

**REPORT  
ON  
AIR QUALITY EMISSION ANALYSIS  
OF  
CONTINUOUS FLOW INTERSECTION STUDY**



**AIRLINE HIGHWAY @ SIEGEN/SHERWOOD  
AND  
AIRLINE HIGHWAY@ JEFFERSON**

**PREPARED BY**

**CAPITAL REGION PLANNING COMMISSION**

**JULY 2004**

**AIR QUALITY EMISSION ANALYSIS FOR  
CONTINUOUS FLOW INTERSECTION STUDY  
ON AIRLINE HIGHWAY  
AT SIEGEN/SHERWOOD AND JEFFERSON**



PROJECT DESCRIPTION  
STATE PROJECT NO. 007-08-0032  
F.A.P. NO. CMAQ-1703(524)

CONTINUOUS FLOW INTERSECTION  
AIRLINE HIGHWAY AT SIEGEN LANE / SHERWOOD FOREST BOULEVARD

*Route US 61*  
*East Baton Rouge Parish*

**1. Introduction**

This report addresses the air quality analysis of Continuous Flow Intersection (CFI) Improvements at Siegen/Sherwood @ Airline and Jefferson @ Airline Intersections. The air quality analysis of CFI project is a requirement for the use of **Congestion Mitigation for Air Quality (CMAQ)** funds.

The major sources of procedures used for the CFI analysis of both individual intersections were based on the **VISSIM, a Microscopic Simulation Model**. The other primary source of procedures and techniques used in this analysis was the **EPA Mobile Source Emission Factor Model (MOBILE6)**.

The Louisiana Department of Transportation and Development (LADOTD) is proposing to modify the intersection of Airline Highway (US 61) and Siegen Lane / Sherwood Forest Boulevard in order to increase traffic flow and reduce congestion and delay. The new design will incorporate the innovative intersection improvement concept called Continuous Flow Intersection or CFI.

Traffic demand and congestion at the intersection has grown to a level that exceeds the existing capacity of the intersection and is projected to further deteriorate in the future. Currently, the intersection operates at a level of service F (lowest possible designation) during peak hours. The proposed improvements would raise traffic operations at the intersection to acceptable and desirable levels of service. Recent traffic counts show that 46,000 vehicles use Airline Highway on an average day, while 36,000 use Sherwood Forest Boulevard and 28,000 travels Siegen Lane daily.

With the CFI concept, left turning vehicles on Airline Highway destined to either Siegen Lane or Sherwood Forest would enter a signalized left-turn bay several hundred feet before the main intersection. The left turn bay would feed a CFI leg, which in turn would empty into the cross street at another signalized intersection. New signals at the left-turn bay, CFI crossover, and the main intersection would be coordinated to maximize traffic flow. Right turning vehicles on Siegen and Sherwood bound for Airline Highway would be channelized to new lanes adjacent to the CFI lanes. These right turn lanes would be controlled by signals as they enter Airline Highway.







A frontage road would be constructed in the southwest quadrant to provide access for the businesses that front Airline Highway between Siegen Lane and Jefferson Highway. The frontage road would tie to Airline opposite the existing Jefferson Highway intersection and be fully signalized. Modifications to other existing frontage roads will also be made to maximize safety and access to existing development.

## **2. Method of Analysis**

The procedures that were used in the analysis are explained in detail below.

The CFI analysis at the two intersections was performed by the VISSIM Microscopic Simulation Model.

- a. Improvements were performed to bring the LOS of F, to acceptable level of service such as C at both intersections. These calculations were based on the most recent traffic counts and traffic signal information for this intersection.
- b. The VISSIM output gave an average delay in seconds per vehicle for the each intersection in the study. Multiplying the intersection average delay by the hourly volume gave the total delay in vehicle-hours per hour. The calculations performed are as shown below.

***Total Delay (in veh-hrs per peak hour) = Peak Hour Volume \* Average Delay in sec/veh/3600.***

- c. After calculating the delay, EPA's Mobile Source Emission Factor Model (MOBILE6) was used to obtain VOC and NOx emission factors for the different functional classifications. The MOBILE6 model was run using the 2.5 mph speed, which gives idling emission factors. The VOC and NOx emission factors were generated in the units of gm/mile. These units were multiplied by 2.5 to convert to gm/hr. These values were then converted to kg/hr and multiplied by the total delay in veh-hrs to obtain total emissions.

