The State of New Jersey
Department of Environmental Protection

Final
State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard (NAAQS)

New Jersey Revised Motor Vehicle Emission Inventories and Transportation Conformity Budgets Using the MOBILE6 Model

April 4, 2003

Preface

This document addresses a commitment made by New Jersey in its April 26, 2000 Attainment Demonstration State Implementation Plan Revision - Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy - Additional Emission Reduction Commitment and Transportation Conformity Budgets, to revise its 2005 and 2007 on-road motor vehicle emission budgets for the New Jersey portion of the Philadelphia/Wilmington/Trenton and New Jersey portion of the Northern New Jersey/New York City/Long Island nonattainment areas. In addition, this document addresses the requirement in the transportation conformity rule (40 CFR 93.118(e)(4)(iv)) which requires that "the motor vehicle emissions budget(s), when considered together with all other emissions sources, is consistent with applicable requirements for reasonable further progress, attainment, or maintenance (whichever is relevant to the given implementation plan submission)." This document shows that the new levels of motor vehicle emissions calculated using MOBILE6 continue to support achievement of the rate of progress requirements and projected attainment of the one-hour ozone National Ambient Air Quality Standard (NAAQS) by the attainment dates for each nonattainment area. Finally, this document proposes a date of December 31, 2004 for the submittal of an attainment status review, as well as an updated General Conformity budget for McGuire Air Force Base.

Acknowledgments

The New Jersey Department of Environmental Protection (NJDEP) acknowledges the efforts and assistance of the many agencies and individuals whose contributions were instrumental in the preparation of this State Implementation Plan Revision. In particular, the NJDEP wishes to acknowledge the many individuals within the New Jersey Department of Transportation (NJDOT), the United States Environmental Protection Agency (USEPA) Region II, the North Jersey Transportation Planning Authority (NJTPA), the South Jersey Transportation Planning Organization (SJTPO), the Delaware Valley Regional Planning Commission (DVRPC), and the staff within the NJDEP itself for their assistance and guidance.

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Acronyms and Abbreviations

AFB	Air Force Base
ASM	Acceleration Simulation Mode
CO	Carbon Monoxide
CE	Control Efficiency
DVMT	Daily Vehicle Miles Traveled
DVRPC	Delaware Valley Regional Planning Commission
EGAS	Economic Growth Analysis System
FIP	Federal Implementation Plan
FMVCP	Federal Motor Vehicle Control Program
gpm	grams per mile
GVWR	Gross Vehicle Weight Rating
HC	Hydrocarbons
HDDV	Heavy-Duty Diesel Vehicles
HDGV	Heavy-Duty Gasoline Vehicles
HPMS	Highway Performance Monitoring System
I/M	Inspection and Maintenance
MPO	Metropolitan Planning Organization
MY	Model Year
NAA	Nonattainment Area
NAAQS	National Ambient Air Quality Standard
NJDEP	New Jersey Department of Environmental Protection
NJDMV	New Jersey Department of Motor Vehicles
NJDOT	New Jersey Department of Transportation
NJTPA	North Jersey Transportation Planning Authority
NLEV	National Low Emission Vehicle
NOAA	National Oceanic and Atmospheric Administration
NO_x	Oxides of Nitrogen
OBD	On-Board Diagnostic
OTAG	Ozone Transport Assessment Group
OTR	Ozone Transport Region
PPAQ	Post-Processor for Air Quality
ppb	parts per billion
ppm	parts per million
RFG	Reformulated Gasoline
ROP	Rate of Progress
RPM	Revolutions Per Minute
SCC	Source Classification Code
SIP	State Implementation Plan
SJTPO	South Jersey Transportation Planning Organization
SUV	Sport Utility Vehicle
TDM	Travel Demand Model
TPD	tons per day
TPY	tons per year
TTC	Technician Training and Certification
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds

Executive Summary

This State Implementation Plan (SIP) revision fulfills a commitment made by New Jersey in its April 26, 2000 Attainment Demonstration State Implementation Plan Revision-Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Additional Emission Reduction Commitment and Transportation Conformity Budgets, to revise its 2005 and 2007 on-road motor vehicle emission budgets for the New Jersey portion of the Philadelphia/Wilmington/Trenton nonattainment area and the New Jersey portion of the Northern New Jersey/New York City/Long Island nonattainment area using the new MOBILE6 model. In addition, this SIP revision shows that the new levels of on-road motor vehicle emissions calculated using MOBILE6 continue to support predicted achievement of rate of progress requirements and projected attainment of the one-hour ozone National Ambient Air Quality Standard (NAAQS) by the attainment dates for each nonattainment area.

The MOBILE6 generated inventories for the base and attainment years were compared with the previous MOBILE5 inventories for each nonattainment area to determine if attainment will still be predicted by the established attainment dates. The relative reductions in on-road emissions were found to be greater under the MOBILE6 model for the New Jersey portions of both the Philadelphia/Wilmington/Trenton and Northern New Jersey/New York City/Long Island nonattainment areas. Therefore both nonattainment areas are still predicted to achieve attainment by their current attainment dates and there is no need to adopt any additional control measure at this time. New Jersey's status towards attaining the one-hour ozone standard will be further assessed in an overall manner in a future review currently scheduled for December 31, 2004. That date will hopefully allow for sufficient time to assess the impact of the USEPA Oxides of Nitrogen (NO_x) SIP Call and is consistent with USEPA guidance.

Transportation conformity budgets were established using MOBILE6 for the attainment years. In addition, for the North Jersey Transportation Planning Authority area budgets were also established for 2005 in order to update previously established budgets for this year. Emissions budgets are shown in Table ES-1.

Table ES-1
MOBILE6 Transportation Conformity Budgets by MPO

Transportation Planning Area	VOC Emissions (tons per day)		NO_x Emissions (tons per day)	
	2005	2007	2005	2007
North Jersey Transportation Planning Authority (NJTPA)	161.97	138.77*	250.05	197.19*
South Jersey Transportation Planning Organization (SJTPO)	22.12*	NA	36.36*	NA
Delaware Valley Regional Planning Commission (DVRPC)	42.99*	NA	63.44*	NA

*denotes the attainment year budget

The highway on-road source control measures assumed in these emissions budgets are consistent with those utilized in New Jersey's plans to achieve attainment of the one-hour ozone standard.

Table ES-2 provides a comparison of the MOBILE6 transportation conformity budgets with the conformity budgets previously established by the State in its March 31, 2001, 1996 Actual Emission Inventory and Rate of Progress Plan for 2002, 2005 and 2007 SIP Revision[1]. The MOBILE6 emission budgets show an increase in both the VOC and NO_x values relative to the prior SIP budgets. The increases are due primarily to certain changes in the MOBILE model between versions 5 and 6. The model changes which are contributing most significantly to the increases are likely the enhanced ability of the MOBILE model to account for emission increases due to vehicle acceleration and air conditioning. Although MOBILE5 accounted for the effects of vehicle acceleration by basing emissions on certain standard drive cycles, emission factors generated by MOBILE6 are based on drive cycles that are designed to more closely match real world driving conditions. In addition, the adjustments to emission factors due to air conditioning were significantly improved between MOBILE5 and MOBILE6.

Table ES-2
Comparison of the MOBILE6 Transportation Conformity Budgets with the Prior Budgets

Transportation Planning Area	Attainment Year	VOC Emissions (tons per day)		NO_x Emissions (tons per day)	
		Prior SIP Budgets	MOBILE6 Budgets*	Prior SIP Budgets	MOBILE6 Budgets*
North Jersey Transportation Planning Authority (NJTPA)	2007	93.20	138.77	175.51	197.19
South Jersey Transportation Planning Organization (SJTPO)	2005	13.36	22.12	26.42	36.36
Delaware Valley Regional Planning Commission (DVRPC)	2005	38.03	42.99	55.62	63.44

* Attainment projections are dependent on the relative emission reductions from the base to attainment years. Therefore, even though the MOBILE6 budgets are higher than the prior budgets, New Jersey's portions of each ozone nonattainment area are still predicted to achieve attainment by their current attainment dates.

In addition, New Jersey has also proposed updates to the General Conformity budgets for McGuire Air Force Base. The year 2005 NO_x budget is being increased by 200 tons per year (TPY) and the VOC budget is being decreased by 208 TPY. Increasing NO_x and decreasing VOC by these amounts should result in offsetting effects with respect to ozone formation.

[1] The State of New Jersey Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard, New Jersey 1996 Actual Emission Inventory and Rate of Progress Plan for 2002, 2005, and 2007, March 31, 2001.

