

Appendix H

MOBILE6 Files

2002 Input File

```
*
* July 1, 2002, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (02murray.in)
*
MOBILE6 INPUT FILE :

POLLUTANTS      : HC CO NOx
*PARTICULATES  :
*REPORT FILE    :
*DATABASE OUTPUT :
*DATABASE OPTIONS :
*WITH FIELDNAMES :
*DATABASE EMISSIONS : 2222 2222
*DATABASE FACILITIES: Freeway Arterial Local Ramp None
*DATABASE VEHICLES : 22222 22222222 2 222 22222222 222
*EMISSIONS TABLE :

RUN DATA
>
* next lines show average hourly temp. for 10 highest Chattanooga ozone days 2000-2002
HOURLY TEMPERATURES: 68 72 77 81 84 87 89 91 92 92 91
                    88 84 80 78 76 73 71 70 69 68 66 66
*
* the Reid vapor pressure shown below is for ozone attainment areas
* and 8-hour ozone nonattainment areas
*
FUEL RVP        : 9.0

* registration distribution for Murray county
REG DIST        : 02murray.d

*
*
SCENARIO REC    : arterials/collectors, 40.0
> July 1, 2002, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (02murray.in)
*
CALENDAR YEAR   : 2002
EVALUATION MONTH : 7
* next lines show average hourly rel. humidity for 10 highest Chattanooga ozone days 2000-2002
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                  42 51 60 65 70 78 79 81 83 83 87 88
* next line shows average daily barometric pressure for 10 highest Chattanooga ozone days 2000-2002
BAROMETRIC PRES : 29.39
AVERAGE SPEED   : 40.0 Arterial 0.0 100.0 0.0 0.0

*
*
SCENARIO REC    : rural local, no speed input
> July 1, 2002, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (02murray.in)
*
CALENDAR YEAR   : 2002
EVALUATION MONTH : 7
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                  42 51 60 65 70 78 79 81 83 83 87 88
BAROMETRIC PRES : 29.39
*
* Note that 12.9 is the default MOBILE6 average speed for local streets.
*
AVERAGE SPEED   : 12.9 local

END OF RUN
```

2009 Input File

```
*
* July 1, 2009, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (09murray.in)
*
MOBILE6 INPUT FILE :

POLLUTANTS      : HC CO NOx
*PARTICULATES   :
*REPORT FILE    :
*DATABASE OUTPUT :
*DATABASE OPTIONS :
*WITH FIELDNAMES :
*DATABASE EMISSIONS : 2222 2222
*DATABASE FACILITIES: Freeway Arterial Local Ramp None
*DATABASE VEHICLES : 22222 22222222 2 222 22222222 222
*EMISSIONS TABLE :

RUN DATA
>
* next lines show average hourly temp. for 10 highest Chattanooga ozone days 2000-2002
HOURLY TEMPERATURES: 68 72 77 81 84 87 89 91 92 92 91
                     88 84 80 78 76 73 71 70 69 68 66
*
* the Reid vapor pressure shown below is for ozone attainment areas
* and 8-hour ozone nonattainment areas
*
FUEL RVP          : 9.0

* registration distribution for Murray county
REG DIST          : 02murray.d

*
*
SCENARIO REC      : arterials/collectors, 40.0
> July 1, 2009, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (09murray.in)
*
CALENDAR YEAR     : 2009
EVALUATION MONTH  : 7
* next lines show average hourly rel. humidity for 10 highest Chattanooga ozone days 2000-2002
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                   42 51 60 65 70 78 79 81 83 83 87 88
* next line shows average daily barometric pressure for 10 highest Chattanooga ozone days 2000-2002
BAROMETRIC PRES   : 29.39
AVERAGE SPEED    : 40.0 Arterial 0.0 100.0 0.0 0.0

*
*
SCENARIO REC      : rural local, no speed input
> July 1, 2009, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (09murray.in)
*
CALENDAR YEAR     : 2009
EVALUATION MONTH  : 7
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                   42 51 60 65 70 78 79 81 83 83 87 88
BAROMETRIC PRES   : 29.39
*
* Note that 12.9 is the default MOBILE6 average speed for local streets.
*
AVERAGE SPEED    : 12.9 local

END OF RUN
```