For example, using MOBILE6 procedures, it is convenient to generate the following:

***Total emissions in Kg/hr = VOC emission factor \* 2.5 \* delay in veh-hrs/1000***

The analysis showed that the proposed improvements would reduce total traffic delay through the intersection by an average of three hours during the morning peak hours and three hours during the evening peak hours. Actually, the improvements will enhance traffic flow and reduce emissions during off-peak times as well, but the greatest benefits were observed to be during the peak hours.

### 3. Summary

The above information can be summarized as follows. During the experimentation of implementing actions to increase the performance for the intersections various alternatives were considered and studied using **VISSIM**.

In this analysis the total delay and emission calculations were calculated assuming the improvements will help traffic flowing through the intersection at least four hours in a day (two hours during the morning peak hours and two hours during the evening peak hours), and 260 days in a year (considering week days only).

The overall emission reductions due to CFI improvements at the two intersections are summarized as follows

#### Continuous Flow Intersection Study - Emission Reduction Summary

CFI Study Intersections	Emission Reductions (US tons)							
	A.M Peak		P.M Peak		Daily		Yearly	
	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>
Siegen/Sherwood @ Airline	0.005	0.001	0.017	0.005	0.022	0.006	5.766	1.487
Jefferson @ Airline	0.012	0.003	0.007	0.002	0.019	0.005	5.051	1.303

### 4. Attachments

Considerable information is provided in the attachments following this narrative. The titles to these attachments are as follows.

- a. Attachment A - A.M. Peak and P.M. Peak CFI Analysis Results
- b. Attachment B – Continuous Flow Intersection Emission Analysis
- c. Attachment C – MOBILE6 Input & Output Files

**Attachment A**  
**A.M. Peak and P.M. Peak CFI Analysis Results**



### A.M. Peak Period Analysis

Intersection Name	Existing		CFI	
Siegen /Sherwood @ Airline	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
NB	111.7	F	40.1	C
SB	47.2	D	14.1	B
EB.	94.0	F	37.6	D
WB	105.0	F	48.3	D
Overall	92.6	F	36.0	C
Total # Vehicles	5800		6500	
Jefferson @ Airline	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
NB	342.2	F	15.4	C
SB	20.7	C	15.6	B
WB	318.4	F	52.0	B
Overall	207.2	F	26.9	C
Total # Vehicles	4400		5100	



### P.M. Peak Period Analysis

Intersection Name	Existing		CFI	
	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
<b>Siegen /Sherwood @ Airline</b>				
NB	158.4	F	33.1	B
SB	211.8	F	26.1	C
EB.	214.3	F	41.0	D
WB	82.3	F	39.8	D
<b>Overall</b>	<b>178.3</b>	<b>F</b>	<b>34.4</b>	<b>C</b>
<b>Total # Vehicles</b>	<b>6200</b>		<b>6700</b>	
	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)	LOS
<b>Jefferson @ Airline</b>				
NB	229.9	F	25.7	C
SB	42.9	F	23.6	C
WB	33.8	B	15.3	C
<b>Overall</b>	<b>98.9</b>	<b>F</b>	<b>23.2</b>	<b>C</b>
<b>Total # Vehicles</b>	<b>4800</b>		<b>5100</b>	

**Attachment B**  
**Continuous Flow Intersection Emission Analysis**



# **Capital Region Planning Commission (CRPC)** **Continuous Flow Intersection Emission Calculations**

**Intersection Name:**      Siegen/Sherwood @ Airline

## **Delay Calculations**

### **A.M Peak**

	Average Delay (Sec/Veh)	Volume (VPH)	Total Delay Veh-Hr/Peak.Hr
Existing Conditions	92.6	5,800	149.2
With Improvements	36.0	6,500	65.0

**Reduction in Delay   84.2**

### **P.M Peak**

	Average Delay (Sec/Veh)	Volume (VPH)	Total Delay Veh-Hr/Peak.Hr
Existing Conditions	178.3	6,200	368.5
With Improvements	34.4	6,700	64.0