I. Introduction and Purpose

This document addresses a commitment made by New Jersey in its April 26, 2000 Attainment Demonstration State Implementation Plan Revision - Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy - Additional Emission Reduction Commitment and Transportation Conformity Budgets, to revise its 2005 and 2007 motor vehicle emission budgets for the New Jersey portion of the Philadelphia/Wilmington/Trenton nonattainment area and the New Jersey portion of the Northern New Jersey/New York City/Long Island nonattainment area. In addition, pursuant to the federal transportation conformity rule (40 CFR §93.118(e)(4)(iv)), this document shows that the new levels of motor vehicle emissions calculated using MOBILE6 continue to support achievement of the rate of progress requirements and projected attainment of the one-hour ozone National Ambient Air Quality Standard (NAAQS) by the attainment dates for each nonattainment area. Finally, this document proposes that the date for conducting a future review of the State's status toward attainment be set at December 31, 2004, consistent with the United States Environmental Protection Agency (USEPA) guidance, and proposes new General Conformity budgets for McGuire Air Force Base.

II. Background - Environmental and Health Impacts of Ozone and Legal Standards

Ozone (O_3) continues to be a pervasive air quality problem in New Jersey. Although the ozone found in the earth's upper atmosphere (stratosphere) forms a layer that protects us from the sun's ultraviolet radiation, the ozone formed near the earth's surface (troposphere) is breathed by or comes in contact with people, animals, crops and other vegetation, and can cause a variety of health and other effects. Ozone is produced in complex chemical reactions when its precursors, volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), react in the presence of sunlight. The primary man-made sources of these ozone precursors are the evaporation of solvents and fuels (consumer products and gasoline) and combustion by-products (power plants, industry, highway vehicles and other engines).

As it forms, ground-level ozone and its precursors, especially oxides of nitrogen can be transported by the wind, resulting in high ozone levels in areas downwind of the original pollution source. The combination of higher summer temperatures, sunlight, local emissions, and atmospheric transport conditions contribute to a summertime elevated peak in ozone concentrations. Therefore, unlike primary pollutants, e.g., sulfur dioxide and lead, which are emitted directly and can be controlled at their source, reducing ozone concentrations poses a difficult challenge because the precursors are emitted from many different sources, and from various geographic locations. As such, controls at any one source may not solve the ozone problem.

Breathing elevated levels of ground-level ozone can[1]:

- decrease lung function, primarily in children active outdoors;
- increase respiratory symptoms, such as coughing and chest pain upon inhalation, particularly in highly sensitive individuals;
- increase hospital admissions and emergency room visits for respiratory causes among children and adults with pre-existing respiratory diseases, such as asthma;
- cause inflammation of the lungs;
- cause possible long-term damage to the lungs; and
- promote allergic reactions.

In addition to its health effects, ground-level ozone interferes with various plants' ability to produce and store nutrients.[2] This causes the plants to become more susceptible to disease, insects, other pollutants and harsh weather. This impacts annual crop production throughout the United States, resulting in significant losses, and injures native vegetation and ecosystems. Ground-level ozone also damages certain man-made materials, such as textile fibers, dyes, and paints.[3]

The NAAQS for ozone that is addressed by this SIP is a one-hour average of 0.12 parts per million (ppm), not to be exceeded more than three days over a three-year period. Therefore, the fourth highest value over a three year period, termed the design value, determines whether or not an area is below the standard. New Jersey has made progress toward reducing the spacial extent of the area that is above the one-hour ozone standard and in reducing the maximum measured concentrations. However, eighteen of its twenty-one counties are still in two USEPA - designated nonattainment areas where the standard is still being exceeded - either within or outside New Jersey. Figure 1 shows the New Jersey portions of these two areas; the Northern New Jersey/New York City/Long Island and Philadelphia/Wilmington/Trenton nonattainment areas.

On July 18, 1997, the USEPA found that the one-hour NAAQS for ozone was no longer sufficiently protective of public health. As such, the USEPA established an ozone health standard to be set at 0.08 parts per million (ppm) averaged over an eight-hour period. The USEPA's plan for compliance with this standard was based on the three-year average of the fourth highest eight-hour averaged concentration reading at a given monitoring site. This three-year average is termed the eight-hour design value.

III. Current Ozone Air Quality

New Jersey's ozone monitoring sites are shown in Figure 2. The Northern New Jersey/New York City/Long Island nonattainment area contains the following monitoring sites: Teaneck,

[1] 62 Fed. Reg. 60317, (November 7, 1997).
[2] A USEPA Fact sheet on the New 8-Hour Ozone and Fine (2.5 microns) Particulate Matter Health Standards, July 1997.

[3] Ibid.

Figure 1

Air Quality Control Regions in New Jersey
One-Hour Ozone National Ambient Air Quality Standard

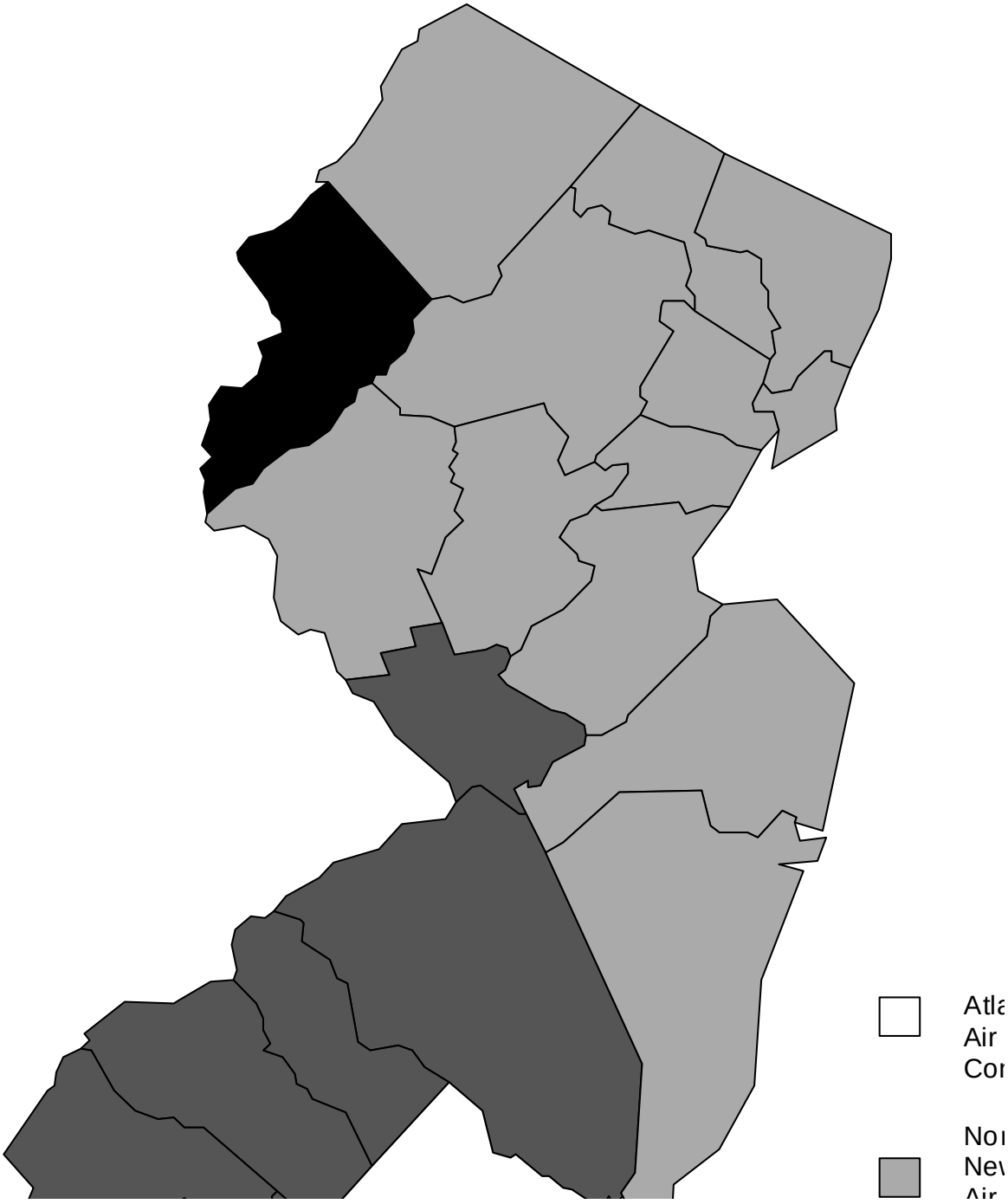
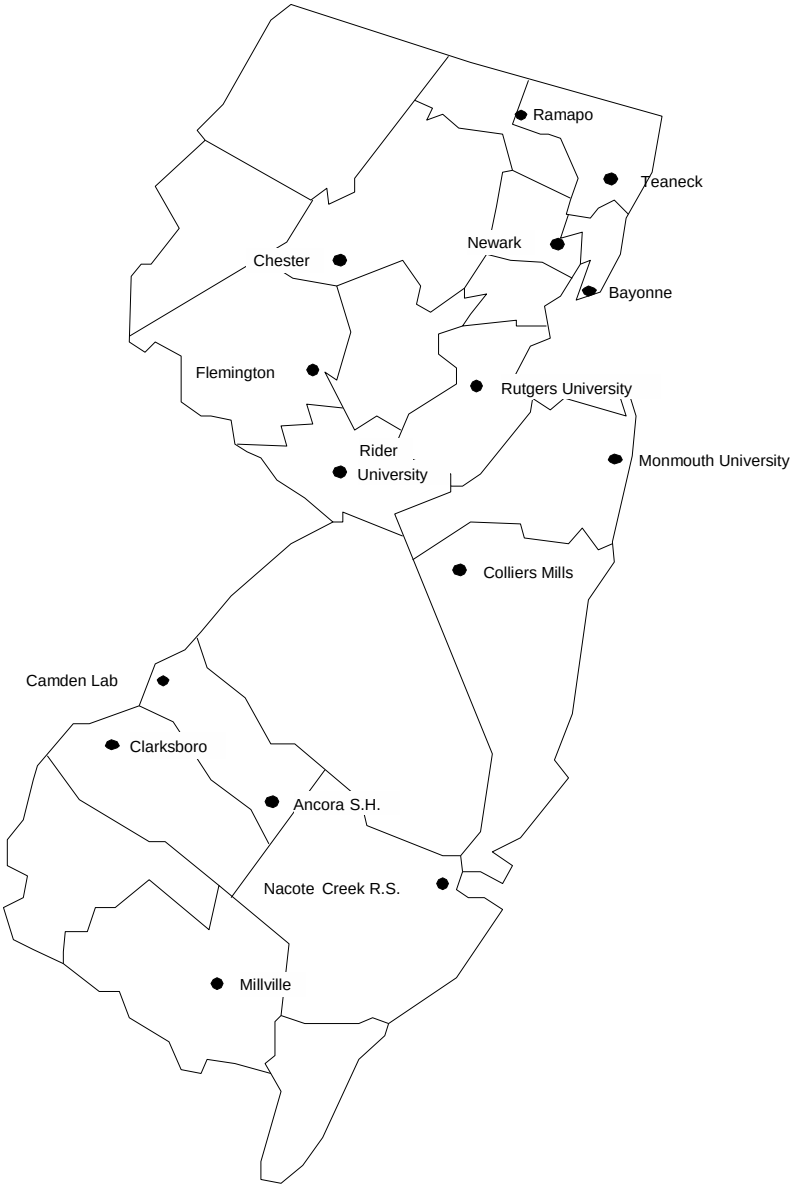


