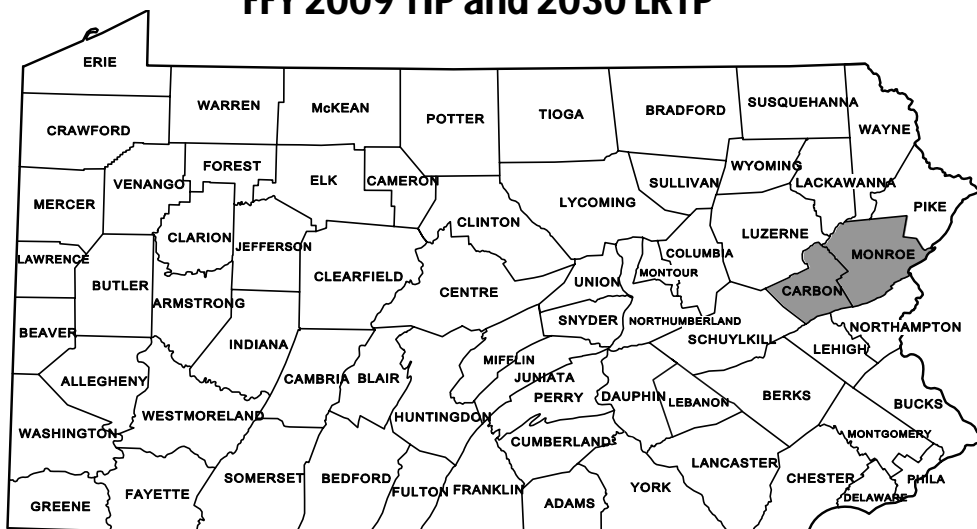


**AIR QUALITY
CONFORMITY ANALYSIS REPORT
FOR THE NEPA RPO PORTION OF THE
SCRANTON-WILKES-BARRE OZONE MAINTENANCE AREA
(MONROE COUNTY)
AND THE
ALLENTOWN-BETHLEHEM-EASTON OZONE MAINTENANCE AREA
(CARBON COUNTY)
FOR THE 8-HOUR OZONE NAAQS**

VOLUME II – TECHNICAL ANALYSIS

FFY 2009 TIP and 2030 LRTP



Prepared by:
Pennsylvania Department of Transportation

DRAFT

PUBLIC REVIEW:

PLANNING PARTNER APPROVAL:

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OZONE CONFORMITY
CARBON COUNTY**

**2002
Summer Weekday Emission Summary
CARBON COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	961,723	14,892	64.58	1,517.80	5,211.80
Other Prin. Art.	192,690	3,681	52.35	344.10	440.30
Minor Arterials	204,171	5,919	34.49	407.40	425.30
Major Collectors	286,255	7,853	36.45	558.80	634.00
Minor Collectors	79,714	2,100	37.96	154.60	170.90
Local	236,790	7,360	32.17	743.60	541.30
Small Urban					
Interstate					
Expressway	85,323	1,446	59.01	151.40	204.10
Other Prin. Art.	44,660	1,220	36.61	88.00	88.40
Minor Arterials	81,985	3,469	23.63	184.70	165.50
Collector	54,138	2,178	24.86	118.10	124.60
Local	30,242	1,896	15.95	95.70	62.00
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
COUNTY TOTAL	2,257,691	52,014	43.41	4,364.20	8,068.20

**2009 TIP
Summer Weekday Emission Summary
CARBON COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,051,735	16,232	64.79	878.00	3,073.90
Other Prin. Art.	93,261	1,897	49.16	88.80	123.90
Minor Arterials	164,378	5,072	32.41	175.60	185.00
Major Collectors	275,455	7,555	36.46	283.50	330.80
Minor Collectors	70,519	1,847	38.18	72.10	82.20
Local	240,870	7,583	31.76	385.10	305.80
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials	16,836	638	26.39	19.10	18.80
Collector	10,930	457	23.92	12.70	12.90
Local					
Urban					
Interstate	122,555	2,044	59.96	105.80	305.40
Expressway	76,981	1,299	59.26	72.50	99.00
Other Prin. Art.	155,982	3,471	44.94	153.70	182.60
Minor Arterials	124,930	4,195	29.78	137.40	136.60
Collector	82,606	2,943	28.07	90.90	102.30
Local	51,062	2,891	17.66	82.10	60.00
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	2,538,100	58,124	43.67	2,557.30	5,019.20

