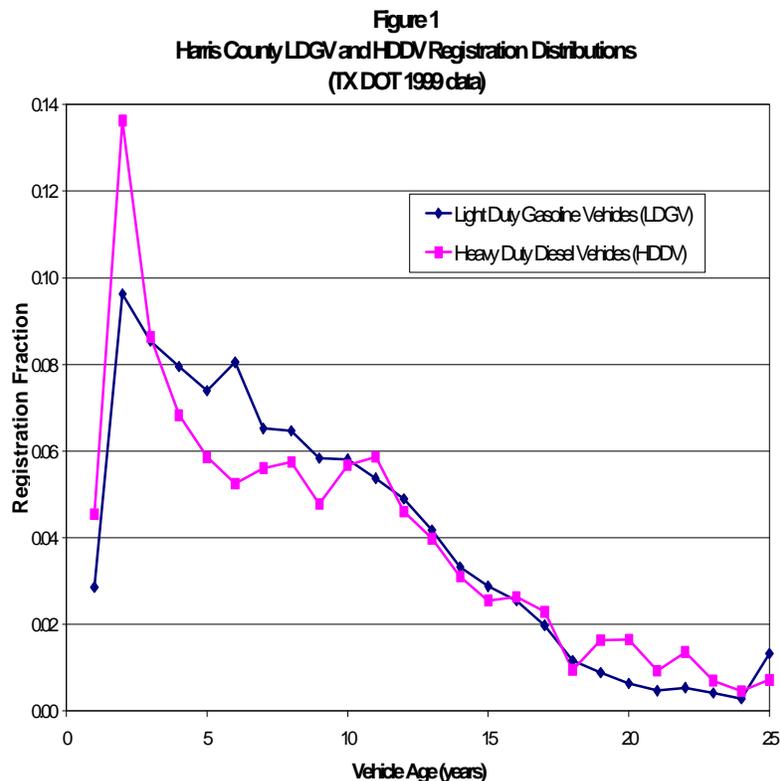
and HDDV are described here. The MOBILE5b input files for each county are provided in the Attachment.

The major difference between the August 2000 SIP and Revised SIP files was the use of MOBILE5 version a\_H instead of MOBILE5b for the Revised SIP. This alone makes a simple comparison difficult between the two SIP emission factors estimates. Some effects of I/M and other emission factors have changed slightly between the two versions of the model. Table 4 shows the MOBILE5b I/M assumptions for Harris County for the August 2000 and Revised SIP inventories.

### Registration Distribution

The base inventory for the August 2000 SIP modeling used vehicle registration distributions from the COAST study (TTI, 1998); however, adjustment factors were then applied to adjust the MOBILE emission factors to reflect 1999 TX DOT registration distributions. In doing these adjustments, the registration distributions for the four urban counties (Brazoria, Montgomery, Galveston, and Fort Bend) were aggregated, and the registration distributions for the three rural counties (Chambers, Liberty, and Waller) were aggregated.

The Revised SIP uses the same TX DOT 1999 vehicle registration distributions. However, the individual by-county distributions are used, so that there are eight individual county registration distributions instead of the three (Harris, urban, rural counties) used in the August 2000 SIP. Figure 1 shows the LDGV and HDDV registration distributions for Harris County. The registration distributions for all



vehicle classes for all eight counties are in the MOBILE5b input files in the Attachment.



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### I/M Program Input

For the August 2000 SIP highway emission inventory, a series of adjustments to the final emissions estimates were used to convert the COAST emission inventory projections to the planned I/M program for the Houston nonattainment area (ERG, 2000b). In order to avoid the method of using adjustments, which confuse the spatial allocation of emissions, the planned I/M program was modeled for the calculation of the emission factors for the Revised SIP highway emissions inventory. The I/M program and emission benefits are determined through the use MOBILE5b model and the input file used. For the most part, the modeled I/M program in the Revised SIP emission inventory is the same as modeled for the August 2000 SIP except as noted below.

### Programs Modeled

Both the August 2000 SIP and the Revised SIP model two I/M programs for all eight counties: ASM for 1995 and older model years, and IM240 for 1996 and later model years. The actual I/M program that is or will be in effect is ASM, but IM240 is used to model the equivalent effects of OBD in newer cars.

### Program Start Years

For Harris County, the Revised SIP uses 1997 as the start year for both I/M programs, while the August 2000 SIP uses 1996 for the ASM program and 2002 for the IM240 program. The correct start year is 1997 because although the Harris County I/M program was proposed to start in 1996, it did not actually begin until 1997.

The I/M programs modeled in both the August 2000 and Revised SIP are identical for all eight counties with the exception of start years. The Revised SIP models the I/M programs starting in 1997 for Harris County, 2003 for the four urban counties, and 2004 for the three rural counties.