**Reduction in Delay   304.5**

*Note: The analysis showed the proposed improvements would enhance traffic flow through the intersection two hours during the morning peak period and two hours during the evening peak period. The total delay and emissions calculations were performed assuming the improvements will help traffic going through the intersection four hours per day, and 260 days in a year (assuming only weekdays).*

## **Emission Calculations**

### **Volatile Organic Compounds (VOC)**

**Emission Factor: 10.35**

Formula = Delay in veh-hours/hour \* VOC Emission Factor \* 2.5 (conversion of gm/mi to gm/hr)

### **A.M Peak**

$$\begin{aligned}
 \text{Hourly emission reductions} &= 84.2 * 10.35 * 2.5 \\
 &= 2178.39 \text{ g} \\
 \text{AM peak emission reductions} &= 2178.39 * 2 \text{ g} \\
 &= 4356.78 \text{ g}
 \end{aligned}$$

$$= 4.36 \text{ Kg}$$

$$= 0.005 \text{ US tons}$$

#### **P.M Peak**

$$\text{Hourly emission reductions} = 304.5 * 10.35 * 2.5$$

$$= 7878.02 \text{ g}$$

$$\text{PM peak emission reductions} = 7878.02 * 2 \text{ g}$$

$$= 15756.04 \text{ g}$$

$$= 15.76 \text{ Kg}$$

$$= 0.017 \text{ US tons}$$

$$\text{Emission reductions per day} = 0.005 + 0.017 \text{ US tons}$$

$$= 0.022 \text{ US tons}$$

$$\text{Yearly Emission Reductions} = 0.022 * 260 \text{ US tons}$$

$$= \mathbf{5.766 \text{ US tons}}$$

#### **Nitrogen Oxides (NOx)**

##### **Emission Factor: 2.67**

Formula = Delay in veh-hours/hour \* NOx Emission Factor \* 2.5 (conversion of gm/mi to gm/hr)

#### **A.M Peak**

$$\text{Hourly emission reductions} = 84.2 * 2.67 * 2.5$$

$$= 561.96 \text{ g}$$

$$\text{AM peak emission reductions} = 561.96 * 2 \text{ g}$$

$$= 1123.92 \text{ g}$$

$$= 1.12 \text{ Kg}$$

$$= 0.001 \text{ US tons}$$

#### **P.M Peak**

$$\text{Hourly emission reductions} = 304.5 * 2.67 * 2.5$$

$$= 2032.30 \text{ g}$$

$$\text{PM peak emission reductions} = 2032.30 * 2 \text{ g}$$

$$= 4064.60 \text{ g}$$

$$= 4.06 \text{ Kg}$$

$$= 0.005 \text{ US tons}$$

$$\text{Emission reductions per day} = 0.001 + 0.005 \text{ US tons}$$

$$= 0.006 \text{ US tons}$$

$$\text{Yearly Emission Reductions} = 0.006 * 2.280 \text{ US tons}$$

$$= \mathbf{1.487 \text{ US tons}}$$



**Intersection Name:** Jefferson @ Airline

**Delay Calculations**

**A.M Peak**

	Average Delay (Sec/Veh)	Volume (VPH)	Total Delay Veh-Hr/Peak.Hr
Existing Conditions	207.2	4,400	253.2
With Improvements	26.9	5,100	38.1

**Reduction in Delay 215.1**

**P.M Peak**

	Average Delay (Sec/Veh)	Volume (VPH)	Total Delay Veh-Hr/Peak.Hr
Existing Conditions	98.9	4,564	158.2
With Improvements	23.2	5,100	32.9

**Reduction in Delay 125.4**

*Note: The analysis showed the proposed improvements would enhance traffic flow through the intersection two hours during the morning peak period and two hours during the evening peak period. The total delay and emissions calculations were performed assuming the improvements will help traffic going through the intersection four hours per day, and 260 days in a year (assuming only weekdays).*

**Emission Calculations**

**Volatile Organic Compounds (VOC)**

**Emission Factor: 10.35**

Formula = Delay in veh-hours/hour \* VOC Emission Factor \* 2.5 (conversion of gm/mi to gm/hr)