**2018 TIP
Summer Weekday Emission Summary
CARBON COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,357,282	20,976	64.71	605.90	1,371.60
Other Prin. Art.	93,504	1,902	49.16	46.90	56.50
Minor Arterials	164,789	5,086	32.40	91.70	90.50
Major Collectors	276,171	7,575	36.46	148.30	157.00
Minor Collectors	70,702	1,851	38.20	37.70	39.30
Local	241,544	7,604	31.77	202.80	141.40
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials	18,788	718	26.17	11.10	10.30
Collector	12,199	517	23.60	7.40	7.00
Local					
Urban					
Interstate	154,102	2,575	59.85	71.00	139.40
Expressway	96,792	1,634	59.24	48.40	58.90
Other Prin. Art.	174,079	4,030	43.20	90.70	98.50
Minor Arterials	139,424	4,912	28.38	80.80	76.10
Collector	92,201	3,425	26.92	53.50	53.70
Local	56,961	3,282	17.36	48.10	32.10
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	2,948,538	66,087	44.62	1,544.30	2,332.30

**2025 LRP
Summer Weekday Emission Summary
CARBON COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,683,751	26,140	64.41	563.40	968.30
Other Prin. Art.	93,745	1,907	49.16	35.30	39.10
Minor Arterials	165,206	5,100	32.39	70.00	64.90
Major Collectors	276,866	7,594	36.46	112.80	110.80
Minor Collectors	70,861	1,856	38.18	28.60	27.80
Local	242,229	7,627	31.76	163.90	97.70
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials	19,953	767	26.01	9.10	7.80
Collector	12,949	553	23.42	6.10	5.30
Local					
Urban					
Interstate	180,597	3,029	59.62	62.30	96.90
Expressway	113,435	1,915	59.23	42.50	48.70
Other Prin. Art.	184,819	4,402	41.99	73.10	74.40
Minor Arterials	148,027	5,443	27.20	66.70	58.50
Collector	97,886	3,772	25.95	44.20	40.00
Local	60,559	3,571	16.96	41.10	24.00
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	3,350,883	73,676	45.48	1,319.10	1,664.20

**2030 LRP
Summer Weekday Emission Summary
CARBON COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	2,163,913	34,232	63.21	706.40	992.80
Other Prin. Art.	93,932	1,911	49.15	34.50	35.20
Minor Arterials	165,541	5,110	32.40	68.60	59.40
Major Collectors	277,445	7,611	36.45	110.40	100.70
Minor Collectors	70,984	1,859	38.18	28.00	25.30
Local	242,946	7,649	31.76	161.40	87.90
Small Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials	20,682	798	25.92	9.20	7.40
Collector	13,431	576	23.32	6.20	5.00
Local					
Urban					
Interstate	221,736	3,779	58.68	74.60	97.60
Expressway	126,401	2,134	59.23	46.20	49.30
Other Prin. Art.	191,659	4,660	41.13	74.30	70.50
Minor Arterials	153,494	5,866	26.17	68.40	56.00
Collector	101,506	4,069	24.95	45.30	37.70
Local	62,767	3,731	16.82	41.90	22.50
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	3,906,437	83,985	46.51	1,475.40	1,647.30

**TABLES
OZONE CONFORMITY
MONROE COUNTY**

**2002
Summer Weekday Emission Summary
MONROE COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,247,893	19,294	64.68	1,606.90	7,154.90
Other Prin. Art.	606,093	11,267	53.79	850.90	1,691.50
Minor Arterials	1,096,944	25,586	42.87	1,669.70	2,329.30
Major Collectors	308,885	7,035	43.91	465.00	684.20
Minor Collectors	293,178	7,191	40.77	448.80	650.80
Local	589,205	17,887	32.94	1,518.80	1,270.20
Small Urban					
Interstate	312,105	5,503	56.72	416.00	1,501.20
Expressway					
Other Prin. Art.	26,141	748	34.95	41.60	57.30
Minor Arterials	211,136	7,651	27.60	366.30	416.60
Collector	57,414	1,890	30.38	96.70	111.50
Local	68,163	2,063	33.04	176.40	134.70
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
COUNTY TOTAL	4,817,157	106,115	45.40	7,657.10	16,002.20