### Program Type

The August 2000 and Revised SIPs model the pressure test as a Test & Repair program type with an effectiveness of 40% of a Test Only program.

The Revised SIP also uses Test & Repair inputs for the I/M and ATP programs. However, these are modeled at 100% effectiveness and thus equivalent to a Test Only program. This makes these Test & Repair programs comparable to the Test Only programs modeled in the August 2000 SIP. The Test & Repair option is simply used to illustrate the reality, since the programs in or to be in effect in the Houston area are Test & Repair.

Table 4. MOBILE5b Inspection and Maintenance (I/M) inputs for Harris County for the August 2000 and Revised SIP inventories.

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	<b>August 2000 SIP</b>		<b>Revised SIP</b>	
I/M Flag	Multiple user-specified I/M Programs		Multiple user-specified I/M Programs	
ATP Flag	ATP and evap functional pressure check		ATP and evap functional pressure check	
<i>I/M Program Descriptive Input</i>				
Technician Training & Certification Credit	100% Credit		100% Credit	
Program Start Year	<b>1996</b>	<b>2002</b>	<b>1997</b>	<b>1997</b>
Stringency	20%	20%	20%	20%
first model year subject to program	1983	1996	1983	1996
last model year subject to program	1995	2005	1995	2005
waiver rates pre-1981 model Year vehicles	3%	3%	3%	3%
waiver rates >=1981 model year vehicles	3%	3%	3%	3%
Compliance Rate	96%	96%	96%	96%
Program Type	Test Only	Test Only	Test & Repair	Test & Repair
frequency of inspection	Annual	Annual	Annual	Annual
Vehicle Types Inspected	LDGV, LDGT1, LDGT2, HDGV		LDGV, LDGT1, LDGT2, HDGV	
Test type	ASM	IM 240	ASM	IM 240
Cutpoints	non-default	non-default	non-default	Non-default
alternate I/M credits Tech I-II vehicles	MOBILE default	MOBILE default	MOBILE default	MOBILE default
alternate I/M credits Tech IV+ vehicles	MOBILE default	MOBILE default	MOBILE default	MOBILE default
user-supplied cutpoint for HC	25	0.8	25	0.8
user-supplied cutpoint for CO	50	15	50	15
user-supplied cutpoint for NOx	2	2	2	2
<i>ATP Descriptive Input</i>				
Program Start Year	1984		1984	
First Model Year	1983		1983	
Last Model ear	2005		2005	
Vehicle Types	LDGV, LDGT1, LDGT2, HDGV		LDGV, LDGT1, LDGT2, HDGV	
Program Type	Test only		Test & Repair	
Inspection Frequency	Annual		Annual	
Compliance Rate	96%		96%	
Air pump system	Inspected		Inspected	
Catalyst	Inspected		Inspected	
Fuel inlet restrictor	Not inspected		Not inspected	
Tailpipe lead deposit test	Not inspected		Not inspected	
EGR system	Inspected		Inspected	
Evaporative emission control system	Inspected		Inspected	
PCV system	Inspected		Inspected	
Gas cap	Inspected		Inspected	
Program Start Year	1996		<b>1997</b>	
First Model Year	1983		1983	
Last Model ear	2005		2005	
Vehicle Types	LDGV, LDGT1, LDGT2, HDGV		LDGV, LDGT1, LDGT2, HDGV	
Program Type	Test & Repair (set as 40% of Test only effectiveness)		Test & Repair (set as 40% of Test only effectiveness)	

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Inspection Frequency Compliance Rate	Annual 96%	Annual 96%
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**New Emission Standards for HDGV**

The Final Rulemaking for heavy-duty engines includes a new emission standard for HDGV. The emission standards are segregated for some <14,000 pound gross vehicle weight vehicles and include some more stringent standards for heavy-duty vehicles now covered under the Tier 2 light-duty regulations. EPA guidance for inclusion of the HDGV emission standards was not available for the August 2000 SIP emission inventory preparation.

The emission standards for other Otto-cycle heavy-duty engines (HDGV) begin with the 2005 model year are a combined (NMHC+NOx) standard of 1 g/hp-hr in comparison with the 1998 emission standard for HDGV of 4 g/hp-hr NOx and 1.9 g/hp-hr HC or 1.7 g/hp-hr NMHC. An alternative standard for complete vehicles (as opposed to the engine-only standard just described) is available, but is expected to provide a similar overall emission rate to the engine-only standard. Also, a small fraction of HDGV will be covered under more stringent Tier 2 light-duty standards labeled as medium-duty passenger vehicles (MDPV).

EPA (2000) has now provided guidance for inclusion of the new HDGV emission standards, which allows a simple addition to the MOBILE5 input files similar to MOBILE5 Information Sheet #5 for HDDV for incorporating the 2004 HDDV standards (EPA, 1998). These standards are included in MOBILE5 with the NEWFLAG Record, as shown below.