Figure 2

State of New Jersey Ozone Monitoring Network 2002



Monmouth University, Ramapo, Rutgers University, Flemington, Bayonne, Newark and Colliers Mills. The Philadelphia/Wilmington/Trenton nonattainment area contains the following monitoring sites: Ancora State Hospital, Rider University, Camden Laboratory, Clarksboro and Milllville. Based on 2000-2002 monitoring date, the current highest ozone one-hour design values in New Jersey are 0.145 ppm for the Northern New Jersey/New York City/Long Island nonattainment area and 0.133 ppm for the Philadelphia/Wilmington/Trenton nonattainment area.

Figure 3 illustrates a significant reduction in the number of monitoring site exceedances from 1990 to 2002[4]. However, as shown in Figure 4 and 5, there has been diminishing progress since 1994. Since 1994, ozone concentrations and the number of days on which the standards have been exceeded appear to have leveled off despite the introduction of additional control measures such as reformulated gasoline. However, in interpreting this trend it is critical to remember that emissions of oxides of nitrogen (NO_x), and to a lesser extent volatile organic compounds (VOC), outside and upwind of New Jersey, play a major role in the ozone concentrations within the State. Therefore, a close correlation between emission reductions in New Jersey and ozone concentrations in New Jersey is not necessarily expected. Nevertheless, the leveling off of trends reinforces the need for New Jersey to maintain progress in emission reduction towards attaining the one-hour standard in the State.

IV. History of New Jersey's Attainment Demonstration and Rate of Progress (ROP) SIPs

A. Attainment Demonstration SIP History

On August 31, 1998, New Jersey submitted to the USEPA a SIP revision containing a demonstration of attainment of the one-hour ozone NAAQS for the Northern New Jersey/New York City/Long Island and Philadelphia/Wilmington/Trenton nonattainment areas.[5] This original attainment demonstration submittal is hereafter referred to as the State's Phase II Ozone SIP. The Phase II Ozone SIP submittal provided for an attainment demonstration as required by 42 U.S.C. §7511a(c)(2)(A), §182(c)(2)(A) of the Clean Air Act and addressed the USEPA's subsequent requirements regarding attainment demonstration for the one-hour NAAQS for ozone.[6,7]

New Jersey used a "weight of evidence" to determine the emission reductions needed to attain the ozone standard. A weight of evidence analysis combines results from advanced

[4] It should be noted that there have been several changes in monitor sites between 1990 and 2002. The site formally located in Cliffside Park has been moved to Ramapo, the site at McGuire AFB has been moved to Colliers Mills, the site at Plainfield has been eliminated and the site at Teaneck has been added.

[5] NJ SIP Revision, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Phase II Ozone Submittal, August 31, 1998.

[6] Memorandum dated March 2, 1995 from Mary D. Nichols, Assistant Administrator for Air and Radiation, USEPA to the USEPA Regional Administrators, Region I-X. This Policy is commonly referred as "The March 2nd Policy."

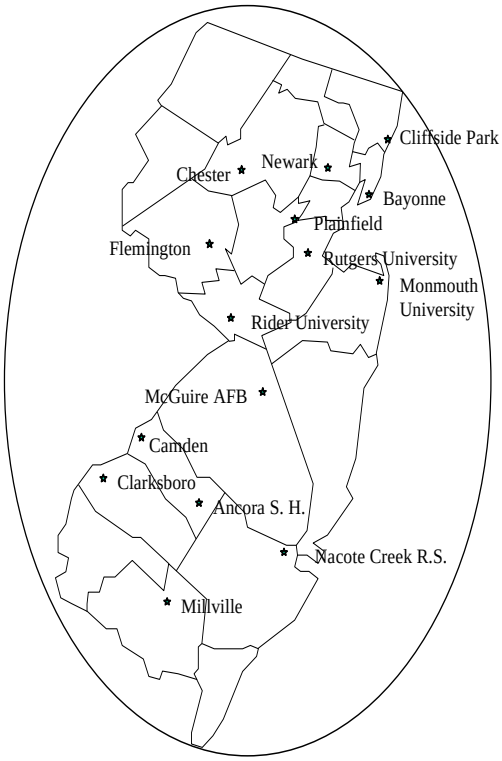
[7] Memorandum dated December 29, 1997 from Richard D. Wilson, Acting Assistant Administrator for the USEPA Office of Air and Radiation to the Regional Administrators, USEPA, Regions I-X entitled "Guidance for Implementing the 1-Hour Ozone and Pre-Existing PM_{10} NAAQS".

Figure 3

Sites in New Jersey Not Attaining the One-Hour Ozone Standard

1990

All Sites Fail to Meet Standard



2002

7 of 15 Sites Fail to Meet Standard

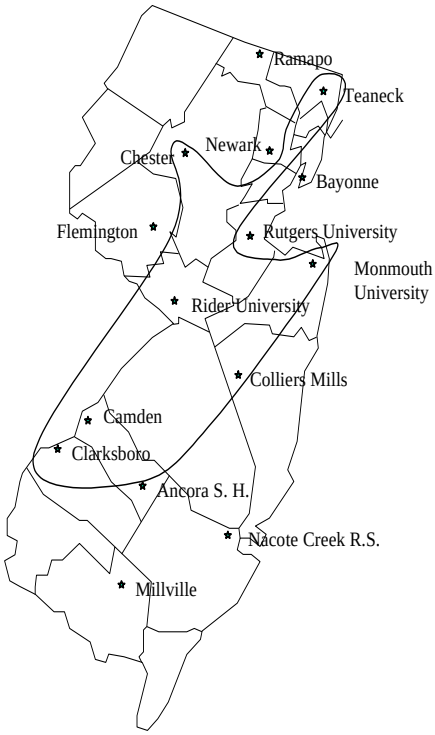


Figure 4

One-Hour and Eight-Hour Ozone Design Values
Northern and Southern New Jersey Potential Nonattainment Areas