**2009 TIP
Summer Weekday Emission Summary
MONROE COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,182,164	18,371	64.35	791.40	3,606.80
Other Prin. Art.	417,386	7,852	53.16	303.70	657.10
Minor Arterials	789,900	17,410	45.37	614.90	879.90
Major Collectors	226,631	5,094	44.49	176.80	256.70
Minor Collectors	258,632	6,376	40.56	205.70	293.00
Local	481,997	14,637	32.93	616.20	582.10
Small Urban					
Interstate	835,944	15,720	53.18	588.30	2,030.80
Expressway					
Other Prin. Art.	287,318	6,570	43.73	218.70	418.30
Minor Arterials	752,474	21,491	35.01	624.60	789.00
Collector	234,932	6,658	35.29	193.50	256.80
Local	141,972	4,335	32.75	182.00	160.70
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	5,609,350	124,514	45.05	4,515.80	9,931.20

**2018 TIP
Summer Weekday Emission Summary
MONROE COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,538,463	24,741	62.18	558.20	1,525.60
Other Prin. Art.	430,651	8,145	52.87	167.10	269.80
Minor Arterials	815,018	18,033	45.20	335.70	413.70
Major Collectors	235,656	5,341	44.12	97.30	120.60
Minor Collectors	266,838	6,587	40.51	112.10	135.30
Local	497,110	15,099	32.92	344.30	263.60
Small Urban					
Interstate	1,136,364	52,772	21.53	552.40	916.00
Expressway					
Other Prin. Art.	406,018	11,562	35.12	174.00	239.00
Minor Arterials	1,069,067	38,169	28.01	502.20	531.10
Collector	326,832	9,180	35.60	142.10	162.20
Local	200,602	6,176	32.48	139.20	102.60
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	6,922,619	195,805	35.35	3,124.60	4,679.50

**2025 LRP
Summer Weekday Emission Summary
MONROE COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	1,913,886	39,931	47.93	581.10	1,046.30
Other Prin. Art.	439,431	8,341	52.68	135.60	181.80
Minor Arterials	831,635	18,449	45.08	273.90	304.50
Major Collectors	240,472	5,453	44.10	79.40	88.10
Minor Collectors	272,243	6,727	40.47	91.70	98.50
Local	507,453	15,416	32.92	297.40	187.90
Small Urban					
Interstate	1,388,452	128,808	10.78	790.70	700.40
Expressway					
Other Prin. Art.	503,058	23,799	21.14	209.90	206.20
Minor Arterials	1,322,923	59,547	22.22	555.70	491.10
Collector	403,466	11,803	34.18	143.00	144.70
Local	248,553	7,720	32.20	146.00	90.40
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	8,071,572	325,994	24.76	3,304.40	3,539.90

**2030 LRP
Summer Weekday Emission Summary
MONROE COUNTY**

	Vehicle Mile of Travel (VMT)	Vehicle Hours of Travel (VHT)	Average Speed (mph)	VOC Emissions (kg/day)	NOX Emissions (kg/day)
Rural					
Interstate	2,244,670	70,005	32.06	739.20	981.40
Other Prin. Art.	445,431	8,476	52.55	134.70	162.00
Minor Arterials	842,973	18,734	45.00	272.50	284.00
Major Collectors	243,759	5,530	44.08	78.90	81.90
Minor Collectors	275,990	6,823	40.45	91.30	91.40
Local	514,427	15,630	32.91	296.80	172.70
Small Urban					
Interstate	1,564,435	186,101	8.41	1,031.10	681.30
Expressway					
Other Prin. Art.	577,559	37,831	15.27	267.80	217.50
Minor Arterials	1,519,379	81,774	18.58	696.00	533.30
Collector	462,973	14,645	31.61	164.00	153.40
Local	285,744	8,951	31.92	165.40	95.10
Urban					
Interstate					
Expressway					
Other Prin. Art.					
Minor Arterials					
Collector					
Local					
Off Network Emission Benefits				0.00	0.00
COUNTY TOTAL	8,977,340	454,500	19.75	3,937.70	3,454.00