**NEWFLAGRecord**

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.....
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
.....

```

Note: Standards in italics are the HDDV emissions standards following MOBILE5 Information Sheet #5 (EPA, 1998) and were already included in the current MOBILE5 input files for the August 2000 SIP modeling.

**TIER 2 LIGHT-DUTY VEHICLE EMISSION STANDARD AND LOW EMISSION FUEL ADJUSTMENTS**  
 After the calculation of emission rates for individual classes of vehicles from the MOBILE model, adjustments were made to account for the Federal Tier 2 light-duty emission standards, low sulfur gasoline, and low emission diesel fuel control programs.



Tier 2 adjustment factors were revised by ERG (2000a) to reflect the EPA guidance and the revised baseline emissions calculations described above. EPA default estimates in emissions per mile were converted to a fractional reduction specific to the Houston area fleet age distributions. The Tier 2 reductions shown in Table 5 reflect new emission standards for light-duty vehicles and lower (30 ppm) sulfur gasoline.

Table 5. Tier 2 Benefits (% reduction) for the Houston area. (Source: ERG 2000a)

County	LDGV	LDGT1	LDGT2	HDGV	LDDV	LDDT	HDDV	MC
<b>NO<sub>x</sub></b>								
Harris	23.9	21.9	17.4	5.1	46.1	47.3	0.0	0.0
Brazoria	23.9	21.9	17.4	4.1	40.9	42.4	0.0	0.0
Fort Bend	23.9	21.9	17.4	4.1	44.6	45.6	0.0	0.0
Galveston	23.9	21.9	17.4	4.5	44.8	46.0	0.0	0.0
Montgomery	23.9	21.9	17.4	4.3	39.9	40.7	0.0	0.0
Liberty	23.9	21.9	17.4	4.0	35.4	35.9	0.0	0.0
Chambers	23.9	21.9	17.4	3.8	21.4	23.5	0.0	0.0
Waller	23.9	21.9	17.4	4.2	28.9	29.6	0.0	0.0
<b>VOC</b>								
Harris	12.0	12.0	11.0	2.3	78.1	72.1	0.0	0.0
Brazoria	17.0	16.0	11.0	2.0	89.9	82.6	0.0	0.0
Fort Bend	12.0	16.0	11.0	1.6	59.4	78.1	0.0	0.0
Galveston	17.0	16.0	11.0	1.7	81.0	75.9	0.0	0.0
Montgomery	18.0	17.0	11.0	2.0	95.4	87.8	0.0	0.0
Liberty	12.0	16.0	11.0	1.7	71.0	90.6	0.0	0.0
Chambers	12.0	15.0	11.0	2.3	77.6	90.6	0.0	0.0
Waller	16.0	12.0	11.0	1.8	133.1	93.7	0.0	0.0

The NO<sub>x</sub> emission reduction is associated with the use of very low sulfur (15 ppm) gasoline in gasoline-fueled vehicles beyond reductions associated with Tier 2 30 ppm sulfur gasoline and was estimated at 0.8 percent for fueled vehicles by ERG (2000b). The NO<sub>x</sub> emission reduction associated with low emission diesel fuel was estimated by ERG (2000b) at 5.74 percent for highway diesel vehicles

#### REFERENCES

ERG (2000a), "Revised Tier 2 Adjustment Factors for COAST SIP Inventory Update – Work Assignment 34730-02," Memorandum to Mary McGarry-Barber of the Texas Natural Resources Conservation Commission from Rick Baker of the Eastern Research Group (ERG), October 12, 2000.

ERG (2000b), "Revised SIP Modeling Procedures for Houston Ozone Non-Attainment Areas," Memorandum to Hazel Barbour of the Texas Natural Resources Conservation Commission from Rick Baker of the Eastern Research Group (ERG), July 26, 2000.

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EPA (2000), Personal communication with John Koupal, September, 2000.

EPA (1998), "Inclusion of New 2004 NOx Standard for Heavy-Duty Diesel Engines in MOBILE5a and MOBILE5b Modeling," January 30, 1998.

TTI (2000), "Near Nonattainment Emissions Inventories – HPMS Estimation Method / Speed Model Refinement for Counties Without Link-Based Travel Demand Models." Perkinson, Dennis G., Texas Transportation Institute, June 2000.

TTI (1998), "Development Of Gridded Mobile Source Emissions Estimates For The Houston Galveston Nonattainment Counties Fy2007 In Support Of The Coast Project," Prepared by the Texas Transportation Institute for the Texas Natural Resource Conservation Commission, December 1998.

## Attachment

### Revised SIP MOBILE5b Input Files



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## Brazoria County

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5 PROMPT
Brazoria County 2007 for COAST Redo USE MOBILE5B
1 Tamflg - Default Tampering Rates
4 Spdflg - One speed for all scenarios + trip length distribution
1 VMflg - default VMT mix
3 Mymrflg- County Specific Reg Dist
2 Newflg - HDDV emission rates conversion factors