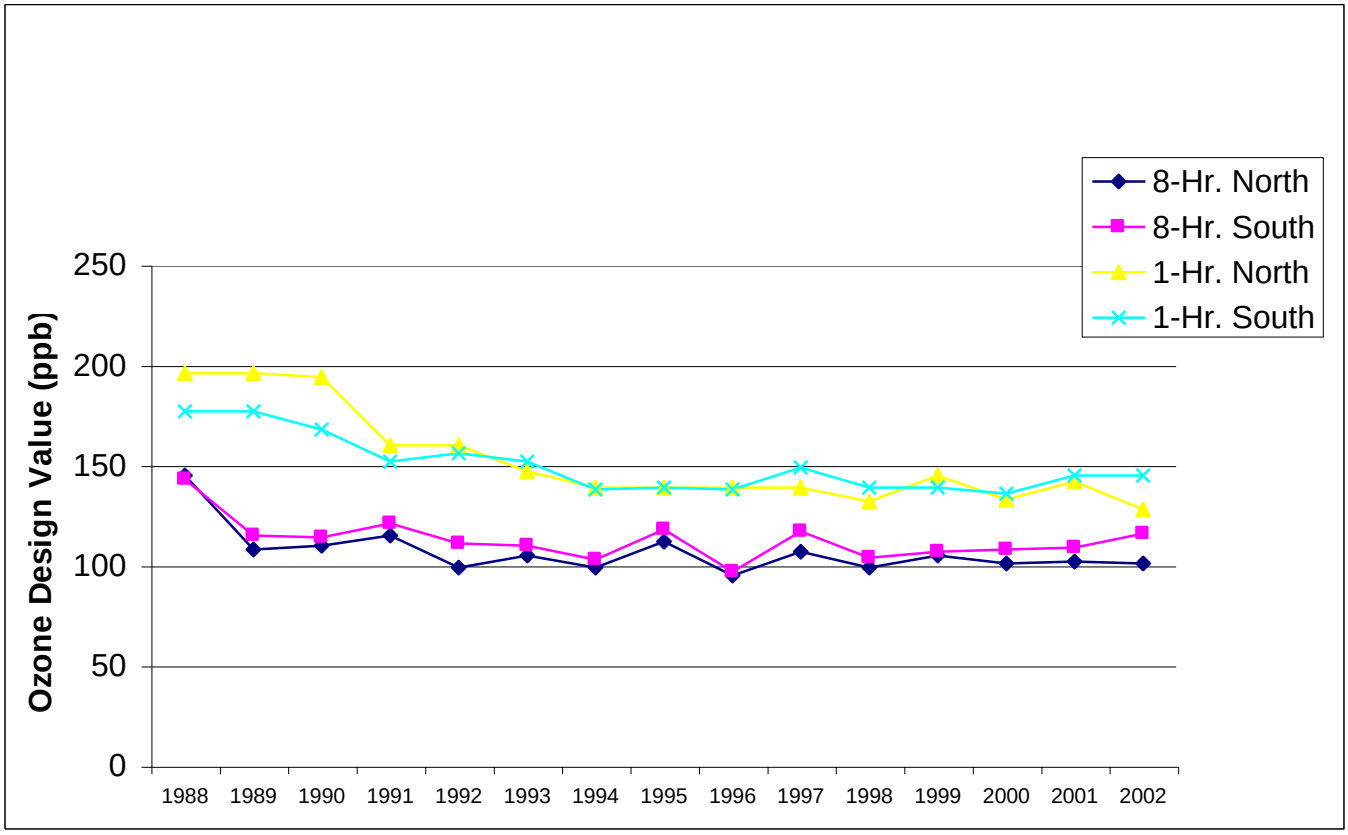
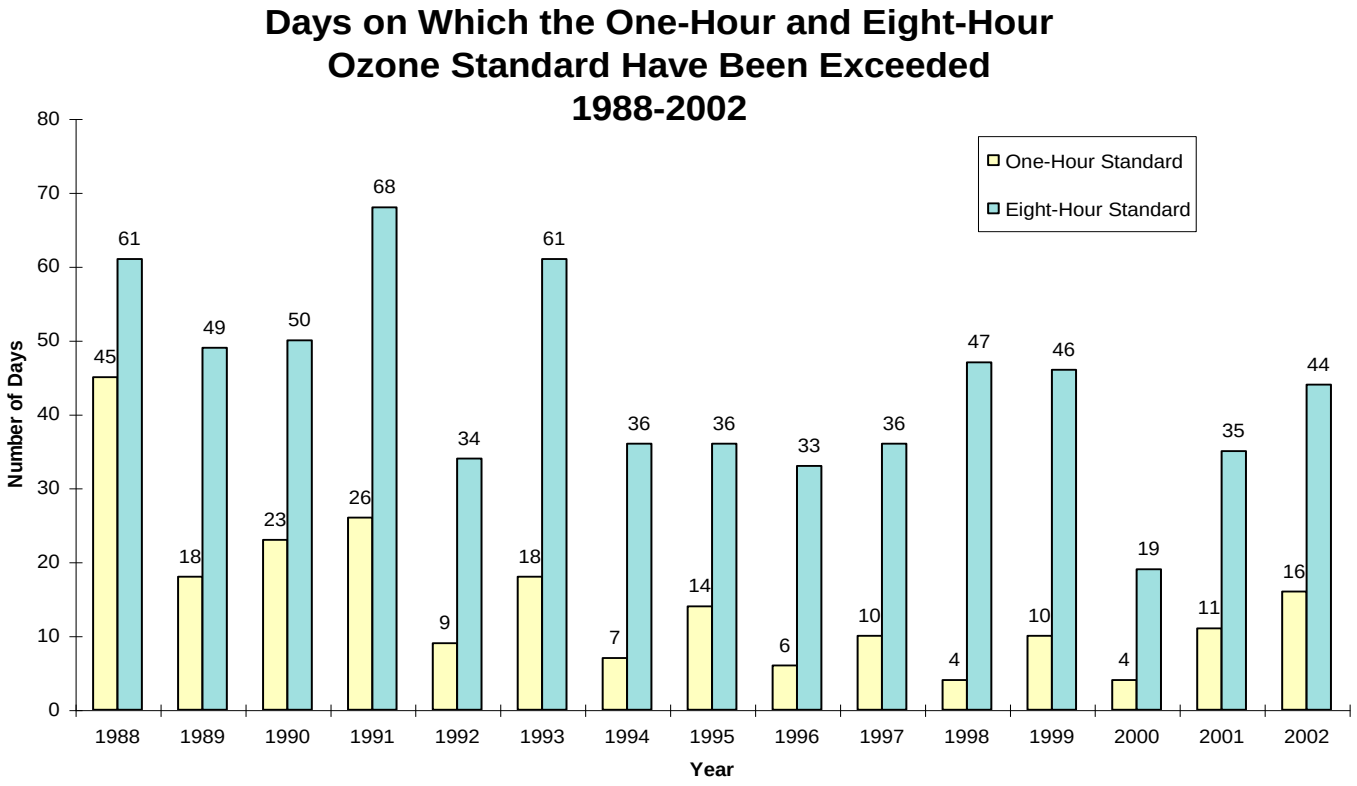


Figure 5


Days on Which the One-Hour and Eight-Hour Ozone Standard Have Been Exceeded 1988-2002
One-Hour Standard
Eight-Hour Standard
Number of Days
Year
0
10
20
30
40
50
60
70
80
1988 45 61
1989 18 49
1990 23 50
1991 26 68
1992 9 34
1993 18 61
1994 7 36
1995 14 36
1996 6 33
1997 10 36
1998 4 47
1999 10 46
2000 4 19
2001 11 35
2002 16 44

photochemical grid models and the most recent air quality data to improve the estimate of emission reductions needed to attain. The method used by New Jersey predicts future ozone concentrations from a baseline of actual historic air quality data and the ozone improvement predicted by the photochemical grid model. The improvement is the model-predicted base year concentration divided by the model-predicted future attainment year concentration. This method[8] takes advantage of the fact that air quality models may be more accurate at calculating relative improvement in air quality as opposed to predicting an absolute concentration at a particular geographic site. An illustration of how modeled and monitored ozone values are used in the weight of evidence methodology is presented in Figure 6.

In addition to including a demonstration of attainment of the one-hour NAAQS for ozone for the Northern New Jersey/New York City/Long Island and Philadelphia/Wilmington/Trenton nonattainment areas, and a list of the control measures adopted by the State to date, the Phase II Ozone SIP committed the State to:

1) submit, by December 31, 2000, post-1999 Rate of Progress (ROP) Plans and any adopted regulations needed to achieve the post-1999 emission reductions;
2) implement the New Jersey portion of the USEPA regional NO_x cap (NO_x SIP Call);
3) undertake a midcourse review and submit a report to the USEPA by December 31, 2002;
4) evaluate additional control measures which are not currently implemented for potential future implementation; and,
5) propose such reasonable and necessary control measures needed to address any shortfall identified in the mid-course review which are necessary for attainment.