APPENDICES

APPENDIX A1

**CARBON COUNTY/MONROE COUNTY
LONG RANGE PLAN/
TRANSPORTATION IMPROVEMENT PROGRAM
FOR HIGHWAYS**

APPENDIX A2

**CARBON COUNTY/MONROE COUNTY
LONG RANGE PLAN/
TRANSPORTATION IMPROVEMENT PROGRAM
FOR TRANSIT**

APPENDIX B

**CARBON COUNTY/MONROE COUNTY
MOBILE6.2 PROGRAM PARAMETERS**

APPENDIX B1

MOBILE6.2 PROGRAM SETUP FILES
For
Ozone Conformity Analysis

MOBILE6.2 INPUT FILE SETTINGS

Carbon County

MOBILE6.2 INPUT FILE
REPORT FILE : M6OUTPUT.OUT REPLACE
DATABASE OUTPUT :
WITH FIELDNAMES :
EMISSIONS TABLE : M6OUTPUT.TB1 REPLACE
POLLUTANTS : HC CO NOX
AGGREGATED OUTPUT :

(Runs are Repeated for Urban, Small Urban, and Rural)

RUN DATA : 0001
EXPRESS HC AS VOC :
EXPAND EXHAUST :
EXPAND EVAPORATIVE :
NO REFUELING :
FUEL RVP : 8.7
MIN/MAX TEMPERATURE: 62.8 92.0
94+ LDG IMP : NLEVNE.D
T2 EXH PHASE-IN : pal2exh.08
T2 EVAP PHASE-IN : pal2evp.08
T2 CERT : leviistd.d } ***CALLEVII Phase-In Files***
REG DISTRIBUTION : CARB05ag.dat ***(2002 for base year; 2005 ages used for all future years)***

(ATP Programs Only Apply to 2004 and Later Analysis Years)

ANTI-TAMP PROGRAM : 04 75 95 22222 11111111 1 11 096. 22212222

(Scenarios are Repeated for Each Functional Class)

SCENARIO RECORD :
CALENDAR YEAR : 2009 ***(Analysis year depends on year being run)***
EVALUATION MONTH : 7
ABSOLUTE HUMIDITY : 59.2
SEASON : 1
VMT FRACTIONS : ***(VMT mix varies for each year, run/scenario combination)***
.333874 .074180 .247058 .076106 .035010 .073550 .007209 .005883
.004557 .016505 .019344 .021061 .075289 .003800 .001717 .004857

(Speed, hourly, and facility distributions prepared by PPSUITE post processor for each Run/Scenario combination)

VMT BY FACILITY :V000101F.def
VMT BY HOUR :V000101H.def
SPEED VMT :V000101S.def

ATTACHMENT: 1
Carbon County Vehicle Age Distributions Input to MOBILE6.2

2005 Age Distribution:

REG	DIST									
1	0.0348	0.0616	0.0629	0.0698	0.0652	0.0754	0.0657	0.0637	0.0602	0.0588
	0.0609	0.0522	0.0496	0.0376	0.0348	0.0295	0.0310	0.0228	0.0185	0.0129
	0.0088	0.0066	0.0034	0.0015	0.0120					
2	0.0269	0.0667	0.0571	0.0534	0.0577	0.0641	0.0624	0.0434	0.0551	0.0433
	0.0500	0.0480	0.0368	0.0316	0.0293	0.0333	0.0417	0.0406	0.0314	0.0281
	0.0202	0.0151	0.0094	0.0072	0.0472					
3	0.0269	0.0667	0.0571	0.0534	0.0577	0.0641	0.0624	0.0434	0.0551	0.0433
	0.0500	0.0480	0.0368	0.0316	0.0293	0.0333	0.0417	0.0406	0.0314	0.0281
	0.0202	0.0151	0.0094	0.0072	0.0472					
4	0.0300	0.1035	0.0750	0.0670	0.0728	0.0646	0.0700	0.0400	0.0620	0.0471
	0.0514	0.0447	0.0259	0.0281	0.0173	0.0242	0.0294	0.0296	0.0207	0.0246
	0.0130	0.0104	0.0071	0.0052	0.0361					
5	0.0300	0.1035	0.0750	0.0670	0.0728	0.0646	0.0700	0.0400	0.0620	0.0471
	0.0514	0.0447	0.0259	0.0281	0.0173	0.0242	0.0294	0.0296	0.0207	0.0246
	0.0130	0.0104	0.0071	0.0052	0.0361					
16	0.0863	0.0744	0.0998	0.0699	0.0564	0.0584	0.0434	0.0309	0.0289	0.0334
	0.0279	0.0240	0.0155	0.0200	0.0135	0.0185	0.0190	0.0120	0.0170	0.0220
	0.0304	0.0120	0.0314	0.0384	0.1168					