**A.M Peak**

$$\begin{aligned}\text{Hourly emission reductions} &= 215.1 * 10.35 * 2.5 \\ &= 5566.65 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{AM peak emission reductions} &= 5566.65 * 2 \text{ g} \\ &= 11133.29 \text{ g} \\ &= 11.13 \text{ Kg} \\ &= 0.012 \text{ US tons}\end{aligned}$$

**P.M Peak**

$$\begin{aligned}\text{Hourly emission reductions} &= 125.4 * 10.35 * 2.5 \\ &= 3244.04 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{PM peak emission reductions} &= 3244.04 * 2 \text{ g} \\ &= 6488.07 \text{ g} \\ &= 6.49 \text{ Kg} \\ &= 0.007 \text{ US tons}\end{aligned}$$

$$\begin{aligned}\text{Emission reductions per day} &= 0.012 + 0.007 \text{ US tons} \\ &= 0.019 \text{ US tons}\end{aligned}$$

$$\begin{aligned}\text{Yearly Emission Reductions} &= 0.019 * 260 \text{ US tons} \\ &= \mathbf{5.051 \text{ US tons}}\end{aligned}$$

**Nitrogen Oxides (NOx)****Emission Factor: 2.67**

Formula = Delay in veh-hours/hour \* NOx Emission Factor \* 2.5 (conversion of gm/mi to gm/hr)

**A.M Peak**

$$\begin{aligned}\text{Hourly emission reductions} &= 215.1 * 2.67 * 2.5 \\ &= 1436.03 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{AM peak emission reductions} &= 1436.03 * 2 \text{ g} \\ &= 2872.07 \text{ g} \\ &= 2.87 \text{ Kg} \\ &= 0.003 \text{ US tons}\end{aligned}$$

**P.M Peak**

$$\begin{aligned}\text{Hourly emission reductions} &= 125.4 * 2.67 * 2.5 \\ &= 836.87 \text{ g}\end{aligned}$$

$$\begin{aligned}\text{PM peak emission reductions} &= 836.87 * 2 \text{ g} \\ &= 1673.73 \text{ g} \\ &= 1.67 \text{ Kg} \\ &= 0.002 \text{ US tons}\end{aligned}$$

$$\begin{aligned}\text{Emission reductions per day} &= 0.003 + 0.002 \text{ US tons} \\ &= 0.005 \text{ US tons}\end{aligned}$$

$$\text{Yearly Emission Reductions} = \mathbf{1.303 \text{ US tons}}$$



## Continuous Flow Intersection Study - Emission Reduction Summary

CFI Study Intersections	Emission Reductions (US tons)							
	A.M Peak		P.M Peak		Daily		Yearly	
	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>	VOC	NO <sub>x</sub>
Siegen/Sherwood @ Airline	0.005	0.001	0.017	0.005	0.022	0.006	5.766	1.487
Jefferson @ Airline	0.012	0.003	0.007	0.002	0.019	0.005	5.051	1.303

**Attachment C**  
**MOBILE6 Input & Output Files**



## \* Baton Rouge On Board Diagnostics Program (exhaust)

\*  
I/M PROGRAM : 1 2002 2050 1 TRC OBD I/M  
I/M MODEL YEARS : 1 1996 2050  
I/M VEHICLES : 1 22222 21111111 1  
I/M STRINGENCY : 1 20.0  
I/M EFFECTIVENESS : 0.75 0.75 0.75  
I/M COMPLIANCE : 1 96.0  
I/M WAIVER RATES : 1 0.0 0.0  
\*

## \* Baton Rouge I/M Programs (evaporative)

\*  
I/M PROGRAM : 2 2000 2001 1 TRC GC  
I/M MODEL YEARS : 2 1980 2001  
I/M VEHICLES : 2 22222 21111111 1  
I/M COMPLIANCE : 2 96.0  
\*  
I/M PROGRAM : 3 2002 2006 1 TRC GC  
I/M MODEL YEARS : 3 1980 2006  
I/M VEHICLES : 3 11111 21111111 1  
I/M COMPLIANCE : 3 96.0  
\*  
I/M PROGRAM : 4 2002 2050 1 TRC EVAP OBD & GC  
I/M MODEL YEARS : 4 1996 2050  
I/M VEHICLES : 4 22222 11111111 1  
I/M STRINGENCY : 4 20.0  
I/M COMPLIANCE : 4 96.0  
\*  
I/M PROGRAM : 5 2007 2050 1 TRC EVAP OBD & GC  
I/M MODEL YEARS : 5 2007 2050  
I/M VEHICLES : 5 11111 21111111 1  
I/M STRINGENCY : 5 20.0  
I/M COMPLIANCE : 5 96.0

## REG DIST

\* The file LA\_RegD.D contains Louisiana's current statewide values for the distribution of vehicles by age for 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.