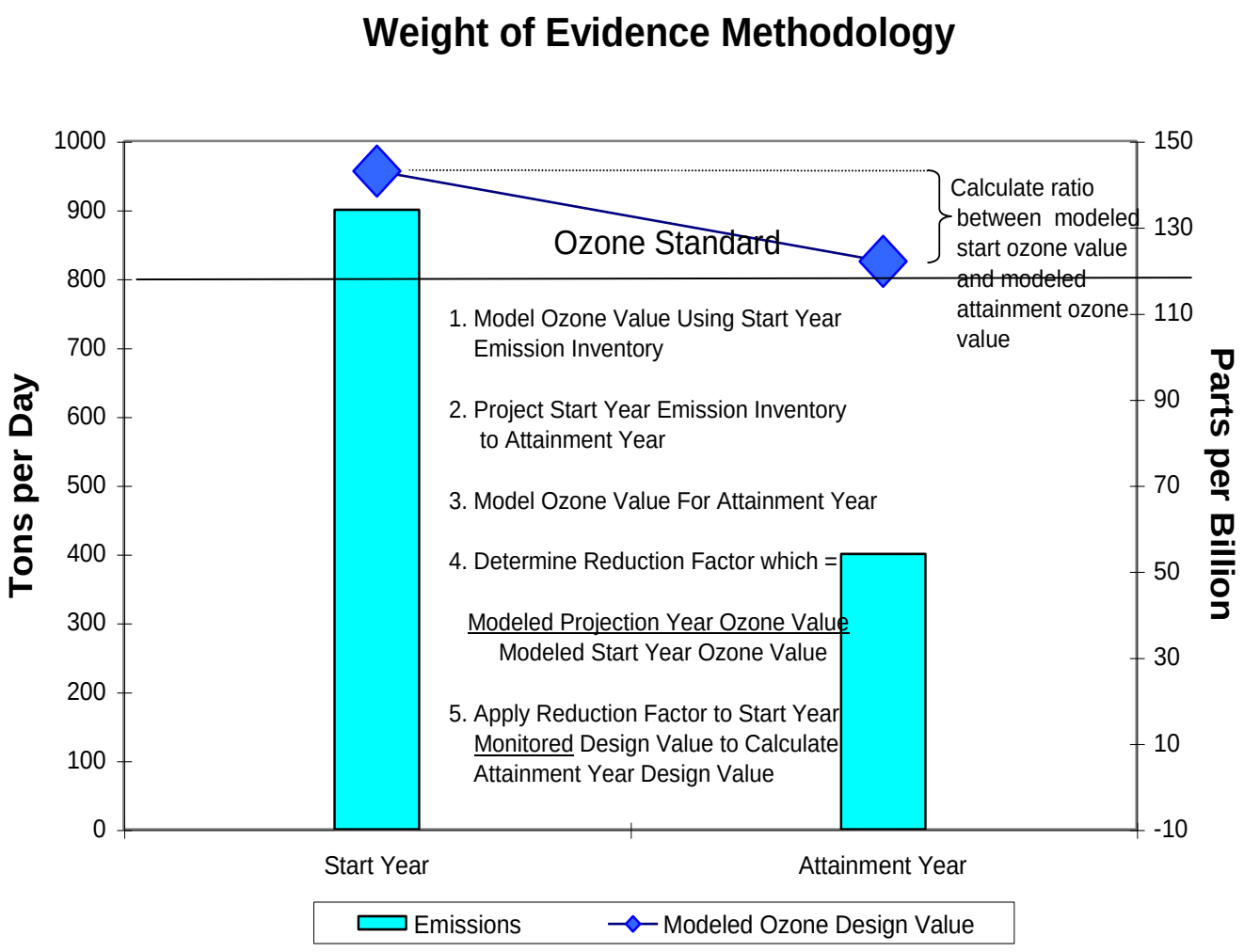
In reviewing the attainment demonstrations submitted by New Jersey, as well as other states' submittals (such as New York, Pennsylvania and Maryland), the USEPA performed its own analyses (also using the weight of evidence method but with a different base year and different modeling results) and determined that further emission reductions were necessary to insure attainment by the applicable dates. For New Jersey, the USEPA's analyses results were reasonably similar to the uncertainty analysis results New Jersey presented in its Phase II Ozone SIP to quantify the uncertainties incorporated its air quality projections. Therefore, considering both the USEPA and the prior state analyses, the State revised its attainment demonstration to include a commitment to a process designed to secure New Jersey's fair share of the additional emission reductions identified by the USEPA.

On April 26, 2000, New Jersey submitted a SIP revision containing an update to meeting the requirements of the alternative ozone attainment demonstration policy.[9] Specifically, this SIP revision provided (a) an enforceable commitment by New Jersey to adopt sufficient measures to

[8] Guidance for Improving Weight of Evidence Through Identification of Additional Emission Reductions Not Modeled, USEPA, November, 1999.

[9]The State of New Jersey Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the One-Hour Ozone National Ambient Air Quality Standard, Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy-Additional Emission Reduction Commitment and Transportation Conformity Budgets, April 26, 2000.

Figure 6


Weight of Evidence Methodology
Tons per Day
Parts per Billion
1000
900
800
700
600
500
400
300
200
100
0
150
130
110
90
70
50
30
10
-10
Ozone Standard
Calculate ratio between modeled start ozone value and modeled attainment ozone value
1. Model Ozone Value Using Start Year Emission Inventory
2. Project Start Year Emission Inventory to Attainment Year
3. Model Ozone Value For Attainment Year
4. Determine Reduction Factor which =
Modeled Projection Year Ozone Value
Modeled Start Year Ozone Value
5. Apply Reduction Factor to Start Year Monitored Design Value to Calculate Attainment Year Design Value
Start Year
Attainment Year
Emissions
Modeled Ozone Design Value

address its fair share of the level of additional emission reductions identified by the USEPA,[10] and to revise its Attainment Demonstration accordingly to reflect those measures; (b) a revised transportation conformity budget that included the Tier 2 Motor Vehicle Standard / Low Sulfur Gasoline Program benefits; (c) an enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity budgets to reflect any adopted additional measures (beyond the Tier 2 Motor Vehicle Standard / Low Sulfur Program) pertaining to motor vehicles; (d) an enforceable commitment to revise the New Jersey Ozone Attainment Demonstration to recalculate the transportation conformity budgets, within one year after the MOBILE6 model is released and required for use in the development of SIPs; (e) a list of possible additional control measures from which a suite of measures can be drawn that would be expected to meet New Jersey's fair share of the USEPA - identified emission reduction shortfall; and (f) an enforceable commitment to perform a midcourse review by December, 2003.

B. ROP SIP History

The State submitted its original 1996 15 percent ROP plans to the USEPA on November 15, 1993.[11] Subsequently, on December 31, 1996, New Jersey submitted to the USEPA, as part of its Phase I Ozone SIP submittal, a revision which updated its 1993 15 percent ROP plans and included its 1999 24 percent ROP plans to the USEPA.[12] The USEPA granted conditional interim approval to New Jersey's Phase I Ozone SIP submittal on June 30, 1997.[13] The USEPA's approval of New Jersey's Phase I Ozone SIP was conditional based on the modeling contained in the 15 percent and 24 Percent Rate of Progress Plans.[14] On December 12, 1997, the USEPA disapproved the 15 percent ROP plans' portion of New Jersey's Phase I Ozone SIP due to the realization that the benefits claimed in these plans for the State's enhanced I/M program would not be obtained.[15]

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[10] 64 Fed. Reg. 70380, (December 16, 1999).

[11] The State of New Jersey Department of Environmental Protection and Energy, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Federal Clean Air Act Requirements, November 15, 1993.

[12] The State of New Jersey, Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy, Phase I Ozone SIP submittal, December 31, 1996.

[13] 62 Fed. Reg. 35100, (June 30, 1997).

[14] In a letter dated May 29, 1997, New Jersey committed to perform the remodeling necessary to estimate the emissions reductions that would result from the enhanced I/M program, as implemented, within 12 months from the effective date of the USEPA's approval action (that is, by July 30, 1998).

[15] Letter dated December 12, 1997 to New Jersey Governor Christine Todd Whitman from Regional Administrator Muszynski, and a similar but more detailed letter dated December 12. 1997 to Commissioner Robert C. Shinn, Jr., NJDEP and Commissioner John J. Haley, Jr., New Jersey Department of Transportation, from Deputy Regional Administrator William J. Muszynski, P.E., USEPA, Region II. This action was later formalized by the USEPA at 63 Fed. Reg. 45399 (August 26, 1998).

On February 5, 1999, the State submitted revised 15% ROP (and 24% ROP) plans that no longer relied on the benefits anticipated from the enhanced I/M program. These revised plans were approved by the USEPA on April 23, 1999.[16] On December 13, 1999, the State began implementation of its enhanced I/M program.

On March 31, 2001 New Jersey submitted a SIP revision (ROP SIP) containing the actual 1996 inventory and ROP plans for 2002, 2005 and 2007. The ROP SIP contained the remaining ROP plans for each milestone year up to and including the attainment years for each applicable nonattainment area. Using control measures consistent with those in the State's demonstration of attainment of the one-hour ozone standard, it was shown that the ROP targets are achieved. In addition, the State agreed to find further emission reductions, identified by the USEPA, and is currently working with other Ozone Transport Region states in this regard. Once these measures are adopted, projected controlled emission levels would decrease further. The ROP SIP also contained revised transportation conformity budgets.