(Truck Age Distributions Assume MOBILE6.2 National Defaults)

MOBILE6.2 INPUT FILE SETTINGS Monroe County

MOBILE6.2 INPUT FILE
REPORT FILE : M6OUTPUT.OUT REPLACE
DATABASE OUTPUT :
WITH FIELDNAMES :
EMISSIONS TABLE : M6OUTPUT.TB1 REPLACE
POLLUTANTS : HC CO NOX
AGGREGATED OUTPUT :

(Runs are Repeated for Urban, Small Urban, and Rural)

RUN DATA : 0001
EXPRESS HC AS VOC :
EXPAND EXHAUST :
EXPAND EVAPORATIVE :
NO REFUELING :
FUEL RVP : 8.7
MIN/MAX TEMPERATURE: 62.5 89.4
94+ LDG IMP : NLEVNE.D
T2 EXH PHASE-IN : pal2exh.08
T2 EVAP PHASE-IN : pal2evp.08
T2 CERT : leviistd.d } ***CALLEVII Phase-In Files***
REG DISTRIBUTION : MONR05ag.dat ***(2002 for base year; 2005 ages used for all future years)***

(ATP Programs Only Apply to 2004 and Later Analysis Years)

ANTI-TAMP PROGRAM : 04 75 95 22222 11111111 1 11 096. 22212222

(Scenarios are Repeated for Each Functional Class)

SCENARIO RECORD :
CALENDAR YEAR : 2009 ***(Analysis year depends on year being run)***
EVALUATION MONTH : 7
ABSOLUTE HUMIDITY : 42.1
SEASON : 1
VMT FRACTIONS : ***(VMT mix varies for each year, run/scenario combination)***
.333874 .074180 .247058 .076106 .035010 .073550 .007209 .005883
.004557 .016505 .019344 .021061 .075289 .003800 .001717 .004857

(Speed, hourly, and facility distributions prepared by PPSUITE post processor for each Run/Scenario combination)

VMT BY FACILITY :V000101F.def
VMT BY HOUR :V000101H.def
SPEED VMT :V000101S.def

ATTACHMENT: 2
Monroe County Vehicle Age Distributions Input to MOBILE6.2

2005 Age Distribution:

REG	DIST									
1	0.0435	0.0718	0.0704	0.0768	0.0758	0.0849	0.0713	0.0676	0.0630	0.0559
	0.0595	0.0476	0.0429	0.0338	0.0291	0.0255	0.0217	0.0170	0.0129	0.0090
	0.0058	0.0042	0.0020	0.0012	0.0067					
2	0.0419	0.0747	0.0675	0.0683	0.0632	0.0687	0.0607	0.0493	0.0591	0.0417
	0.0597	0.0494	0.0329	0.0230	0.0243	0.0283	0.0346	0.0366	0.0263	0.0242
	0.0143	0.0106	0.0065	0.0045	0.0297					
3	0.0419	0.0747	0.0675	0.0683	0.0632	0.0687	0.0607	0.0493	0.0591	0.0417
	0.0597	0.0494	0.0329	0.0230	0.0243	0.0283	0.0346	0.0366	0.0263	0.0242
	0.0143	0.0106	0.0065	0.0045	0.0297					
4	0.0430	0.1166	0.0867	0.0824	0.0729	0.0670	0.0629	0.0458	0.0644	0.0378
	0.0616	0.0419	0.0290	0.0180	0.0146	0.0208	0.0244	0.0250	0.0148	0.0178
	0.0128	0.0085	0.0064	0.0026	0.0224					
5	0.0430	0.1166	0.0867	0.0824	0.0729	0.0670	0.0629	0.0458	0.0644	0.0378
	0.0616	0.0419	0.0290	0.0180	0.0146	0.0208	0.0244	0.0250	0.0148	0.0178
	0.0128	0.0085	0.0064	0.0026	0.0224					
16	0.0851	0.0932	0.1124	0.0830	0.0724	0.0681	0.0489	0.0308	0.0305	0.0278
	0.0308	0.0214	0.0227	0.0141	0.0135	0.0165	0.0127	0.0122	0.0154	0.0200
	0.0192	0.0165	0.0178	0.0197	0.0951					

(Truck Age Distributions Assume MOBILE6.2 National Defaults)

