APPENDIX D

AIR QUALITY MODELING CALCULATION

Table 1
Alternative 1 - Percent Distribution, Patrons, and Vehicle Miles Travels per Year

Routes[1]	Market Areas	Trip Distribution[1]	Distance (miles)	Alternatives			
				A, C and Sub-Alternative A-1		B	
				Trips	VMT/Year	Trips	VMT/Year
Florida Turnpike North	Northern Florida	0.07	5.0	121,874	609,368	106799	533,995
Florida Turnpike South	Miami	0.07	20.0	121,874	2,437,470	106799	2,135,980
Sample Road	Coconut Grove and Coral Springs	0.42	5.0	731,241	3,656,205	640794	3,203,970
Wiles Road	Coconut Grove and Coral Springs	0.07	5.0	731,241	3,656,205	640794	3,203,970
Sawgrass Expressway	Coconut Grove and Coral Springs	0.09	10.0	156,695	1,566,945	137313	1,373,130
State Route 7 North and South	North and South Broward County	0.28	15.0	487,494	7,312,410	427196	6,407,940
Total VMT (miles)					19,238,603		16,858,985

[1] Transportation Plannig Study (Keith and Schnars, 2011, **Appendix E**
Source: AES, 2011

Table 2a
Mobile Operations Criteria Pollutant and GHG Emissions

Alternatives Speed (mph)	A, C, and A-1 Freeway. Arterial, and Local	B Freeway. Arterial, and Local
vmt/yr	19,238,603	16,858,985
Criteria Pollutant Emissions (tpy)		
NOx	9.6	8.5
VOC	9.5	8.3
SO_2	0.2	0.1
CO	131.1	114.9
$PM_{2.5}$	0.3	0.3
PM_{10}	0.6	0.5
Greenhouse Gas		
CO_2	11,997	10,513

Criteria pollutant emissions were calculated using half summer/half winter emission factors.
Source: Mobile 6.2, 2003; AES, 2011.

Table 2b
Cumulative Mobile Operations Criteria Pollutant and GHG Emissions

Alternatives Speed (mph)	A, C, and A-1 Freeway. Arterial, and Local	B Freeway. Arterial, and Local
vmt/yr	19,238,603	16,858,985
Criteria Pollutant Emissions (tpy)		
NOx	6.0	5.2
VOC	7.9	6.9
SO_2	0.2	0.1
CO	122.4	107.2
$PM_{2.5}$	0.3	0.2
PM_{10}	0.6	0.5
Greenhouse Gas		
CO_2	12,000	10,516

Criteria pollutant emissions were calculated using half summer/half winter emission factors.
Source: Mobile 6.2, 2003; AES, 2011.

Table 3a

Build Out Operational Emission Factors

Season	**Winter**	**Summer**
Default Speeds	**Freeway, Arterial, and Local[1]**	**Freeway, Arterial, and Local[1]**
Criteria Pollutant	**grams per mile**	
NOx	0.447	0.463
VOC	0.437	0.461
SO_2	0.0078	0.0078
CO	6.353	6.01
$PM_{2.5}$	0.0143	0.0142
PM_{10}	0.0292	0.0291
Greenhouse Gas		
CO_2	565.43	565.96

[1] Freeway, Arterial, and local speeds = 55, 40, and 25 miles per hour, repectively.

Source: Mobile6.2, 2003; AES, 2011

Table 3b

Cumulative Operational Emission Factors

Season	**Winter**	**Summer**
Default Speeds	**Freeway, Arterial, and Local[1]**	**Freeway, Arterial, and Local[1]**
Criteria Pollutant	**grams per mile**	
NOx	0.268	0.294
VOC	0.363	0.383
SO_2	0.0078	0.0078
CO	5.935	5.605
$PM_{2.5}$	0.0126	0.0126
PM_{10}	0.0274	0.0274
Greenhouse Gas		
CO_2	565.61	566.14

[1] Freeway, Arterial, and local speeds = 55, 40, and 25 miles per hour, repectively.