6 IMflg - I/M program
1 Alhflg - No additional correction factors
5 ATPflg - ATP and Pressure test
5 Rlflg - Zero-out refueling emissions
2 Locflg - One LAP for all scenarios
1 Tempflag Mobile calculates exhaust temperature
4 Outfmt - 80 column output format
4 Prtflg - Print HC emission factors only
1 Idflg - No Idle factors calculated
3 Nmhlfg - Print HC = VOC
2 HCflg - Print Total HC
.0195.0814.0835.0813.0777.0851.0699.0709.0593.0592 LDGV BRAZORIA 1999
.0515.0518.0415.0320.0281.0259.0196.0121.0086.0067 LDGV
.0048.0059.0042.0028.0167 LDGV
.0238.0924.0766.0872.0700.0754.0729.0585.0520.0539 LDGT1
.0487.0497.0405.0293.0324.0280.0257.0137.0148.0109 LDGT1
.0061.0082.0069.0048.0176 LDGT1
.0916.2969.1057.1384.0546.0476.0373.0208.0138.0220 LDGT2
.0169.0216.0193.0094.0157.0106.0126.0063.0090.0114 LDGT2
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.0693.0714.0476.0368.0844 HDGV
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.0515.0518.0415.0320.0281.0259.0196.0121.0086.0067 LDDV
.0048.0059.0042.0028.0167 LDDV
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.0487.0497.0405.0293.0324.0280.0257.0137.0148.0109 LDDT
.0061.0082.0069.0048.0176 LDDT
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.0481.0661.0601.0457.0349.0565.0421.0240.0373.0349 HDDV
.0216.0180.0156.0048.0168 HDDV
.0301.0921.0734.0683.0658.0615.0560.0484.0369.0267 MC
.0259.4149.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
03 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
03 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
03 83 05 2222 21 096 22112222 ATP
03 83 05 2222 21 096 Pressure Test
NHR WED Diurn B 73.0 91.0 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 85.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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Chambers County

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5 PROMPT
Chambers County 2007 for COAST Redo USE MOBILE5B
1 Tamflg - Default Tampering Rates
4 Spdflg - One speed for all scenarios + trip length distribution
1 VMflg - default VMT mix
3 Mymrflg- County Specific Reg Dist
2 Newflg - HDDV emission rates conversion factors
6 IMflg - I/M program
1 Alhflg - No additional correction factors
5 ATPflg - ATP and Pressure test
5 Rlfflg - Zero-out refueling emissions
2 Locflg - One LAP for all scenarios
1 Tempflag Mobile calculates exhaust temperature
4 Outfmt - 80 column output format
4 Prtflg - Print HC emission factors only
1 Idflg - No Idle factors calculated
3 Nmhfllg - Print HC = VOC
2 HCflg - Print Total HC
.0112.0577.0885.0886.0827.0885.0704.0739.0591.0542 LDGV CHAMBERS 1999
.0523.0505.0417.0315.0270.0263.0244.0141.0114.0090 LDGV
.0050.0065.0047.0039.0169 LDGV
.0162.0768.0874.0945.0712.0833.0781.0632.0583.0510 LDGT1
.0477.0444.0388.0250.0295.0276.0226.0142.0144.0125 LDGT1
.0070.0090.0062.0039.0172 LDGT1
.1097.2939.1322.1222.0748.0474.0274.0150.0125.0100 LDGT2
.0100.0150.0100.0050.0224.0125.0200.0100.0075.0075 LDGT2
.0025.0050.0100.0050.0125 LDGT2
.0000.0857.0000.0000.0000.0857.0286.0286.0000.1143 HDGV
.0286.0571.0857.0286.0286.0857.0000.0000.0286.0286 HDGV
.0857.0571.0571.0000.0857 HDGV
.0112.0577.0885.0886.0827.0885.0704.0739.0591.0542 LDDV
.0523.0505.0417.0315.0270.0263.0244.0141.0114.0090 LDDV
.0050.0065.0047.0039.0169 LDDV
.0162.0768.0874.0945.0712.0833.0781.0632.0583.0510 LDDT
.0477.0444.0388.0250.0295.0276.0226.0142.0144.0125 LDDT
.0070.0090.0062.0039.0172 LDDT
.0706.0822.0471.0588.0235.0353.0706.0471.0235.0235 HDDV
.0353.0824.0706.0235.0588.0471.0706.0118.0471.0588 HDDV
.0000.0000.0118.0000.0000 HDDV
.0072.0761.0725.0616.1051.0761.0507.0471.0217.0072 MC
.0217.4530.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
04 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
04 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
04 83 05 2222 21 096 22112222 ATP
04 83 05 2222 21 096 Pressure Test
NHR WED Diurn B 73.0 91.0 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 85.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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ENVIRON

Golden Gate Plaza \$ 101 Rowland Way \$ Novato, California 94945-5010 USA

Tel: (415) 899-0700 \$ Fax: (415) 899-0707

Fort Bend County