APPENDIX B2

INSPECTION AND MAINTENANCE MODELING PARAMETERS FOR LRTP/TIP CONFORMITY ANALYSIS

Pennsylvania I/M Program

The Pennsylvania inspection and maintenance (I/M) program was upgraded and expanded throughout the state with a phase-in period starting in September 2003 and fully implemented by June 2004. The program test requirements vary by region and include on-board diagnostics (OBD) technology that uses the vehicle's computer for model years 1996 and newer to download potential engine problems that could effect emissions. The program, named PAOBDII, is implemented in the Philadelphia, Pittsburgh, and South Central and Lehigh Valley Regions. The Northern Region receives gas cap and visual inspections and the other 42 counties in the Commonwealth receive a visual inspection. For all of projected analysis years beyond 2004, the upgraded I/M program was modeled.

Vehicles subject to the program include 1975 and newer model year gasoline cars and light duty trucks up to 9,000 pounds GVW. New model years are exempt for the first year. The county of registration determines which inspections are required. Details of the program by region are provided below.

Philadelphia 5-County Area

The five counties include Bucks, Chester, Delaware, Montgomery and Philadelphia. The previous PA97 program with ASM was upgraded in final ASM cutpoints in September 2003 and OBD implemented in between April and June 2004. The program parameters for Philadelphia include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1981-1995 (LDGV) 1984-1995 (LDGT)	ASM Gas Cap ATP
1975-1980 (LDGV) 1975-1983 (LDGT)	Idle Test Gas Cap ATP

Pittsburgh 4-County Area

The four counties include Allegheny, Beaver, Washington and Westmoreland. The previous PA97 program was upgraded to OBD between January and March 2004. The program parameters include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1975-1995	2-speed Idle Gas Cap ATP

South Central and Lehigh Valley Region

The eight counties in the region include Berks, Cumberland, Dauphin, Lancaster, Lebanon, Lehigh, Northampton, and York. The new program expanded to these counties during December 2003 to February 2004. There was not prior inspection program. The program parameters include:

Model Years	Program Parameters
1996 & newer	PAOBDII Gas Cap
1975-1995	Gas Cap ATP

Northern Region

The eight counties in the region include Blair, Cambria, Centre, Erie, Lackawanna, Luzerne, Lycoming, and Mercer. The new program expanded to these counties during January and March 2004, which did not have a prior program. The program parameters include:

Model Years	Program Parameters
1975 & newer	Gas Cap ATP

42-County Region

The remaining 42 counties in the Commonwealth will receive an anti-tampering program for all 1975 and newer subject vehicles as part of their Safety Inspection starting in December 2003. The program consists of seven visual inspections of key emissions control components. They include: air pump system, catalytic converter, fuel inlet restrictor, EGR, evaporative system, PCV system, and gas cap. The seven inspections are the same for all areas for vehicles receiving the ATP inspection.

APPENDIX B3

MOBILE6.2 OZONE Summer Weekday Temperature and Humidity Inputs

MOBILE6 Summer Daily Temperatures and Humidity			
Air Quality District	Maximum	Minimum	Absolute Humidity
1. Bucks, Chester, Delaware, Montgomery, Philadelphia	93.1	68.7	52.2
2. Berks	94.4	68.8	75.0
3. Lancaster	94.0	66.7	57.2
4. Carbon, Lehigh, Northampton	92.0	62.8	59.2
5. Adams, Franklin, York	94.0	66.7	57.2
6. Cumberland, Dauphin, Lebanon, Perry	94.0	66.7	57.2
7. Columbia, Lackawanna, Luzerne, Schuylkill, Susquehanna, Wayne, Wyoming	89.4	62.5	42.1
8. Bedford, Blair, Fulton, Huntingdon, Juniata, Mifflin	88.3	62.1	42.3
9. Cameron, Centre, Clearfield, Clinton	88.3	62.1	42.3
10. Bradford, Lycoming, Potter, Sullivan, Tioga	89.4	62.5	42.1
11. Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Washington, Westmoreland	89.4*	68.8*	78.0*
12. Clarion, Lawrence, Mercer, Venango	88.3	62.1	42.3
13. Crawford, Elk, Erie, Forest, McKean, Warren	87.7	69.5	61.3
14. Cambria, Indiana, Somerset	88.3	62.1	42.3

** Temperatures based on 10 highest ozone exceedence days from 2000-2002 consistent with their respective maintenance plans.*