Source: Mobile6.2, 2003; AES, 2011

Table 4

Fugitive Dust Emissions from Construction Activities

Alternatives	A, C and Sub Alt. A-1	B
Area to be Graded (acres)	43.00	23.00
Grading Duration (day/year)	66	66
PM_{10} Emisson Factor (tons PM_{10}/acre-day)	0.0191	0.0191
PM10 Emissions (tons/year)	**54.206**	**28.994**
$PM_{2.5}$ Emisson Factor (tons PM_{10}/acre-day)	0.005	0.005
$PM_{2.5}$ Emissions (tons/year)	**15.178**	**8.118**

Source: OFFROAD air quality model, 2007.

Table 5a

Alternatives A, C and Sub-Alternative A-1 - Construction Emissions

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4]						Emisssion (tons/year)					
				CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$
Site Grading															
2 Bulldozer	352	0.59	8	1.38	0.36	4.76	0.74	0.33	0.32	1.84	0.48	6.36	0.99	0.44	0.43
2 Motor Grader	174	0.575	8	1.36	0.35	7.43	0.74	0.33	0.32	0.88	0.23	4.78	0.48	0.21	0.21
2 Water Truck	417	0.49	8	2.07	0.44	5.49	0.74	0.41	0.40	2.72	0.58	7.21	0.97	0.54	0.53
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		17,720		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.35	0.01	0.02	0.0002	0.0007	0.0004
Fugitive Dust (38.2 Acres)														54.206	15.178
Total Site Grading Emissions										*6.96*	*1.59*	*22.17*	*3.00*	*55.66*	*16.59*
Building															
2 Concrete/Industrial Saw	84	0.73	8	8.50	1.00	5.80	0.13	0.16	0.15	3.35	0.39	2.29	0.05	0.06	0.06
3 Crane	190	0.43	8	1.30	0.44	5.72	0.73	0.34	0.33	1.02	0.35	4.51	0.58	0.27	0.26
3 Rough Terrain Forklift	94	0.475	8	7.76	1.98	8.56	0.95	1.39	1.35	3.34	3.24	0.83	3.58	0.40	0.58
3 Rubber Tire Loader	165	0.465	8	1.55	0.38	5.00	0.74	0.35	0.34	1.15	0.28	3.70	0.55	0.26	0.25
2 Tractors/Loader/Backhoe	79	0.465	8	8.21	1.85	7.22	0.95	1.37	1.33	1.94	0.44	1.71	0.22	0.32	0.31
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		17,720		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.35	0.01	0.02	0.00	0.00	0.00
Total Building										*12.33*	*5.00*	*16.84*	*5.54*	*1.58*	*1.72*
Paving[4]															
Paver	132	0.59	8	8.5	1.0	5.8	0.17	0.16	0.15	2.13	0.25	1.45	0.04	0.04	0.04
Paving Equipment	111	0.53	8	8.5	1.0	5.8	0.14	0.16	0.15	1.61	0.19	1.10	0.03	0.03	0.03
2 Rollers	114	0.43	8	8.5	1.0	5.8	0.14	0.16	0.15	2.68	0.32	1.83	0.04	0.05	0.05
Total Paving Emissions										*6.42*	*0.75*	*4.38*	*0.11*	*0.12*	*0.11*
Architectural Coating															
Total Architectural Coating Emissions											*34.46*				
Total Construction Emissions										**25.71**	**41.80**	**43.38**	**8.65**	**57.36**	**18.43**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Besed on 20 mile trip length, 886 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission fectors provided by EPA approved OFFROAD 2007, based on equipment ege distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 5b