```

5          PROMPT
Fort Bend County 2007 for COAST Redo USE MOBILE5B
1          Tamflg - Default Tampering Rates
4          Spdflg - One speed for all scenarios + trip length distribution
1          VMflg - default VMT mix
3          Mymrflg- County Specific Reg Dist
2          Newflg - HDDV emission rates conversion factors
6          IMflg - I/M program
1          Alhflg - No additional correction factors
5          ATPflg - ATP and Pressure test
5          Rlfflg - Zero-out refueling emissions
2          Locflg - One LAP for all scenarios
1          Tempflag Mobile calculates exhaust temperature
4          Outfmt - 80 column output format
4          Prtflg - Print HC emission factors only
1          Idflg - No Idle factors calculated
3          Nmhfllg - Print HC = VOC
2          HCflg - Print Total HC
.0223.0851.0969.0939.0876.0931.0744.0719.0615.0580 LDGV FORT BEND 1999
.0513.0419.0348.0259.0214.0195.0148.0085.0071.0051 LDGV
.0034.0039.0033.0021.0123 LDGV
.0243.1143.0989.1034.0739.0772.0725.0595.0479.0461 LDGT1
.0418.0398.0334.0247.0255.0236.0211.0114.0133.0099 LDGT1
.0055.0073.0056.0046.0145 LDGT1
.1120.2841.1082.1301.0648.0577.0291.0329.0154.0154 LDGT2
.0181.0220.0132.0088.0104.0165.0093.0060.0088.0055 LDGT2
.0038.0082.0060.0027.0110 LDGT2
.0194.0155.0116.0116.0233.1240.0194.0194.0271.0388 HDGV
.0233.0426.0465.0233.0504.0271.0504.0310.0581.0504 HDGV
.0465.0659.0271.0349.1124 HDGV
.0223.0851.0969.0939.0876.0931.0744.0719.0615.0580 LDDV
.0513.0419.0348.0259.0214.0195.0148.0085.0071.0051 LDDV
.0034.0039.0033.0021.0123 LDDV
.0243.1143.0989.1034.0739.0772.0725.0595.0479.0461 LDDT
.0418.0398.0334.0247.0255.0236.0211.0114.0133.0099 LDDT
.0055.0073.0056.0046.0145 LDDT
.0128.0965.0867.0587.0281.0485.0421.0689.0370.0587 HDDV
.0612.0651.0485.0434.0421.0434.0319.0191.0242.0281 HDDV
.0128.0102.0128.0077.0115 HDDV
.0145.1127.1013.0829.0864.0667.0645.0469.0338.0246 MC
.0268.3389.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
03 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
03 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
03 83 05 2222 21 096 22112222 ATP
03 83 05 2222 21 096 Pressure Test
HAR WED Diurn B 70.0 95.5 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 87.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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Galveston County

```

5      PROMPT
Galveston County 2007 for COAST Redo USE MOBILE5B
1      Tamflg - Default Tampering Rates
4      Spdflg - One speed for all scenarios + trip length distribution
1      VMflg - default VMT mix
3      Mymrflg- County Specific Reg Dist
2      Newflg - HDDV emission rates conversion factors
6      IMflg - I/M program
1      Alhflg - No additional correction factors
5      ATPflg - ATP and Pressure test
5      Rlfflg - Zero-out refueling emissions
2      Locflg - One LAP for all scenarios
1      Tempflag Mobile calculates exhaust temperature
4      Outfmt - 80 column output format
4      Prtflg - Print HC emission factors only
1      Idflg - No Idle factors calculated
3      Nmhfllg - Print HC = VOC
2      HCflg - Print Total HC
.0180.0820.0800.0785.0744.0823.0703.0700.0608.0588 LDGV GALVESTON 1999
.0539.0502.0414.0334.0301.0275.0217.0121.0094.0069 LDGV
.0051.0066.0051.0035.0180 LDGV
.0235.0964.0789.0887.0656.0718.0708.0603.0522.0510 LDGT1
.0482.0478.0405.0286.0307.0279.0285.0153.0163.0113 LDGT1
.0059.0082.0074.0055.0187 LDGT1
.1036.3007.1005.1186.0624.0562.0318.0250.0125.0200 LDGT2
.0169.0181.0119.0081.0094.0131.0144.0069.0094.0112 LDGT2
.0106.0119.0062.0062.0144 LDGT2
.0214.0357.0071.0821.0321.0500.0179.0286.0179.0214 HDGV
.0179.0321.0286.0250.0321.0286.0357.0321.0429.0250 HDGV