## \* LDV (LDGV/LDDV)

1 0.0550 0.0710 0.0650 0.0710 0.0700 0.0810 0.0650 0.0620 0.0570 0.0560  
0.0520 0.0490 0.0430 0.0320 0.0290 0.0270 0.0220 0.0150 0.0120 0.0090  
0.0070 0.0090 0.0070 0.0050 0.0290

## \* LDT1 (LDGT1/LDDT)

2 0.0640 0.0850 0.0800 0.0810 0.0610 0.0630 0.0610 0.0520 0.0440 0.0460  
0.0410 0.0430 0.0380 0.0260 0.0310 0.0300 0.0270 0.0180 0.0170 0.0160  
0.0100 0.0150 0.0110 0.0090 0.0310

## \* LDT2 (LDGT1/LDDT)

3 0.0640 0.0850 0.0800 0.0810 0.0610 0.0630 0.0610 0.0520 0.0440 0.0460  
0.0410 0.0430 0.0380 0.0260 0.0310 0.0300 0.0270 0.0180 0.0170 0.0160  
0.0100 0.0150 0.0110 0.0090 0.0310

## \* LDT3 (LDGT2)

4 0.1280 0.1550 0.1030 0.0940 0.0770 0.0770 0.0590 0.0520 0.0390 0.0390  
0.0240 0.0280 0.0250 0.0200 0.0160 0.0190 0.0140 0.0060 0.0030 0.0030  
0.0070 0.0030 0.0020 0.0020 0.0050

## \* LDT4 (LDGT2)

5 0.1280 0.1550 0.1030 0.0940 0.0770 0.0770 0.0590 0.0520 0.0390 0.0390  
0.0240 0.0280 0.0250 0.0200 0.0160 0.0190 0.0140 0.0060 0.0030 0.0030  
0.0070 0.0030 0.0020 0.0020 0.0050

## \* HDV2B (MOBILE6 DEFAULT)

6 0.0503 0.0916 0.0833 0.0758 0.0690 0.0627 0.0571 0.0519 0.0472 0.0430  
0.0391 0.0356 0.0324 0.0294 0.0268 0.0244 0.0222 0.0202 0.0184 0.0167  
0.0152 0.0138 0.0126 0.0114 0.0499

## \* HDV3 (MOBILE6 DEFAULT)

7 0.0503 0.0916 0.0833 0.0758 0.0690 0.0627 0.0571 0.0519 0.0472 0.0430  
0.0391 0.0356 0.0324 0.0294 0.0268 0.0244 0.0222 0.0202 0.0184 0.0167  
0.0152 0.0138 0.0126 0.0114 0.0499

## \* HDV4 (MOBILE6 DEFAULT)

8 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
0.0204 0.0191 0.0178 0.0167 0.0797



## LA\_Regd

## \* HDV5 (MOBILE6 DEFAULT)

9 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
 0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
 0.0204 0.0191 0.0178 0.0167 0.0797

## \* HDV6 (MOBILE6 DEFAULT)

10 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
 0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
 0.0204 0.0191 0.0178 0.0167 0.0797

## \* HDV7 (MOBILE6 DEFAULT)

11 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
 0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
 0.0204 0.0191 0.0178 0.0167 0.0797

## \* HDV8a (MOBILE6 DEFAULT)

12 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
 0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
 0.0204 0.0191 0.0178 0.0167 0.0797

## \* HDV8b (MOBILE6 DEFAULT)

13 0.0388 0.0726 0.0679 0.0635 0.0594 0.0556 0.0520 0.0486 0.0455 0.0425  
 0.0398 0.0372 0.0348 0.0326 0.0304 0.0285 0.0266 0.0249 0.0233 0.0218  
 0.0204 0.0191 0.0178 0.0167 0.0797