Alternatives B - Construction Emissions

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4]						Emisssion (tons/year)					
				CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]	CO	VOC	NO_2	SO_2	PM_{10}	$PM_{2.5}$[3]
Site Grading															
2 Bulldozer	352	0.59	8	1.38	0.36	4.76	0.74	0.33	0.32	1.84	0.48	6.36	0.99	0.44	0.43
2 Motor Grader	174	0.575	8	1.36	0.35	7.43	0.74	0.33	0.32	0.88	0.23	4.78	0.48	0.21	0.21
2 Water Truck	417	0.49	8	2.07	0.44	5.49	0.74	0.41	0.40	2.72	0.58	7.21	0.97	0.54	0.53
2 Other Construction Equipment	190	0.62	8	1.55	0.38	5.00	0.74	0.35	0.34	1.17	0.29	3.79	0.56	0.27	0.26
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		12,000		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.24	0.01	0.02	0.00	0.00	0.00
Fugitive Dust														0.009	0.003
Total Site Grading Emissions										*6.85*	*1.58*	*22.16*	*3.00*	*1.47*	*1.42*
Building															
2 Concrete/Industrial Saw	84	0.73	8	8.50	1.00	5.80	0.13	0.16	0.15	3.35	0.39	2.29	0.05	0.06	0.06
2 Crane	190	0.43	8	1.30	0.44	5.72	0.73	0.34	0.33	0.68	0.23	3.01	0.38	0.18	0.17
1Rough Terrain Forklift	94	0.475	8	7.76	1.98	8.56	0.95	1.39	1.35	1.11	0.28	1.23	0.14	0.20	0.19
1Rubber Tire Loader	165	0.465	8	1.55	0.38	5.00	0.74	0.35	0.34	0.38	0.09	1.23	0.18	0.09	0.08
1Tractors/Loader/Backhoe	79	0.465	8	8.21	1.85	7.22	0.95	1.37	1.33	0.97	0.22	0.85	0.11	0.16	0.16
	Total Miles Traveled			**Emission Factors (g/miles)**						**Emissions (tons/year)**					
Employee Trips[3]		12,000		17.946	0.735	1.156	0.0078	0.0371	0.0215	0.24	0.02	0.03	0.00	0.00	0.00
Total Building Emissions										*6.74*	*1.24*	*8.64*	*0.87*	*0.69*	*0.67*
Paving[4]															
Paver	132	0.59	8	8.5	1.0	5.8	0.17	0.16	0.15	2.13	0.25	1.45	0.04	0.04	0.04
Paving Equipment	111	0.53	8	8.5	1.0	5.8	0.14	0.16	0.15	1.61	0.19	1.10	0.03	0.03	0.03
2 Rollers	114	0.43	8	8.5	1.0	5.8	0.14	0.16	0.15	2.68	0.32	1.83	0.04	0.05	0.05
Total Paving Emissions										*6.42*	*0.75*	*4.38*	*0.11*	*0.12*	*0.11*
Architectural Coating															
Total Architectural Coating Emissions											*16.12*				
Total Construction Emissions										20.01	**19.70**	**35.17**	3.98	**2.28**	**2.20**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 20 mile trip length, 600 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 6

Alternatives A, C and Sub-Alternative A-1 - Construction GHG Emissions[1]

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4] CO2	Emisssion (MT/year) CO2
Site Grading					
2 Bulldozer	352	0.59	8	536.20	651.76
2 Motor Grader	174	0.575	8	536.30	314.05
2 Water Truck	417	0.49	8	536.00	641.01
2 Other Construction Equipment	190	0.62	8	536.20	369.69
	Total Miles Traveled			**Emission Factors (g/miles)**	**Emissions (MT/year)**
Employee Trips[3]	17,720			552.8	9.80
Total Site Grading Emissions					*1986.31*
Building					
2 Concrete/Industrial Saw	84	0.73	8	529.70	190.11
3 Crane	190	0.43	8	530.20	253.53
3 Rough Terrain Forklift	94	0.475	8	690.80	180.53
3 Rubber Tire Loader	165	0.465	8	536.20	240.79
2 Tractors/Loader/Backhoe	79	0.465	8	691.10	148.59
2 Other Construction Equipment	190	0.62	8	530.20	365.56
	Total Miles Traveled			**Emission Factors (g/miles)**	**Emissions (MT/year)**
Employee Trips[3]	17,720			552.8	9.80
Total Building					*1388.89*
Paving[4]					
Paver	132	0.59	8	520.3	118.58
Paving Equipment	111	0.53	8	520.3	89.58
2 Rollers	114	0.43	8	520.3	74.64
Total Paving Emissions					*282.80*
Total Construction Emissions					**3,658.00**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 20 mile trip length, 886 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 7