.0607.0821.0357.0679.1394 HDGV
.0180.0820.0800.0785.0744.0823.0703.0700.0608.0588 LDDV
.0539.0502.0414.0334.0301.0275.0217.0121.0094.0069 LDDV
.0051.0066.0051.0035.0180 LDDV
.0235.0964.0789.0887.0656.0718.0708.0603.0522.0510 LDDT
.0482.0478.0405.0286.0307.0279.0285.0153.0163.0113 LDDT
.0059.0082.0074.0055.0187 LDDT
.0162.0603.0766.0348.0302.0186.0348.0441.0836.0719 HDDV
.0789.0487.0418.0464.0441.0626.0603.0162.0186.0348 HDDV
.0255.0209.0116.0046.0139 HDDV
.0164.1203.0844.0664.0780.0565.0472.0449.0289.0215 MC
.0289.4066.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
03 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
03 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
03 83 05 2222 21 096 22112222 ATP
03 83 05 2222 21 096 Pressure Test
NHR WED Diurn B 73.0 91.0 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 85.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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ENVIRON

Golden Gate Plaza \$ 101 Rowland Way \$ Novato, California 94945-5010 USA

Tel: (415) 899-0700 \$ Fax: (415) 899-0707

Harris County

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5          PROMPT
Harris County 2007 for COAST Redo USE MOBILE5B
1          Tamflg - Default Tampering Rates
4          Spdflg - One speed for all scenarios + trip length distribution
1          VMflg - default VMT mix
3          Mymrflg- County Specific Reg Dist
2          Newflg - HDDV emission rates conversion factors
6          IMflg - Harris county I/M program
1          Alhflg - No additional correction factors
5          ATPflg - ATP and Pressure test
5          Rlfflg - Zero-out refueling emissions
2          Locflg - One LAP for all scenarios
1          Tempflag Mobile calculates exhaust temperature
4          Outfmt - 80 column output format
4          Prtflg - Print HC emission factors only
1          Idflg - No Idle factors calculated
3          Nmhfllg - Print HC = VOC
2          HCflg - Print Total HC
.0286.0963.0854.0795.0739.0805.0652.0647.0584.0581 LDGV      HARRIS      1999
.0537.0490.0418.0333.0288.0255.0198.0117.0089.0064 LDGV
.0047.0054.0042.0029.0133 LDGV
.0275.1098.0889.0929.0674.0739.0676.0579.0497.0473 LDGT1
.0437.0441.0379.0277.0286.0266.0239.0135.0155.0115 LDGT1
.0062.0081.0071.0053.0174 LDGT1
.0823.2229.0916.1194.0643.0735.0559.0437.0288.0249 LDGT2
.0271.0219.0191.0121.0149.0135.0130.0076.0143.0103 LDGT2
.0099.0088.0067.0038.0097 LDGT2
.0167.0544.0293.0517.0447.1766.0447.0233.0315.0303 HDGV
.0346.0293.0286.0284.0338.0328.0272.0192.0289.0264 HDGV
.0338.0486.0371.0221.0660 HDGV
.0286.0963.0854.0795.0739.0805.0652.0647.0584.0581 LDDV
.0537.0490.0418.0333.0288.0255.0198.0117.0089.0064 LDDV
.0047.0054.0042.0029.0133 LDDV
.0275.1098.0889.0929.0674.0739.0676.0579.0497.0473 LDDT
.0437.0441.0379.0277.0286.0266.0239.0135.0155.0115 LDDT
.0062.0081.0071.0053.0174 LDDT
.0454.1363.0864.0683.0586.0525.0561.0575.0478.0567 HDDV
.0587.0460.0398.0310.0255.0264.0229.0095.0164.0165 HDDV
.0093.0136.0070.0046.0072 HDDV
.0299.1432.1008.0794.0783.0661.0521.0482.0307.0212 MC
.0217.3284.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
97 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
97 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/imdata4.d
1.00 1.00 1.00 1.00 0.40
84 83 05 2222 21 096 22112222 ATP
97 83 05 2222 21 096 Pressure Test
HAR WED Diurn B 70.0 95.5 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 19.6 87.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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ENVIRON

Golden Gate Plaza \$ 101 Rowland Way \$ Novato, California 94945-5010 USA

Tel: (415) 899-0700 \$ Fax: (415) 899-0707

Liberty County