## \* HDBS (MOBILE6 DEFAULT)

14 0.0393 0.0734 0.0686 0.0641 0.0599 0.0559 0.0522 0.0488 0.0456 0.0426  
 0.0398 0.0372 0.0347 0.0324 0.0303 0.0283 0.0264 0.0247 0.0231 0.0216  
 0.0201 0.0188 0.0176 0.0165 0.0781

## \* HDBT (MOBILE6 DEFAULT)

15 0.0307 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0614 0.0613  
 0.0611 0.0607 0.0595 0.0568 0.0511 0.0406 0.0254 0.0121 0.0099 0.0081  
 0.0066 0.0054 0.0044 0.0037 0.0114

## \* Motorcycles

16 0.1010 0.1030 0.0880 0.0720 0.0640 0.0490 0.0440 0.0380 0.0260 0.0180  
 0.0160 0.3810 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



CFI  
\* Baton Rouge 5-Parish Non-attainment Area (90% design speeds); 2005

\*\*\*\*\* Header Section \*\*\*\*\*

MOBILE6 INPUT FILE :  
POLLUTANTS : HC NOX  
RUN DATA

\*\*\*\*\* Run Section \*\*\*\*\*

>CONTINUOUS FLOW INTERSECTION STUDY, AIRLINE @ SEIGEN @ SHERWOOD

NO REFUELING :  
MIN/MAX TEMP : 72.3 94.8  
ABSOLUTE HUMIDITY : 123.44  
FUEL RVP : 7.8  
REG DIST : LA\_RegD.d  
I/M DESC FILE : btr\_im.d  
ANTI-TAMP PROG : 00 80 95 22222 21111111 1 11 072. 22222222  
VMT FRACTIONS :  
0.766 0.034 0.113 0.018 0.008 0.018 0.002 0.001  
0.001 0.004 0.005 0.005 0.018 0.001 0.000 0.006

\*\*\*\*\* Scenario Section \*\*\*\*\*

SCENARIO REC : CFI STUDY, SIEGEN @ AIRLINE  
CALENDAR YEAR : 2004  
EVALUATION MONTH : 7  
ALTITUDE : 1  
AVERAGE SPEED : 2.5 ARTERIAL

END OF RUN

## CFI

\*\*\*\*\*  
 \* MOBILE6.2.01 (31-Oct-2002) \*  
 \* Input file: CFI.IN (file 1, run 1). \*  
 \*\*\*\*\*

\*CONTINUOUS FLOW INTERSECTION STUDY, AIRLINE @ SEIGEN @ SHERWOOD

M603 Comment:

User has disabled the calculation of REFUELING emissions.

\* Reading Registration Distributions from the following external  
 \* data file: LA\_REGD.D

\* Reading I/M program description records from the following external  
 \* data file: BTR\_IM.D

M615 Comment:

User supplied VMT mix.

\* #####

\* CFI STUDY, SIEGEN @ AIRLINE

\* File 1, Run 1, Scenario 1.

\* #####

M583 warning:

The user supplied arterial average speed of 2.5  
 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.

\*\*\* I/M credits for Tech1&2 vehicles were read from the following external  
 data file: TECH12.D

M 48 Warning:

there are no sales for vehicle class HDGV8b

Calendar Year: 2004  
 Month: July  
 Altitude: Low  
 Minimum Temperature: 72.3 (F)  
 Maximum Temperature: 94.8 (F)  
 Absolute Humidity: 123. grains/lb  
 Nominal Fuel RVP: 7.8 psi  
 Weathered RVP: 7.4 psi  
 Fuel sulfur Content: 121. ppm

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

Vehicle Type:	LDGV	LDGT12	LDGT34	LDGT	HDGV	LDDV	LDDT	HDDV	MC	All Veh
GVWR:		<6000	>6000	(A11)						
VMT Distribution:	0.7646	0.1469	0.0256		0.0167	0.0014	0.0005	0.0383	0.0060	1.0000
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Composite Emission Factors (g/mi):										
Composite VOC :	10.975	9.790	5.703	9.183	14.361	1.547	2.179	1.791	10.52	10.350
Composite NOX :	2.030	1.829	1.925	1.843	3.414	2.706	2.558	19.132	0.88	2.670
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