The purpose of the ROP submittals was to demonstrate steady incremental progress (3 percent of the 1990 VOC baseline emission level averaged over each consecutive three-year period beginning in 1991) leading towards the ultimate goal of attainment. The purpose of the attainment demonstration, however, was to assess the overall emission reductions necessary to actually achieve attainment, which could be greater than or less than the ROP incremental reductions. If the attainment demonstration shows that a state needs less than 3 percent over each consecutive three-year period to reach attainment, it can petition the USEPA to reduce the ROP requirement for their particular state.[17] In New Jersey's case, however, attaining the standard requires emission reductions that exceed ROP requirements. By way of illustration, the control measures in the attainment demonstration were incorporated in the ROP SIP, and the resulting controlled emission levels indicate that the inventories for the Northern New Jersey/New York City/Long Island and Philadelphia/Wilmington/ Trenton nonattainment areas are well below the targets derived from the 3 percent reduction over each consecutive three-year period. For example, for the Northern New Jersey/New York City/Long Island nonattainment area for 2007 the sum of the New Jersey VOC and NO_x percentage emission reduction was 83.5 percent as compared to a 48 percent ROP test requirement. Therefore, for New Jersey, the emission reductions needed to attain the ozone standard significantly exceed the three percent per year ROP requirements.

V. Development of the MOBILE6 Inventories

A. MOBILE6 Inputs

The on-road emission inventories are estimates of VOC, NO_X and carbon monoxide (CO) tailpipe emissions, and VOC evaporative emissions, from vehicles operating on public roadways. The emissions are calculated by multiplying an activity level by an emission factor. The activity level is daily vehicle miles traveled (DVMT). The emission factors are calculated using the USEPA's mobile source emission factor model, MOBILE6.

[16] 64 Fed. Reg. 19913 (April 23, 1999).

[17] 42 U.S.C. §7511a(c)(2)(B)(ii).

The DVMT used to develop these emission inventories were calculated using travel demand models in use by the three Metropolitan Planning Organizations (MPOs) in the State. The travel demand models use demographic data, such as population, employment, housing density, and shopping patterns to estimate the demand for travel in the modeled area. This travel demand is then distributed throughout the available roadways and transit routes, referred to as links. The model is based on an algorithm which takes into account factors such as transit fares, tolls, traffic volume, and time of day to estimate how many people travel from one point to another on any given link. The number of vehicles traveling on each link is then used to estimate the speed of travel and the DVMT. The calculated DVMT is adjusted for any travel which is not accounted for in the model, such as reductions due to transportation control measures or increases to account for local roadways.

The MOBILE model is a USEPA-developed computer program that estimates VOC, CO, and NO_x emission factors for gasoline-fueled and diesel-powered highway motor vehicles. There have been several versions of the model developed and released by the USEPA for use by the States in estimating emissions from on-road sources. The latest version of EPA MOBILE6.2, dated October 31, 2002, was used for this SIP.

For individual vehicle types, MOBILE6 calculates emission factors that depend on various conditions such as: temperature, humidity, travel speeds, fuel type, vehicle age distributions, inspection and maintenance (I/M) program and roadway type. The model is designed so that the user can specify many of the variables that affect vehicle emissions. The model estimates emission factors for any calendar year between 1952 and 2050 inclusive. The 25 most recent vehicle model years are considered to be in operation in each calendar year. MOBILE6 differs significantly from its immediate predecessor, MOBILE5. MOBILE6 contains new and improved data including basic emission data from more realistic driving conditions. The effects of new Federal regulations since 1992 have been incorporated into the MOBILE6 model. It is no longer necessary to perform separate calculations to incorporate the effects of the Tier 1 and Tier 2 vehicle regulations and the Heavy-Duty Diesel NO_x consent decree. In addition the overall effectiveness of an I/M program can be specified in the MOBILE6 input file which eliminates the need to perform multiple runs to accurately model the effects of the New Jersey "hybrid" I/M program, i.e., consisting of both centralized and decentralized facilities.

1. Temperature and Humidity

The MOBILE6 model requires the user to provide local temperature data as an input. The two options for input of temperature data are to provide minimum/maximum daily temperatures or to provide hourly temperatures. The use of minimum and maximum daily temperatures is the USEPA recommended approach for analyses of average summer or winter day conditions that will not be used as input into an air quality or dispersion model[18].

[18] Technical Guidance on the use of MOBILE6 for Emission Inventory Preparation, USEPA, January, 2002.

Minimum and maximum daily temperatures for New Jersey's air quality areas were determined using the methodology described in the applicable USEPA guidance.[19,20] First, the ten highest ozone measurements within each of the four New Jersey air quality areas over a three year period (calendar years: 1999, 2000 and 2001) were determined. The New Jersey air quality areas and corresponding representative monitoring station locations are shown in Table 1. Then temperature data were compiled for each of the high ozone days from a National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center located within or near the New Jersey air quality areas. The NOAA stations were located at: Newark Airport for the NY/NJ/LI Area, Philadelphia Airport for the Philadelphia/Wilmington/Trenton Area, Atlantic City Airport for the Atlantic City Area, and Lehigh Valley Airport for the Allentown/Bethlehem/Eastern Area. Finally, the ten maximum and minimum daily temperatures were averaged for each area. Results are shown in Table 2. In accordance with USEPA guidance[21], the temperatures used in the base year inventory (1996) were also used for all projection year inventories.

The USEPA recommends that States use local humidity data as input in MOBILE6 for estimates of summer day emissions that will be used for SIP or conformity purposes. Humidity inputs are used within MOBILE6 along with temperature to calculate a heat index. The heat index is used to establish air conditioning use rates; thereby affecting VOC, NO_x and CO emissions. In addition, humidity is used directly by MOBILE6 to correct for its effects on NO_x emissions due to the quenching effect of water vapor in the air on combustion chamber temperatures. Overall, humidity has its largest effect on NO_x emissions relative to its effects on VOC or CO emissions.[22]

Table 1
Area Definitions

Air Quality Area	Counties	Monitoring Stations
Northern New Jersey/ New York City/Long Island	Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union	Ramapo, Teaneck, Bayonne, Rutgers Univ., Monmouth Univ., Colliers Mills, Flemington, Newark
Philadelphia/Wilmington/Trenton	Burlington, Camden, Cumberland, Gloucester, Mercer, Salem	Rider Univ., Camden, Clarksboro, Ancora S.H, Millville
Atlantic City	Atlantic, Cape May	Nacote Creek R.S.
Allentown/Bethlehem/Easton	Warren	Chester

[19] Technical Guidance on the use of MOBILE6 for Emission Inventory Preparation, USEPA, January, 2002.
[20] Procedures for Emission Inventory Preparation-Vol. IV: Mobile Sources USEPA, 1992.
[21] Procedures for Emission Inventory Preparation-Vol. IV: Mobile Sources USEPA, 1992.
[22] Technical Guidance on the use of MOBILE6 for Emission Inventory Preparation, USEPA, January, 2002.

Table 2
Summary of Temperature Determinations - Results

	Northern New Jersey/New York City/Long Island Area		Philadelphia/Wilmington /Trenton Area		Atlantic City Area		Allentown/Bethlehem/ Easton Area	
	Date (Ozone Value)	Max/Min	Date (Ozone Value)	Max/Min	Date (Ozone Value)	Max/Min	Date (Ozone Value)	Max/Min
1.	7/17/99 (157)	94/71	7/17/99 (151)	98/72	7/27/99 (119)	94/67	8/7/01 (123)	93/70
2.	7/16/99 (154)	95/67	7/18/99 (149)	96/74	7/6/99 (118)	99/76	7/16/99 (121)	97/64
3.	7/23/99 (150)	94/72	7/16/99 (148)	93/69	7/26/99 (112)	90/69	6/13/01 (121)	87/64
4.	8/9/01 (142)	105/77	8/9/01 (145)	101/77	6/9/00 (112)	88/64	7/31/99 (119)	99/66
5.	6/10/00 (139)	94/71	7/28/99 (142)	96/74	6/10/00 (108)	92/68	6/10/00 (118)	90/60
6.	7/18/99 (138)	93/72	6/10/00 (139)	93/67	7/9/99 (105)	91/61	7/9/99 (115)	93/60
7.	6/19/01 (137)	89/66	7/31/99 (137)	99/75	8/7/01 (105)	97/76	6/19/01 (114)	87/59
8.	6/9/00 (136)	90/66	6/19/01 (134)	88/68	8/8/01 (105)	100/75	8/12/99 (113)	93/62
9.	7/3/99 (135)	87/76	7/19/99 (131)	97/74	6/28/01 (104)	93/72	7/18/99 (112)	98/71
10.	7/19/99 (135)	100/71	8/8/01 (130)	100/82	8/18/99 (103)	90/68	6/2/99 (111)	87/65
Averages	----	94.1/70.9	----	96.1/73.2	----	93.4/69.6	----	92.4/64.1

Note: Ozone values are reported as parts per billion.
Temperature values are reported as degrees F.