APPENDIX B4

MOBILE6.2 OZONE Summer Weekday Fuel Volatility Inputs

MVMA Fuel Volatility Survey Results					
Nonattainment Area	MVMA Surveyed City	RVP			
		1990	2002	Beyond 2002	
Allentown-Bethlehem-Easton	Philadelphia	8.4	8.7	8.7	
Altoona	Philadelphia	8.4	8.7	8.7	
Erie	Cleveland	9.7	8.7	8.7	
Harrisburg-Lebanon-Carlisle	Philadelphia	8.4	8.7	8.7	
Johnstown	Philadelphia	8.4	8.7	8.7	
Lancaster	Philadelphia	8.4	8.7	8.7	
Philadelphia-Wilmington-Trenton	Philadelphia	8.4	8.7	8.7	
Pittsburgh-Beaver Valley	Philadelphia	8.4	7.8	7.8	
Reading	Philadelphia	8.4	8.7	8.7	
Scranton-Wilkes Barre	Philadelphia	8.4	8.7	8.7	
York	Philadelphia	8.4	8.7	8.7	
Youngstown-Warren-Sharon	Cleveland	9.7	8.7	8.7	

APPENDIX C

**CARBON COUNTY/MONROE COUNTY
PUBLIC PARTICIPATION**

APPENDIX D

CLEAN AIR ACRONYMS

ACRONYMS

ACRONYMS

AADT	Annual Average Daily Traffic (July 1 and seasonally adjusted)
AASHTO	American Association of State and Highway Transportation Officials
ACT	Alternative Control Technique Documents
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
AFV	Alternative Fuel Vehicle
AIRS	Aerometric Information Retrieval Systems
APCA	Air Pollution Control Act of 1992 (Pennsylvania)
APO	Average Passenger Occupancy
AQ	Air Quality
AQP	Air Quality Program
AQTF	Air Quality Task Force
AQRV	Air Quality Related Values
AVI	Automatic Vehicle Identification
AVO	Average Vehicle Occupancy
AVR	Average Vehicle Ridership
BEQ	Bureau of Environmental Quality (PENNDOT)
BMS	Bridge Management System
BMV	Bureau of Motor Vehicles
CAA70	Clean Air Act of 1970
CAA77	Clean Air Act Amendments of 1977
CAA90	Clean Air Act Amendments of 1990
CAAA	Clean Air Act Amendments of 1990
CARB	California Air Resources Board
CBD	Central Business District
CE	Categorical Exclusion
CEE	Categorical Exclusion Evaluation
CFF	Clean Fuel Fleet
CFFV	Clean Fuel Fleets Vehicles
CFR	Code of Federal Regulations
CFV	Clean Fuel Vehicle
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Plan
CMS	Congestion Management System OR Contract Management System
CMSA	Consolidated Metropolitan Statistical Area
CNG	Compressed Natural Gas
CO	Carbon Monoxide (ppm) OR Central Office
CO ₂	Carbon Dioxide (ppm)
CPI	Consumer Price Index
CTG	Control Technique Guidance
CV	Conventional Vehicle
DEIS	Draft Environmental Impact Statement
DEP	Department of Environmental Protection
DOI	Department of Interior
DOT	Department of Transportation
DVMT	Daily Vehicle Miles of Travel
DVRPC	Delaware Valley Regional Planning Commission
EA	Environmental Assessment
ECO	Employee Commute Option

ECONS	Energy Conservation and Safety
EDD	Economic Development District
E I/M	Enhanced Inspection/Maintenance
EIS	Environmental Impact Statement
EKMA	Empirical Kinetic Measurement Assessment
EPA	Environmental Protection Agency (United States)
EPACT	Energy Policy Act of 1992
EPS	Emissions Pre-Processor Systems
EQB	Environmental Quality Board (PA)
ERC	Emission Reduction Credit
ETC	Employer Trip Coordinator OR Employee Transportation Coordination
ETRP	Employer Trip Reduction Program
ETTM	Electronic Toll and Traffic Management
FEIS	Final Environmental Impact Statement
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FIP	Federal Implementation Plan
FIPS	Federal Information Processor Systems
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
FTP	Federal Test Procedure
GM/BHP-HR	Grams per Break Horsepower Hour
GIS	Geographic Information System
GVWR	Gross Vehicle Weight Rating
HBW	Home-Based Work
HC	Hydrocarbons (Kg/day, Tons/yr)
HCM	Highway Capacity Manual
HDDV	Heavy Duty Diesel Vehicle
HDGV	Heavy Duty Gasoline Vehicle
HDV	Heavy Duty Vehicle
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HP&R	Highway Planning and Research Funds (Federal)
ILEV	Inherently Low Emission Vehicles
I/M	Inspection/Maintenance
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
IVHS	Intelligent Vehicle Highway Systems
LAER	Lowest Achievable Emission Rate
LDD	Local Development District
LDDT	Light Duty Diesel Truck
LDDV	Light Duty Diesel Vehicle
LDGT	Light Duty Gasoline Truck
LDGV	Light Duty Gasoline Vehicle
LDT	Light Duty Truck
LDV	Light Duty Vehicle
LEV	Low Emission Vehicle
LOS	Level of Service
LPG	Liquid Petroleum Gas
LPO	Lead Planning Organization
MACT	Maximum Achievable Control Technology
MOBILE	EPA's computer program used to run conformity -- latest version is number 5A
MPO	Metropolitan Planning Organization
MPH	Miles Per Hour
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards

NARC	National Association of Regional Councils
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act of 1969, as amended
NHB	Non-Home Based
NHS	National Highway System
NH ₃	Ammonia
NO ₂	Nitrogen Dioxide
No _x	Nitrogen Oxides
NO _x RACT	Nitrous Oxides Reasonable Available Control Technology
NPRM	Notice of Proposed Rulemaking
NSPS	New Source Performance Standards
NSR	New Source Review
O ₃	Ozone (ppm)
OEM	Original Equipment Manufacturer
OMB	Office of Management and Budget (US)
OTC	Ozone Transport Commission
OTR	Ozone Transport Region
PADEP	Pennsylvania Department of Environmental Protection
PENNDOT	Pennsylvania Department of Transportation
PAMPTA	Pennsylvania Association of Mass Transit Authorities
P&R	Park and Ride
PERC	Perchloroethylene
PHF	Peak Hour Factor
PI&E	Public Information and Education
PL	Metropolitan Planning Funds
PM _{2.5}	Fine Particulate Matter (ug/m ³)
PM ₁₀	Particulate Matter (ug/m ³)
PMS	Pavement Management System OR Project Management System
PPAQ	Post Processor for Air Quality
PPM	Parts Per Million
RACT	Reasonable Available Control Technology
RFA	Regulatory Flexibility Analysis
RFG	Reformulated Federal Gasoline
RFP	Reasonable Further Progress
RMS	Roadway Management System
RMSE	Route Mean Square Error
ROD	Record of Decision
ROG	Reactive Organic Gases
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RVP	Reid Vapor Pressure
SAMI	Safety and Mobility Initiative (PENNDOT)
SIP	State Implementation Plan
SMA	Statistical Metropolitan Area
SO _x	Sulfates
SO ₂	Sulfur Dioxide
SOL	Strike-Off-Letter (PENNDOT)
SOV	Single Occupancy Vehicle
SOVCAP	Single Occupancy Vehicle Capacity Adding Project
SPRPC	Southwestern Pennsylvania Regional Planning Commission
STAMPP	Systematic Technique to Analyze & Manage Pennsylvania's Pavement (PENNDOT)
STC	State Transportation Commission
STEP	Short-range Transportation Evaluation Program
STIP	Statewide Transportation Improvement Plan
STP	Surface Transportation Program
TAC	Technical Advisory Committee

TAZ	Traffic Analysis Zone
TCM	Transportation Control Measure
TCP	Traffic Control Plan
TDM	Travel Demand Management
TDR	Travel Demand Reduction
TIP	Transportation Improvement Program
TLEV	Transitional Low Emission Vehicle
TMA	Transportation Management Association OR Transportation Management Area
TODF	Time of Day Factor
TPD	Tons Per Day
TPY	Tons Per Year
TR	Traffic Route
TRB	Transportation Research Board
TRO	Trip Reduction Ordinance
TSM	Transportation System Management
TYP	Twelve-Year Program (PADOT)
UAM	Urban Air Shed Model
UG/M ³	Micrograms per Cubic Meter
ULEV	Ultra Low Emission Vehicles
UMTA	Urban Mass Transportation Administration (renamed FTA--Federal Transit Administration)
USC	United States Code
VHT	Vehicle Hours Travelled
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
VPH	Vehicles Per Hour
ZEV	Zero Emission Vehicles