2018 Input File

```
*
* July 1, 2018, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (18murray.in)
*
MOBILE6 INPUT FILE :

POLLUTANTS      : HC CO NOx
*PARTICULATES   :
*REPORT FILE    :
*DATABASE OUTPUT :
*DATABASE OPTIONS :
*WITH FIELDNAMES :
*DATABASE EMISSIONS : 2222 2222
*DATABASE FACILITIES: Freeway Arterial Local Ramp None
*DATABASE VEHICLES : 22222 22222222 2 222 22222222 222
*EMISSIONS TABLE :

RUN DATA
>
* next lines show average hourly temp. for 10 highest Chattanooga ozone days 2000-2002
HOURLY TEMPERATURES: 68 72 77 81 84 87 89 91 92 92 91
                    88 84 80 78 76 73 71 70 69 68 66 66
*
* the Reid vapor pressure shown below is for ozone attainment areas
* and 8-hour ozone nonattainment areas
*
FUEL RVP          : 9.0

* registration distribution for Murray county
REG DIST          : 02murray.d

*
*
SCENARIO REC      : arterials/collectors, 40.0
> July 1, 2018, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (18murray.in)
*
CALENDAR YEAR     : 2018
EVALUATION MONTH  : 7
* next lines show average hourly rel. humidity for 10 highest Chattanooga ozone days 2000-2002
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                    42 51 60 65 70 78 79 81 83 83 87 88
* next line shows average daily barometric pressure for 10 highest Chattanooga ozone days 2000-2002
BAROMETRIC PRES   : 29.39
AVERAGE SPEED    : 40.0 Arterial 0.0 100.0 0.0 0.0

*
*
SCENARIO REC      : rural local, no speed input
> July 1, 2018, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (18murray.in)
*
CALENDAR YEAR     : 2018
EVALUATION MONTH  : 7
RELATIVE HUMIDITY : 84 73 63 54 49 43 39 37 35 34 34 36
                    42 51 60 65 70 78 79 81 83 83 87 88
BAROMETRIC PRES   : 29.39
*
* Note that 12.9 is the default MOBILE6 average speed for local streets.
*
AVERAGE SPEED    : 12.9 local

END OF RUN
```


VMT Distribution:	0.4821	0.2538	0.1279		0.0382	0.0012	0.0029	0.0883	0.0056	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	4.118	5.911	3.547	5.119	6.980	1.446	1.944	1.391	4.94	4.363
Composite CO :	20.83	38.68	23.15	33.47	79.95	3.104	3.359	8.259	32.30	26.796
Composite NOX :	1.597	1.768	1.516	1.684	4.329	2.095	2.238	14.839	0.97	2.903

VMT Distribution:	0.3847	0.3172	0.1591		0.0387	0.0004	0.0023	0.0925	0.0051	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	2.321	3.682	2.120	3.160	3.189	0.682	0.814	0.850	4.85	2.627
Composite CO :	11.15	18.84	13.06	16.91	22.96	2.174	1.391	4.553	32.30	13.821
Composite NOX :	0.922	1.392	1.241	1.341	2.541	1.003	1.005	8.643	0.97	1.899

2018 Output File

```
*****
* MOBILE6.2.03 (24-Sep-2003) *
* Input file: 18MURRAY.IN (file 3, run 1). *
*****
*
```

```
* Reading Registration Distributions from the following external
* data file: 02MURRAY.D
```

```
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:
      1.00      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:
      1.00      MYR sum not = 1. (will normalize)
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      1.00      MYR sum not = 1. (will normalize)
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      1.00      MYR sum not = 1. (will normalize)
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      1.00      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:
      1.00      MYR sum not = 1. (will normalize)
```

```
* #####
* arterials/collectors, 40.0
* File 3, Run 1, Scenario 1.
* #####
* July 1, 2018, Murray county, '02 reg. dist. (default for Class 8b), default VMT mix (18murray.in)
```

```
M583 Warning:
      The user supplied arterial average speed of 40.0
      will be used for all hours of the day. 100% of VMT
      has been assigned to the arterial/collector roadway
      type for all hours of the day and all vehicle types.
```

```
M 48 Warning:
      there are no sales for vehicle class HDGV8b
```

```
M 48 Warning:
      there are no sales for vehicle class LDDT12
```

```
      Calendar Year: 2018
      Month: July
      Altitude: Low
      Minimum Temperature: 66.0 (F)
      Maximum Temperature: 92.0 (F)
```


Reformulated Gas: No

Vehicle Type: GVWR:	LDGV	LDGT12 <6000	LDGT34 >6000	LDGT (All)	HDGV	LDDV	LDDT	HDDV	MC	All Veh
VMT Distribution:	0.3091	0.3656	0.1833		0.0394	0.0003	0.0027	0.0947	0.0049	1.0000