In accordance with the USEPA guidance,[23] the lowest humidity ratio was determined individually for each of the ten highest ozone days and the lowest of these ratios was used as input in MOBILE6. Relative humidity, barometric pressure and temperature data at three hour intervals were compiled from the NOAA National Climatic Data Center for each day/area. Absolute humidity values were calculated using the USEPA EXCEL spreadsheet from the MOBILE6 website[24] and the lowest values for each day/area were determined. These values are in Table 3. Analogous to the USEPA guidance[25] concerning temperatures, the humidity ratios used in the base year inventories (1996) were also used for all projection year inventories.

2. Age Distribution of Vehicle Registration

The age distribution of vehicles in the fleet has a significant impact on overall emissions. The specific age distribution affects both the fractions of the fleet that meet different emission standards and the deterioration of vehicle emission control effectiveness. For SIP and conformity related purposes, the USEPA recommends and encourages states to develop and use local age distributions.[26]

[23] Technical Guidance on the use of MOBILE6 for Emission Inventory Preparation, USEPA, January, 2002.
[24] www.epa.gov/otaq/m6.htm#m60.
[25] Procedures for Emission Inventory Preparation-Vol. IV: Mobile Sources, USEPA, 1992.
[26] Technical Guidance on the use of MOBILE6 for Emission Inventory Preparations, USEPA, January, 2002

Table 3
Summary of Absolute Humidity Determinations

	Northern New Jersey/New York City/Long Island Area	Philadelphia/ Wilmington/Trenton Area	Atlantic City Area	Allentown/ Bethlehem/Easton Area
Date* (Hour, LST)	6/9/00 (01)	7/28/99 (16)	7/9/99 (10)	7/9/99 (13)
Temperature, °F	67	94	87	88
Rel. Humidity (percent)	66	32	30	28
Pressure (inches Hg)	29.96	29.75	29.92	29.49
Absolute Humidity (mass of water vapor per unit mass of dry air)	64.4	76.2	56.8	55.5

* Date on which the lowest value of absolute humidity occurred among the ten highest ozone days.

New Jersey developed an age distribution for its vehicle fleets using 1999 vehicle registration data in 2000 for use in inventory preparation for the ROP SIP of March 31, 2001. This same age distribution was used to prepare the MOBILE6 inventories for the current SIP.

One of the changes between MOBILE5 and MOBILE6 is that the number of vehicle classifications increases from eight to sixteen (twenty-eight if diesel and gasoline fueled vehicle classes are counted separately). Therefore, it was necessary to convert the eight MOBILE5 age distribution fractions to sixteen MOBILE6 age distribution fractions. This conversion was performed by following the procedure in the User's Guide to MOBILE6.0.[27] The vehicle class adjustment factors for 1999 were used to perform the conversion because the specific age distribution data is from 1999.

3. I/M Programs

Table 4 presents descriptions of the New Jersey gasoline vehicle inspection and maintenance (I/M) programs for each evaluation year: 1996, 2005 and 2007. MOBILE6 includes a number of new features that increase the flexibility and ease of use compared to MOBILE5 with regard to the modeling of specific I/M program options. Important new features include: the ability to model up to seven separate I/M programs simultaneously, the addition of On-Board Diagnostic (OBD) exhaust and evaporative I/M options, the ability to specify grace periods for newer vehicles during which they are exempt from the program, and the option to specify an effectiveness rate for the overall I/M program.

[27] User's Guide to MOBILE6.0 - Mobile Source Emission Factor Model, USEPA 420R-02-001, January 2002.

Table 4

New Jersey's I/M Program Description

Program Element	New Jersey's I/M Program – Evaluation Year 1996	New Jersey's I/M Program - Evaluation Year 2005	New Jersey's I/M Program - Evaluation Year 2007
Network Type	hybrid - 68% centralized/32% decentralized	hybrid - 70% centralized/30% decentralized	hybrid - 70% centralized/30% decentralized
Credit Assumed for Decentralized Program	50%	80%	80%
Program Start Date[1]	1974	1974	1974
Test Frequency	annual	biennial[2]	biennial[2]
Emission Standards	Idle exhaust emission standards	Initial ASM5015 exhaust emission standards	Initial ASM5015 exhaust emission standards
Model Year (MY) Coverage	All vehicles not specifically exempt	All vehicles not specifically exempt	All vehicles not specifically exempt
Vehicle Type Coverage	All gasoline-fueled vehicles and trucks (both light and heavy duty vehicles)	All gasoline-fueled vehicles and trucks (both light and heavy duty vehicles)	All gasoline-fueled vehicles and trucks (both light and heavy duty vehicles)
Exhaust Emission Test	Idle - All Vehicles	OBD - 1996 and later MY beginning 6/1/03 ASM5015 - 1981-1995 MY amenable to dyno. testing 2500 RPM test – certain exempt vehicles and those 1981 and newer MY not amenable to dyno. testing Idle - pre-1981 and HDGVs	OBD - 1996 and later MY beginning 6/1/03 ASM5015 - 1981-1995 MY amenable to dyno. testing 2500 RPM test - certain exempt vehicles and those 1981 and newer MY not amenable to dyno. Testing Idle - pre-1981 and HDGVs
Emission Control Device Inspections	Visual inspection of the catalytic converter, presence of a gas cap and fuel inlet restrictor - 1975 and newer (beginning calendar 1985)	Visual inspection of the catalytic converter, presence of a gas cap and fuel inlet restrictor - 1975 and newer (beginning calendar 1985)	Visual inspection of the catalytic converter, presence of a gas cap and fuel inlet restrictor - 1975 and newer (beginning calendar 1985)
Evaporative System Function Checks	N/A	Gas Cap Testing - 1970 and later vehicles (beginning calendar year 1998)	Gas Cap Testing - 1970 and later vehicles (beginning calendar year 1998)
Pre-1981 MY Stringency	20%	30%	30%
Waiver Rate	0%	3%[3]	3%[3]
Compliance Rate	96%	98%	98%

Table 4 (Continued)

Program Element	New Jersey's I/M Program – Evaluation Year 1996	New Jersey's I/M Program - Evaluation Year 2005	New Jersey's I/M Program – Evaluation Year 2007
Other Modeling Assumptions	▪ No technician training and certification (TTC) ▪ Northeast NLEV ▪ Northern RFG	▪ Yes - TCC ▪ Northeast NLEV ▪ Northern RFG	▪ Yes – TCC ▪ Northeast NLEV ▪ Northern RFG

[1] The actual start dates for each of the exhaust and evaporative I/M programs were used for the MOBILE6 modeling.

[2] Except for new vehicles of model year 2000 or later purchased after January 1, 2003. These vehicles are exempt from their first emission inspection for two inspection cycles (i.e., four years) and thereafter must be inspected biennially (or once every other year). This is modeled in MOBILE6 using the Grace Period Command and specifying the exemption age at 4.

[3] A zero percent waiver rate was assumed for pre-1981 vehicles as these vehicles are not eligible for a waiver based on the NJDMV inspection rules.

Each of the New Jersey exhaust and evaporative I/M programs presented in Table 4 were included in the MOBILE6 modeling with the exception of the 2500 RPM exhaust test for certain vehicles. The separate sets of MOBILE6 runs with subsequent off-model calculations necessary to include this program was not justified due to the extremely small emissions impact of this test. Based on the MOBILE6 modeling associated with a recent I/M program Performance Standard modeling effort, the 2005 and 2007 emissions impact of certain vehicles receiving the 2500 RPM test instead of the ASM5015 test was not discernible for VOC and less than a 0.2% increase in NO_x emissions. The effects are negligible because of the small number of vehicles involved (only 6% of the subject vehicles are exempt or not amenable to ASM5015 testing).

The I/M EFFECTIVENESS command was used in the MOBILE6 inputs to model New Jersey's hybrid I/M program. The program is hybrid because it allows motorists the option of using either a centralized or decentralized inspection station. The effectiveness of centralized facilities is considered to be 100% while the effectiveness of decentralized facilities is less. The overall I/M program effectiveness is calculated using the following equation:

$$E_{overall} = f_1 \times E_{centralized} + f_2 \times E_{decentralized}$$

where: $E_{overall}$ is the overall I/M program effectiveness to be used as input for MOBILE6
f_1 is the fraction of motorists using centralized facilities
$E_{centralized}$ is the credit assumed for inspection at a centralized facility (100%)
f_2 is the fraction of motorists using decentralized facilities
$E_{decentralized}$ is the credit assumed for inspection at a decentralized facility

Overall effectiveness for New Jersey's 1996 I/M program was calculated to be 84% as follows:

$$E_{overall} = 0.68 \times 100\% + 0.32 \times 50\%$$
$$E_{overall} = 84\%$$

Overall effectiveness for New Jersey's 2005/7 I/M program was calculated to be 94% as follows:

$$E_{overall} = 0.70 \times 100\% + 0.30 \times 80\%$$
$$E_{overall} = 94\%$$

The overall effectiveness for New Jersey's 2005/7 I/M program increased from its 1996 value due to an increase in the fraction of motorists using centralized facilities and the assumption of a higher credit for inspection at a decentralized facility.