Alternatives B - Construction GHG Emissions[1]

Construction Equipment[1]	Horsepower[2]	Load Factor[2]	Hours in Use[2] (hours/day)	Emission Factors (g/bhp/hr)[4] CO	Emisssion (tons/year) CO
Site Grading					
2 Bulldozer	352	0.59	8	536.20	651.76
2 Motor Grader	174	0.575	8	536.30	314.05
2 Water Truck	417	0.49	8	536.00	641.01
2 Other Construction Equipment	190	0.62	8	536.20	369.69
	Total Miles Traveled			**Emission Factors (g/miles)**	**Emissions (tons/year)**
Employee Trips[3]		12,000		552.8	6.63
Fugitive Dust					
Total Site Grading Emissions					*1983.15*
Building					
2 Concrete/Industrial Saw	84	0.73	8	529.70	190.11
2 Crane	190	0.43	8	530.20	253.53
1Rough Terrain Forklift	94	0.475	8	690.80	90.26
1Rubber Tire Loader	165	0.465	8	536.20	120.39
1Tractors/Loader/Backhoe	79	0.465	8	691.10	74.29
	Total Miles Traveled			**Emission Factors (g/miles)**	**Emissions (tons/year)**
Employee Trips[3]		12,000		552.8	6.63
Total Building Emissions					*735.22*
Paving[4]					
Paver	132	0.59	8	520.3	118.58
Paving Equipment	111	0.53	8	520.3	89.58
2 Rollers	114	0.43	8	520.3	74.64
Total Paving Emissions					*282.80*
Total Construction Emissions					**3,001.17**

Source: EPA, 2007; AES, 2011

[1] Construction equipment list from USEPA approved URBEMIS 2007 air model.

[2] Hours per normal work day.

[3] Based on 20 mile trip length, 600 trips per day, and EMFAC, 2007 emission factors (grams/mile).

[4] Emission factors provided by EPA approved OFFROAD 2007, based on equipment age distribution in the U.S. in g/bhp/hr = grams per brake horsepower per hour

Table 8a

Alternative A, C and Sub-Alternative A-1[1]

Pollutant/GHG	MMscf/year	Emission Factors (lb/MMscf)	Conversion factor (lb/tons)	Emissions (tons)
VOC	300	5.5	0.0005	0.83
NOx	300	0.64	0.0005	0.10
CO	300	11	0.0005	1.65
SO2	300	0.6	0.0005	0.09
PM10	300	5.7	0.0005	0.86
PM2.5	300	1.9	0.0005	0.29
Greenhouse Gas			**lb/MT**	**MT**
CO2	300	120,000	0.0005	18,000

Table 8b

Alternative B[2]

Pollutant/GHG	MMscf/year	Emission Factors (lb/MMscf)	Conversion factor (lb/tons)	Emissions (tons)
VOC	240	5.5	0.0005	0.66
NOx	240	0.64	0.0005	0.08
CO	240	11	0.0005	1.32
SO2	240	0.6	0.0005	0.07
PM10	240	5.7	0.0005	0.68
PM2.5	240	1.9	0.0005	0.23
Greenhouse Gas			**lb/MT**	**MT**
CO2	240	120,000	0.0005	14,400

[1] Based on AP-42 emissions factors for 3 - 12 MMBtu/hr natural gas boilers.

[2] Based on AP-42 emissions factors for 2 - 12 MMBtu/hr natural gas boilers.

Source AP-42, EPA, 1998; AES, 2011.