```

5          PROMPT
Liberty County 2007 for COAST Redo USE MOBILE5B
1          Tamflg - Default Tampering Rates
4          Spdflg - One speed for all scenarios + trip length distribution
1          VMflg - default VMT mix
3          Mymrflg- County Specific Reg Dist
2          Newflg - HDDV emission rates conversion factors
6          IMflg - I/M program
1          Alhflg - No additional correction factors
5          ATPflg - ATP and Pressure test
5          Rlfflg - Zero-out refueling emissions
2          Locflg - One LAP for all scenarios
1          Tempflag Mobile calculates exhaust temperature
4          Outfmt - 80 column output format
4          Prtflg - Print HC emission factors only
1          Idflg - No Idle factors calculated
3          Nmhfllg - Print HC = VOC
2          HCflg - Print Total HC
.0146.0705.0772.0770.0742.0794.0600.0628.0527.0575 LDGV LIBERTY 1999
.0536.0543.0458.0377.0357.0331.0256.0177.0135.0098 LDGV
.0075.0100.0076.0037.0185 LDGV
.0217.0881.0833.0900.0692.0739.0647.0545.0476.0489 LDGT1
.0433.0440.0400.0261.0308.0293.0312.0187.0207.0148 LDGT1
.0078.0124.0099.0074.0217 LDGT1
.0999.3741.1265.1110.0566.0388.0189.0144.0067.0178 LDGT2
.0166.0089.0122.0111.0133.0100.0033.0044.0078.0100 LDGT2
.0055.0067.0055.0067.0133 LDGT2
.0067.0604.0268.0268.0000.0604.0134.0134.0134.0268 HDGV
.0470.0604.0134.0268.0537.0268.0403.0201.0403.0604 HDGV
.0805.0671.0470.0403.1278 HDGV
.0146.0705.0772.0770.0742.0794.0600.0628.0527.0575 LDDV
.0536.0543.0458.0377.0357.0331.0256.0177.0135.0098 LDDV
.0075.0100.0076.0037.0185 LDDV
.0217.0881.0833.0900.0692.0739.0647.0545.0476.0489 LDDT
.0433.0440.0400.0261.0308.0293.0312.0187.0207.0148 LDDT
.0078.0124.0099.0074.0217 LDDT
.0609.0393.1375.0884.0747.0668.1531.0825.0472.0295 HDDV
.0236.0255.0196.0098.0118.0216.0177.0118.0177.0255 HDDV
.0020.0059.0059.0079.0138 HDDV
.0114.1182.1045.0500.0750.0591.0477.0455.0250.0136 MC
.0136.4364.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
04 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
04 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
04 83 05 2222 21 096 22112222 ATP
04 83 05 2222 21 096 Pressure Test
HAR WED Diurn B 70.0 95.5 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 87.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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ENVIRON