Composite Emission Factors (g/mi):										
Composite VOC :	1.106	1.540	1.013	1.364	1.421	0.158	0.354	0.554	4.84	1.224
Composite CO :	8.23	12.78	9.44	11.66	17.06	1.253	0.785	1.362	32.30	9.907
Composite NOX :	0.488	0.917	0.711	0.848	0.955	0.156	0.341	2.681	0.97	0.914

Murray County Registration Distribution Input (02murray.d)

REG DIST

*
* The file REGDATA.D contains the default MOBILE6 values for the distribution of
* vehicles by age for July of any calendar year. There are sixteen (16)
* sets of values representing 16 combined gasoline/diesel vehicle class
* distributions. These distributions are split for gasoline and diesel
* using the separate input (or default) values for diesel sales fractions.
* Each distribution contains 25 values which represent the fraction of
* all vehicles in that class (gasoline and diesel) of that age in July.
* The first number is for age 1 (calendar year minus model year plus one)
* and the last number is for age 25. The last age includes all vehicles
* of age 25 or older. The first number in each distribution is an integer
* which indicates which of the 16 vehicle classes are represented by the
* distribution. The sixteen vehicle classes are:
*
* 1 LDV Light-Duty Vehicles (Passenger Cars)
* 2 LDT1 Light-Duty Trucks 1 (0-6,000 lbs. GVWR, 0-3750 lbs. LVW)
* 3 LDT2 Light Duty Trucks 2 (0-6,001 lbs. GVWR, 3751-5750 lbs. LVW)
* 4 LDT3 Light Duty Trucks 3 (6,001-8500 lbs. GVWR, 0-3750 lbs. LVW)
* 5 LDT4 Light Duty Trucks 4 (6,001-8500 lbs. GVWR, 3751-5750 lbs. LVW)
* 6 HDV2B Class 2b Heavy Duty Vehicles (8501-10,000 lbs. GVWR)
* 7 HDV3 Class 3 Heavy Duty Vehicles (10,001-14,000 lbs. GVWR)
* 8 HDV4 Class 4 Heavy Duty Vehicles (14,001-16,000 lbs. GVWR)
* 9 HDV5 Class 5 Heavy Duty Vehicles (16,001-19,500 lbs. GVWR)
* 10 HDV6 Class 6 Heavy Duty Vehicles (19,501-26,000 lbs. GVWR)
* 11 HDV7 Class 7 Heavy Duty Vehicles (26,001-33,000 lbs. GVWR)
* 12 HDV8A Class 8a Heavy Duty Vehicles (33,001-60,000 lbs. GVWR)
* 13 HDV8B Class 8b Heavy Duty Vehicles (>60,000 lbs. GVWR)
* 14 HDBS School Busses
* 15 HDBT Transit and Urban Busses
* 16 MC Motorcycles (All)
*
* The 25 age values are arranged in two rows of 10 values followed by a row
* with the last 5 values. Comments (such as this one) are indicated by
* an asterisk in the first column. Empty rows are ignored. Values are
* read "free format," meaning any number may appear in any row with as
* many characters as needed (including a decimal) as long as 25 values
* follow the initial integer value separated by a space.
*
* If all 16 vehicle classes do not need to be altered from the default
* values, then only the vehicle classes that need to be changed need to
* be included in this file. The order in which the vehicle classes are
* read does not matter, however each vehicle class set must contain 25
* values and be in the proper age order.
*
*-----
* This file specifies the local registration distribution by age
* (MOBILE6 defaults for heavy-heavy-duties) for the county where
* the Fort Mountain State Park nonattainment area is:
*
* Murray.
*
* Sources of registration data: R. L. Polk & Co.'s National Vehicle
* Population Profile (R) as of October 2002 and R. L. Polk & Co.'s
* TIPNet (R) as of March 2003.
*
* LDV
1 0.0066 0.0334 0.0425 0.0576 0.0505 0.0547 0.0563 0.0597 0.0692 0.0604
0.0656 0.0578 0.0547 0.0470 0.0503 0.0427 0.0342 0.0308 0.0254 0.0200
0.0115 0.0061 0.0053 0.0056 0.0521
*
* LDT1
2 0.0095 0.0663 0.0623 0.0623 0.0550 0.0575 0.0573 0.0645 0.0694 0.0671
0.0630 0.0477 0.0369 0.0287 0.0376 0.0419 0.0360 0.0271 0.0224 0.0164
0.0107 0.0043 0.0025 0.0035 0.0499