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

* Reading Ammonia (NH3) Basic Emissiion Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D

                    Calendar Year:  2020
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  75.0 (F)
               Maximum Temperature: 100.0 (F)
                 Absolute Humidity:  300. grains/lb
                  Nominal Fuel RVP:   7.0 psi
                     Weathered RVP:   6.5 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
                GVWR:                <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000
 Fuel Economy (mpg):      24.1      18.5      14.2      17.2       9.8      32.4      17.0
7.2      50.0      16.1

-------------------------------------------------------------------------------------------
----------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.349     0.454     0.736     0.526     0.498    0.064     0.208
0.266      2.22     0.461
     Composite CO  :      5.54      6.37      8.38      6.88      7.36     0.633     0.460
0.462     19.16     6.010
     Composite NOX :      0.244     0.315     0.557     0.377     0.606    0.062     0.261
1.661      0.90     0.463
```

Composite CO2 :	368.0	479.3	623.9	516.3	907.3	314.1	598.7	1410.9	177.4	565.96

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2020
                                     Month:  July
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff: 10.00 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
            GVWR:                  <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000

-------------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
              Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
             GASPM:    0.0039    0.0037    0.0038    0.0037    0.0133    ------    ------
------    0.0205    0.0039
           ECARBON:    ------    ------    ------    ------    ------    0.0098    0.0067
0.0193    ------    0.0017
           OCARBON:    ------    ------    ------    ------    ------    0.0028    0.0097
0.0099    ------    0.0009
               SO4:    0.0003    0.0005    0.0005    0.0005    0.0018    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0042    0.0042    0.0042    0.0042    0.0151    0.0127    0.0167
0.0300    0.0206    0.0070
             Brake:    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125
0.0125    0.0125    0.0125
              Tire:    0.0080    0.0080    0.0080    0.0080    0.0086    0.0080    0.0080
0.0258    0.0040    0.0096
          Total PM:    0.0247    0.0248    0.0248    0.0248    0.0363    0.0333    0.0373
0.0684    0.0371    0.0291

-------------------------------------------------------------------------------------------------
-----------------------
```

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*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS25.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2020
                                     Month:  July
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff:  2.50 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV         MC   All Veh
            GVWR:                  <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000

-------------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
              Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
             GASPM:    0.0036    0.0034    0.0035    0.0034    0.0120    ------    ------
------    0.0142    0.0035
           ECARBON:    ------    ------    ------    ------    ------    0.0090    0.0062
0.0177    ------    0.0016
           OCARBON:    ------    ------    ------    ------    ------    0.0025    0.0089
0.0091    ------    0.0008
               SO4:    0.0003    0.0005    0.0005    0.0005    0.0018    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0039    0.0039    0.0039    0.0039    0.0138    0.0117    0.0154
0.0277    0.0143    0.0064
             Brake:    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053
0.0053    0.0053    0.0053
              Tire:    0.0020    0.0020    0.0020    0.0020    0.0022    0.0020    0.0020
0.0065    0.0010    0.0024
          Total PM:    0.0112    0.0113    0.0113    0.0113    0.0213    0.0190    0.0227
0.0395    0.0206    0.0142

-------------------------------------------------------------------------------------------------
-----------------------
```

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

* Reading Ammonia (NH3) Basic Emissiion Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D

                    Calendar Year:  2020
                            Month:  Jan.
                         Altitude:  Low
               Minimum Temperature:  65.0 (F)
               Maximum Temperature:  75.0 (F)
                 Absolute Humidity:  250. grains/lb
                  Nominal Fuel RVP:   7.0 psi
                     Weathered RVP:   7.0 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
             GVWR:                <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000
 Fuel Economy (mpg):      24.1      18.5      14.2      17.2       9.8      32.4      17.0
7.2      50.0      16.1

-------------------------------------------------------------------------------------------
----------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.340     0.420     0.714     0.495     0.442    0.064     0.212
0.268      2.01     0.437
     Composite CO  :      6.12      6.58      9.15      7.23      7.38     0.629     0.465
0.481     13.42     6.353
     Composite NOX :      0.210     0.285     0.544     0.351     0.619    0.064     0.271
1.757      1.05     0.447
```

```
    Composite CO2 :    368.0     479.3     623.9     516.0     907.4     314.1     598.7
1411.1      177.4    565.43

-------------------------------------------------------------------------------------------
----------------------
```