Golden Gate Plaza \$ 101 Rowland Way \$ Novato, California 94945-5010 USA

Tel: (415) 899-0700 \$ Fax: (415) 899-0707

Montgomery County

```

5 PROMPT
Montgomery County 2007 for COAST Redo USE MOBILE5B
1 Tamflg - Default Tampering Rates
4 Spdflg - One speed for all scenarios + trip length distribution
1 VMflg - default VMT mix
3 Mymrflg- County Specific Reg Dist
2 Newflg - HDDV emission rates conversion factors
6 IMflg - I/M program
1 Alhflg - No additional correction factors
5 ATPflg - ATP and Pressure test
5 Rlfflg - Zero-out refueling emissions
2 Locflg - One LAP for all scenarios
1 Tempflag Mobile calculates exhaust temperature
4 Outfmt - 80 column output format
4 Prtflg - Print HC emission factors only
1 Idflg - No Idle factors calculated
3 Nmhfllg - Print HC = VOC
2 HCflg - Print Total HC
.0218.0850.0908.0895.0818.0852.0707.0686.0579.0557 LDGV MONTGOMERY 1999
.0510.0464.0382.0295.0260.0233.0185.0110.0087.0060 LDGV
.0047.0059.0043.0030.0165 LDGV
.0253.1066.0914.1004.0717.0780.0676.0578.0472.0462 LDGT1
.0415.0400.0345.0247.0293.0258.0239.0135.0149.0115 LDGT1
.0059.0094.0077.0058.0194 LDGT1
.1120.2898.1290.1250.0590.0490.0327.0227.0170.0130 LDGT2
.0143.0120.0117.0087.0093.0093.0103.0093.0133.0093 LDGT2
.0067.0087.0083.0063.0133 LDGT2
.0047.0376.0282.0565.0235.0824.0212.0259.0424.0400 HDGV
.0376.0282.0259.0259.0212.0353.0447.0306.0376.0424 HDGV
.0541.0588.0541.0376.1036 HDGV
.0218.0850.0908.0895.0818.0852.0707.0686.0579.0557 LDDV
.0510.0464.0382.0295.0260.0233.0185.0110.0087.0060 LDDV
.0047.0059.0043.0030.0165 LDDV
.0253.1066.0914.1004.0717.0780.0676.0578.0472.0462 LDDT
.0415.0400.0345.0247.0293.0258.0239.0135.0149.0115 LDDT
.0059.0094.0077.0058.0194 LDDT
.0277.0904.0511.0862.0468.0415.0489.0479.0383.0436 HDDV
.0628.0436.0383.0340.0404.0436.0564.0223.0351.0362 HDDV
.0202.0170.0128.0064.0085 HDDV
.0346.1141.1131.0823.0733.0629.0543.0422.0284.0207 MC
.0207.3534.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
03 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
03 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
03 83 05 2222 21 096 22112222 ATP
03 83 05 2222 21 096 Pressure Test
HAR WED Diurn B 70.0 95.5 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 87.0 15.1 14.3 23.3 7 HWY WED DRN
01 1 NLEV, start 2001,

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Waller County

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5 PROMPT
Waller County 2007 for COAST Redo USE MOBILE5B
1 Tamflg - Default Tampering Rates
4 Spdflg - One speed for all scenarios + trip length distribution
1 VMflg - default VMT mix
3 Mymrflg- County Specific Reg Dist
2 Newflg - HDDV emission rates conversion factors
6 IMflg - I/M program
1 Alhflg - No additional correction factors
5 ATPflg - ATP and Pressure test
5 Rlflg - Zero-out refueling emissions
2 Locflg - One LAP for all scenarios
1 Tempflag Mobile calculates exhaust temperature
4 Outfmt - 80 column output format
4 Prtflg - Print HC emission factors only
1 Idflg - No Idle factors calculated
3 Nmhfllg - Print HC = VOC
2 HCflg - Print Total HC
.0137.0635.0762.0761.0730.0810.0579.0650.0561.0565 LDGV WALLER 1999
.0543.0481.0483.0334.0335.0322.0315.0188.0167.0104 LDGV
.0084.0106.0078.0056.0214 LDGV
.0211.0978.0852.0857.0823.0730.0676.0546.0471.0420 LDGT1
.0395.0430.0368.0276.0267.0276.0255.0170.0202.0149 LDGT1
.0094.0124.0123.0065.0242 LDGT1
.0768.3448.1404.1554.0655.0412.0337.0169.0056.0169 LDGT2
.0112.0094.0112.0019.0112.0131.0037.0037.0075.0075 LDGT2
.0037.0000.0037.0019.0131 LDGT2
.0122.0732.0488.0122.0122.0488.0366.0366.0244.0488 HDGV
.0122.0244.0122.0000.0244.0366.0244.0244.0488.0732 HDGV
.0732.0732.0122.0488.1582 HDGV
.0137.0635.0762.0761.0730.0810.0579.0650.0561.0565 LDDV
.0543.0481.0483.0334.0335.0322.0315.0188.0167.0104 LDDV
.0084.0106.0078.0056.0214 LDDV
.0211.0978.0852.0857.0823.0730.0676.0546.0471.0420 LDDT
.0395.0430.0368.0276.0267.0276.0255.0170.0202.0149 LDDT
.0094.0124.0123.0065.0242 LDDT
.0367.1655.0917.0367.0367.0275.0550.0275.0550.0367 HDDV
.0550.0550.0275.0459.0367.0183.0275.0275.0092.0459 HDDV
.0275.0275.0000.0092.0183 HDDV
.0193.0725.0628.0531.0531.0676.0338.0821.0242.0338 MC
.0290.4687.0000.0000.0000.0000.0000.0000.0000.0000 MC
.0000.0000.0000.0000.0000 MC
009
1 7 3 90 90 05.639 00.000
1 7 3 91 97 04.598 00.000
1 7 3 98 03 03.679 00.000
1 7 3 04 50 01.840 00.000
1 4 3 05 07 01.120 00.020
1 4 3 08 08 01.090 00.020
1 4 3 09 50 01.060 00.020
1 4 1 05 07 00.690 00.090
1 4 1 09 50 00.680 00.090
2 1 2 1
04 20 83 95 03 03 096 221 2222 5211 25.0 50.0 2.00 I/M Prog1
04 20 96 05 03 03 096 221 2222 4211 0.80 15.0 2.00 I/M Prog2/ASM/IMdata4.d
1.00 1.00 1.00 1.00 0.40
04 83 05 2222 21 096 22112222 ATP
04 83 05 2222 21 096 Pressure Test
HAR WED Diurn B 70.0 95.5 8.3 7.8 92 1 1 2 LAP WEDNESDAY
13.7 26.9 22.6 15.1 9.1 12.6 Trip Length Diurnal
4 07 XXXX 87.0 15.1 14.3 23.3 7 HWY WED DRN
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ENVIRON

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