* LDT2										
3	0.0006	0.0011	0.0056	0.0246	0.0302	0.0610	0.0649	0.0000	0.0201	0.0325
	0.0364	0.0353	0.0403	0.0576	0.0778	0.0856	0.0481	0.0755	0.0632	0.0744
	0.0476	0.0593	0.0582	0.0000	0.0000					
* LDT3										
4	0.0331	0.0762	0.0823	0.0872	0.0904	0.0476	0.0664	0.0651	0.0804	0.0625
	0.0305	0.0334	0.0146	0.0204	0.0201	0.0240	0.0272	0.0275	0.0444	0.0275
	0.0172	0.0123	0.0097	0.0000	0.0000					
* LDT4										
5	0.0022	0.0195	0.0195	0.0282	0.0542	0.0477	0.0586	0.0390	0.0738	0.0759
	0.0607	0.0629	0.0477	0.0412	0.0716	0.0694	0.0369	0.0477	0.0325	0.0499
	0.0325	0.0087	0.0195	0.0000	0.0000					
* HDV2B										
6	0.0377	0.0866	0.0490	0.0565	0.0546	0.0151	0.0546	0.0527	0.0414	0.0659
	0.0433	0.0490	0.0282	0.0264	0.0301	0.0527	0.0282	0.0452	0.0565	0.0490
	0.0358	0.0282	0.0113	0.0000	0.0019					
* HDV3										
7	0.0267	0.0833	0.1433	0.0500	0.0833	0.0300	0.0600	0.0433	0.0433	0.0500
	0.0267	0.0100	0.0067	0.0433	0.0300	0.0167	0.0333	0.0467	0.0300	0.0233
	0.0267	0.0267	0.0067	0.0067	0.0533					
* HDV4										
8	0.0000	0.0326	0.0435	0.0326	0.0435	0.0652	0.0978	0.0109	0.0326	0.0217
	0.0543	0.0217	0.0435	0.0435	0.0761	0.0978	0.0543	0.0109	0.0326	0.0543
	0.0326	0.0000	0.0000	0.0000	0.0978					
* HDV5										
9	0.0000	0.0175	0.1053	0.0702	0.0526	0.0175	0.1228	0.0000	0.0175	0.0000
	0.0000	0.0351	0.0000	0.0000	0.0000	0.0000	0.0000	0.0175	0.0175	0.0175
	0.0526	0.0000	0.0175	0.0000	0.4386					
* HDV6										
10	0.0030	0.0030	0.0121	0.0453	0.0242	0.0242	0.0242	0.0272	0.0363	0.0181
	0.0151	0.0121	0.0030	0.0151	0.0181	0.0181	0.0483	0.0302	0.0211	0.0302
	0.0211	0.0181	0.0091	0.0121	0.5106					
* HDV7										
11	0.0000	0.0076	0.0076	0.0152	0.0000	0.0076	0.0303	0.0000	0.0682	0.0227
	0.0303	0.0303	0.0530	0.0606	0.0303	0.0909	0.0530	0.0758	0.0909	0.0530
	0.0227	0.0530	0.0455	0.0530	0.0985					
* HDV8A										
12	0.0046	0.1261	0.0550	0.0642	0.0321	0.0482	0.0344	0.0505	0.0550	0.0528
	0.0298	0.0528	0.0482	0.0367	0.0528	0.0596	0.0229	0.0390	0.0413	0.0298
	0.0161	0.0115	0.0046	0.0069	0.0252					
* HDV8B										
*13	0.0204	0.0000	0.0544	0.0612	0.0544	0.0408	0.0408	0.0272	0.0680	0.0068
*	0.0340	0.0068	0.0136	0.0340	0.0272	0.0408	0.0136	0.0884	0.0408	0.0204
*	0.0204	0.0136	0.0204	0.0068	0.2449					
* HDBS										
14	0.0549	0.0440	0.0330	0.0440	0.0549	0.0110	0.0549	0.0769	0.0769	0.0440
	0.0440	0.0989	0.0549	0.0659	0.0110	0.0769	0.0330	0.0000	0.0220	0.0000
	0.0220	0.0110	0.0110	0.0110	0.0440					
* HDBT										
15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000					
* MC										
16	0.0016	0.0966	0.1293	0.0841	0.0514	0.0561	0.0483	0.0561	0.0530	0.0343
	0.0312	0.3583	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	0.0000	0.0000	0.0000	0.0000	0.0000					