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2020
                                     Month:  Jan.
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff: 10.00 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV         MC   All Veh
             GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000

-------------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
               Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
              GASPM:    0.0039    0.0037    0.0038    0.0037    0.0137    ------    ------
------    0.0205    0.0039
            ECARBON:    ------    ------    ------    ------    ------    0.0099    0.0070
0.0202    ------    0.0018
            OCARBON:    ------    ------    ------    ------    ------    0.0028    0.0100
0.0103    ------    0.0009
                SO4:    0.0003    0.0005    0.0005    0.0005    0.0018    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0042    0.0042    0.0042    0.0042    0.0155    0.0129    0.0173
0.0315    0.0206    0.0071
              Brake:    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125
0.0125    0.0125    0.0125
               Tire:    0.0080    0.0080    0.0080    0.0080    0.0086    0.0080    0.0080
0.0259    0.0040    0.0096
            Total PM:    0.0247    0.0248    0.0248    0.0248    0.0367    0.0334    0.0379
0.0699    0.0371    0.0292

-------------------------------------------------------------------------------------------------
-----------------------
```

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2020
                                      Month:  Jan.
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff:  2.50 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV         MC   All Veh
            GVWR:                  <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000

-------------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
              Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
             GASPM:    0.0036    0.0034    0.0035    0.0034    0.0124    ------    ------
------    0.0142    0.0036
           ECARBON:    ------    ------    ------    ------    ------    0.0091    0.0064
0.0186    ------    0.0016
           OCARBON:    ------    ------    ------    ------    ------    0.0026    0.0092
0.0095    ------    0.0008
               SO4:    0.0003    0.0005    0.0005    0.0005    0.0018    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0039    0.0039    0.0039    0.0039    0.0142    0.0119    0.0159
0.0290    0.0143    0.0066
             Brake:    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053
0.0053    0.0053    0.0053
              Tire:    0.0020    0.0020    0.0020    0.0020    0.0022    0.0020    0.0020
0.0065    0.0010    0.0024
          Total PM:    0.0112    0.0113    0.0113    0.0113    0.0217    0.0192    0.0233
0.0408    0.0206    0.0143

-------------------------------------------------------------------------------------------------
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```

```
*******************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                  *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS10.IN (file 1, run 1).                *
*******************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

* Reading Ammonia (NH3) Basic Emissiion Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D

                    Calendar Year:  2035
                            Month:  July
                         Altitude:  Low
               Minimum Temperature:  75.0 (F)
               Maximum Temperature: 100.0 (F)
                 Absolute Humidity:  300. grains/lb
                  Nominal Fuel RVP:   7.0 psi
                     Weathered RVP:   6.5 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
          GVWR:                  <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000
 Fuel Economy (mpg):      24.1      18.5      14.2      17.2       9.8      32.4      17.0
7.2      50.0      16.1

-------------------------------------------------------------------------------------------
----------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.311     0.387     0.538     0.426     0.359     0.047     0.108
0.237      2.22     0.383
     Composite CO  :      5.25      6.06      7.32      6.38      7.11     0.597     0.350
0.215     19.16     5.605
     Composite NOX :      0.211     0.275     0.407     0.308     0.174     0.028     0.123
0.484      0.90     0.294
```

Composite CO2 :	368.0	479.4	624.6	516.6	907.3	314.1	598.7	1410.9	177.4	566.14

```
*****************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS10.IN (file 1, run 1).              *
*****************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2035
                                     Month:  July
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff: 10.00 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
            GVWR:                  <6000     >6000     (All)
                      ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000

-----------------------------------------------------------------------------------------------
----------------------
 Composite Emission Factors (g/mi):
              Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
             GASPM:    0.0039    0.0037    0.0037    0.0037    0.0082    ------    ------
------    0.0205    0.0037
           ECARBON:    ------    ------    ------    ------    ------    0.0071    0.0037
0.0082    ------    0.0007
           OCARBON:    ------    ------    ------    ------    ------    0.0020    0.0053
0.0042    ------    0.0004
               SO4:    0.0003    0.0005    0.0005    0.0005    0.0019    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0042    0.0042    0.0042    0.0042    0.0101    0.0093    0.0093
0.0133    0.0206    0.0053
             Brake:    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125
0.0125    0.0125    0.0125
              Tire:    0.0080    0.0080    0.0080    0.0080    0.0086    0.0080    0.0080
0.0258    0.0040    0.0096
          Total PM:    0.0247    0.0247    0.0247    0.0247    0.0313    0.0298    0.0299
0.0516    0.0371    0.0274

-----------------------------------------------------------------------------------------------
----------------------
```

```
*****************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                *
* Input file: N:\PROJECTS\MOBILE6.2\SIMS10.IN (file 1, run 1).              *
*****************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2035
                                     Month:  July
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff:  2.50 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV         MC   All Veh
             GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2788    0.4388    0.1507              0.0365    0.0003    0.0022
0.0876    0.0051    1.0000

-----------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
               Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
              GASPM:    0.0036    0.0034    0.0034    0.0034    0.0075    ------    ------
------    0.0142    0.0034
            ECARBON:    ------    ------    ------    ------    ------    0.0065    0.0034
0.0075    ------    0.0007
            OCARBON:    ------    ------    ------    ------    ------    0.0018    0.0049
0.0038    ------    0.0003
                SO4:    0.0003    0.0005    0.0005    0.0005    0.0019    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0039    0.0039    0.0039    0.0039    0.0094    0.0085    0.0086
0.0123    0.0143    0.0049
              Brake:    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053
0.0053    0.0053    0.0053
               Tire:    0.0020    0.0020    0.0020    0.0020    0.0022    0.0020    0.0020
0.0065    0.0010    0.0024
            Total PM:    0.0112    0.0112    0.0112    0.0112    0.0169    0.0159    0.0159
0.0241    0.0206    0.0126

-----------------------------------------------------------------------------------------------
-----------------------
```

```
*****************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).              *
*****************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

* Reading PM Gas Carbon ZML Levels
* from the external data file PMGZML.CSV

* Reading PM Gas Carbon DR1 Levels
* from the external data file PMGDR1.CSV

* Reading PM Gas Carbon DR2 Levels
* from the external data file PMGDR2.CSV

* Reading PM Diesel Zero Mile Levels
* from the external data file PMDZML.CSV

* Reading the First PM Deterioration Rates
* from the external data file PMDDR1.CSV

* Reading the Second PM Deterioration Rates
* from the external data file PMDDR2.CSV
  M 48 Warning:
               there are no sales for vehicle class HDGV8b
  M 48 Warning:
               there are no sales for vehicle class LDDT12

* Reading Ammonia (NH3) Basic Emissiion Rates
* from the external data file PMNH3BER.D

* Reading Ammonia (NH3) Sulfur Deterioration Rates
* from the external data file PMNH3SDR.D

                    Calendar Year:  2035
                            Month:  Jan.
                         Altitude:  Low
               Minimum Temperature:  65.0 (F)
               Maximum Temperature:  75.0 (F)
                 Absolute Humidity:  250. grains/lb
                  Nominal Fuel RVP:   7.0 psi
                     Weathered RVP:   7.0 psi
               Fuel Sulfur Content:   30. ppm

               Exhaust I/M Program:  No
                  Evap I/M Program:  No
                       ATP Program:  No
                  Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
                GVWR:                <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000
 Fuel Economy (mpg):      24.1      18.5      14.2      17.2       9.8      32.4      17.0
7.2      50.0      16.1

-----------------------------------------------------------------------------------------
----------------------
 Composite Emission Factors (g/mi):
     Composite VOC :      0.304     0.357     0.524     0.400     0.319     0.046     0.108
0.237      2.01     0.363
     Composite CO  :      5.88      6.24      8.02      6.69      7.11     0.592     0.349
0.215     13.42     5.935
     Composite NOX :      0.178     0.243     0.388     0.280     0.168     0.028     0.123
0.484      1.05     0.268
```

Composite CO2 :	368.0	479.4	624.6	516.4	907.4	314.1	598.7	1411.1	177.4	565.61

```
**************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                             *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).           *
**************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2035
                                     Month:  Jan.
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff: 10.00 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV        MC   All Veh
             GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000

-------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
             Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
            GASPM:    0.0039    0.0037    0.0037    0.0037    0.0082    ------    ------
------    0.0205    0.0037
          ECARBON:    ------    ------    ------    ------    ------    0.0071    0.0037
0.0082    ------    0.0007
          OCARBON:    ------    ------    ------    ------    ------    0.0020    0.0053
0.0042    ------    0.0004
              SO4:    0.0003    0.0005    0.0005    0.0005    0.0019    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0042    0.0042    0.0042    0.0042    0.0101    0.0093    0.0093
0.0133    0.0206    0.0053
            Brake:    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125    0.0125
0.0125    0.0125    0.0125
             Tire:    0.0080    0.0080    0.0080    0.0080    0.0086    0.0080    0.0080
0.0259    0.0040    0.0096
          Total PM:    0.0247    0.0247    0.0247    0.0247    0.0313    0.0298    0.0299
0.0517    0.0371    0.0274

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-----------------------
```

```
*****************************************************************************
* MOBILE6.2.03 (24-Sep-2003)                                                *
* Input file: N:\PROJECTS\MOBILE6.2\SIMW10.IN (file 1, run 1).              *
*****************************************************************************

* # # # # # # # # # # # # # # # # # # # # # # #
* Siminole Casino

* File 1, Run 1, Scenario 1.
* # # # # # # # # # # # # # # # # # # # # # # #

                              Calendar Year:  2035
                                     Month:  Jan.
                 Gasoline Fuel Sulfur Content:   30. ppm
                   Diesel Fuel Sulfur Content:   15. ppm
                         Particle Size Cutoff:  2.50 Microns
                             Reformulated Gas:  No

       Vehicle Type:      LDGV    LDGT12    LDGT34      LDGT      HDGV      LDDV      LDDT
HDDV         MC   All Veh
             GVWR:                 <6000     >6000     (All)
                        ------    ------    ------    ------    ------    ------    ------
------    ------    ------
   VMT Distribution:    0.2790    0.4400    0.1500              0.0363    0.0003    0.0022
0.0872    0.0050    1.0000

-----------------------------------------------------------------------------------------------
-----------------------
 Composite Emission Factors (g/mi):
              Lead:    0.0000    0.0000    0.0000    0.0000    0.0000    ------    ------
------    0.0000    0.0000
             GASPM:    0.0036    0.0034    0.0034    0.0034    0.0075    ------    ------
------    0.0142    0.0034
           ECARBON:    ------    ------    ------    ------    ------    0.0065    0.0034
0.0075    ------    0.0007
           OCARBON:    ------    ------    ------    ------    ------    0.0018    0.0049
0.0038    ------    0.0003
               SO4:    0.0003    0.0005    0.0005    0.0005    0.0019    0.0002    0.0003
0.0009    0.0001    0.0005
   Total Exhaust PM:    0.0039    0.0039    0.0039    0.0039    0.0094    0.0085    0.0086
0.0123    0.0143    0.0049
             Brake:    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053    0.0053
0.0053    0.0053    0.0053
              Tire:    0.0020    0.0020    0.0020    0.0020    0.0022    0.0020    0.0020
0.0065    0.0010    0.0024
          Total PM:    0.0112    0.0112    0.0112    0.0112    0.0169    0.0159    0.0159
0.0241    0.0206    0.0126

-----------------------------------------------------------------------------------------------
-----------------------
```