4. Fuel and National Low Emission Vehicle (NLEV) Programs

New Jersey has been a participant in the Federal reformulated gasoline (RFG) program since the mid-1990's as required by the Clean Air Act. This is represented in the MOBILE6 inputs by specifying reformulated gasoline for a northern region using the Fuel Program command. This option sets 1995-and-later gasoline sulfur content, oxygen content and fuel volatility values for the MOBILE6 calculations. Although the exact composition of RFG fuel may vary by refiner, the RFG fuel values modeled in MOBILE6 are consistent with the RFG requirements and represent the typical values expected in an RFG area.[28] The MOBILE6 model includes benefits from both Phase I and Phase II of the Federal RFG program.

5. Traffic Activity

Traffic activity includes the estimates of DVMT and various other aspects of vehicle usage. Total DVMT and a number of these other traffic activity estimates, including VMT fraction by speed distribution, facility (roadway) type and hour of the day are generated by the MPOs using travel demand models. The traffic activity for the 1996 inventory is an estimate of the actual vehicle usage on the actual roadway network for that year. The traffic activity projections for 2005 and 2007 are based on estimates of future vehicle usage using the latest demographic and other planning assumptions. The roadway network projected to be in-place in 2005 and 2007 includes the existing roadway network in addition to any projects scheduled to be completed and open to traffic in that year.

Local New Jersey data has been used to generate the MOBILE6 inputs for the following: VMT fractions by vehicle type, VMT fractions by hour, VMT fractions by facility (roadway) type, and speed distributions. MOBILE6 defaults are used for the other traffic activity inputs.

[28] User's Guide to MOBILE6.0 – Mobile Source Emission Factor Model, USEPA 420R-02-001.

B. MOBILE6 Results

1. South Jersey Transportation Planning Organization (SJTPO) and North Jersey Transportation Planning Authority (NJTPA)

Both the SJTPO and the NJTPA use a computer model called PPSUITE to combine traffic activity data from the travel demand models with other MOBILE6 inputs in order to estimate emissions from on-road sources. PPSUITE is a group of computer programs that modifies and converts output data from the travel demand models, generates MOBILE6 inputs files, and summarizes MOBILE6 outputs including the calculation of emission inventories using DVMT and emission factors. PPSUITE Version 5 was developed to be compatible with MOBILE6. The user interfaces with the PPSUITE programs through a set of user-friendly windows that allow the user to set up and execute runs.

PPSUITE allows the user to perform adjustments to the raw outputs from the travel demand models. PPSUITE calculates link capacities and speed distributions for each hour. VMT is spread and speeds are adjusted when overcapacity situations occur. PPSUITE also includes a region wide incident model that computes delays due to roadway incidents. PPSUITE combines the adjusted traffic activity data with the non-traffic-activity MOBILE6 input parameters (such as I/M program description) to generate a MOBILE6 input file. A separate MOBILE6 run is performed for each county with separate MOBILE6 scenarios performed for each roadway type. After MOBILE6 is run, PPSUITE multiplies VMT by the MOBILE6 emission factors to produce emission inventory results. PPSUITE uses the composite MOBILE6 emission factors from the MOBILE6 descriptive output. The files used to generate the 1996, 2005 and 2007 on-road source emission inventories for the NJTPA counties are contained in Appendix I. The files used to generate the on-road emission inventories for the SJTPO counties are contained in Appendix II.

2. Delaware Valley Regional Planning Commission (DVRPC)

The DVRPC uses a different process to calculate emissions. First, the travel demand model is used to determine the highway/transit volumes and the resultant VMT inventory. Output from the travel demand model is fed into a postprocessor along with speed curve data to generate MOBILE6 inputs. The MOBILE6 inputs consist of speed distribution files (*.sp files), VMT by facility files (*.fc files), and hourly VMT files (*.hr files) for each county. One MOBILE6 run is then performed with each MOBILE6 scenario representing a different county. Composite emission factors from the MOBILE6 descriptive output are combined with VMT data in a spreadsheet to calculate emission inventories by county. The files used to generate the 1996 and 2005 on-road source emission inventories for the DVRPC counties are contained in Appendix III.

3. Inventories by County and Nonattainment Area

Table 5 presents the 1996, 2005 and 2007 on-road mobile source emission inventories by county and New Jersey portion of the nonattainment areas in tons per typical summer day. Table 6 presents the daily vehicle miles traveled for on-road vehicles by county and New Jersey portion of the nonattainment areas.

Table 5

On-Road Mobile Emission Inventory by County and Nonattainment Area (New Jersey Portions)

	- 1996 -			- 2005 -			- 2007 -		
	VOC (tons/day)	**NO_X (tons/day)**	**CO (tons/day)**	**VOC (tons/day)**	**NO_X (tons/day)**	**CO (tons/day)**	**VOC (tons/day)**	**NO_X (tons/day)**	**CO (tons/day)**
Atlantic County	16.66	21.04	185.46	10.46	16.09	146.66	NA	NA	NA
Cape May County	7.55	8.92	80.56	4.17	5.98	54.82	NA	NA	NA
Total for Atlantic City Nonattainment Area	24.21	29.96	266.02	14.63	22.07	201.48	NA	NA	NA
Bergen County	48.23	46.52	400.97	22.03	27.78	237.89	18.63	21.41	183.26
Essex County	30.78	30.79	265.38	13.78	18.67	158.87	11.57	14.33	121.30
Hudson County	15.93	18.83	129.77	6.76	11.40	74.85	5.54	8.70	56.31
Hunterdon County	7.13	11.89	68.84	4.65	9.98	58.02	4.08	8.05	45.77
Middlesex County	35.01	46.13	306.01	19.38	35.32	222.15	16.92	28.75	177.29
Monmouth County	39.48	44.27	348.39	19.28	28.62	224.93	16.64	22.60	175.45
Morris County	38.38	43.15	332.56	19.21	29.40	220.84	16.75	23.39	174.03
Ocean County	31.83	34.33	266.31	14.60	21.77	164.08	12.52	17.08	128.66
Passaic County	23.77	23.27	190.44	11.30	14.95	118.74	9.61	11.62	91.98
Somerset County	18.98	23.93	170.14	10.59	16.90	120.34	9.21	13.31	94.99
Sussex County	10.06	11.15	75.76	4.96	7.26	48.78	4.28	5.82	38.95
Union County	20.64	22.20	174.18	9.83	15.12	112.00	8.25	11.87	86.42
Total for Northern New Jersey/New York City/Long Island Nonattainment Area	320.22	356.46	2,728.75	156.37	237.17	1,761.49	134.00	186.93	1,374.41
Burlington County	27.13	33.86	244.80	13.34	19.72	157.75	NA	NA	NA
Camden County	25.25	31.00	223.22	11.71	17.16	136.39	NA	NA	NA
Cumberland County	8.49	9.44	74.58	4.41	6.44	49.12	NA	NA	NA
Gloucester County	15.29	19.30	139.19	7.88	11.84	94.65	NA	NA	NA
Mercer County	20.42	25.00	179.71	10.05	14.71	116.64	NA	NA	NA
Salem County	6.10	11.87	65.24	3.08	7.84	41.80	NA	NA	NA
Total for Philadelphia/Wilmington/ Trenton Nonattainment Area	102.69	130.47	926.74	50.48	77.72	596.35	NA	NA	NA
Warren County	9.29	16.79	84.08	5.59	12.89	63.16	4.77	10.25	49.84
Total for Allentown/ Bethlehem/Easton Nonattainment Area	9.29	16.79	84.08	5.59	12.89	63.16	4.77	10.25	49.84
Total for State	456.42	533.67	4,005.58	227.08	349.85	2,622.49	NA	NA	NA

Table 6

Daily Vehicle Miles Traveled (DVMT) by County and Nonattainment Area (New Jersey Portions)

County	Daily Vehicle Miles Traveled		
	1996	2005	2007
Atlantic County	8,880,500	11,035,700	NA
Cape May County	3,865,300	4,202,700	NA
Total for Atlantic City Nonattainment Area	12,745,800	15,238,400	NA
Bergen County	19,706,200	19,300,100	19,269,800
Essex County	12,769,200	12,602,000	12,503,200
Hudson County	6,070,800	5,990,900	5,872,800
Hunterdon County	3,579,700	4,959,400	5,113,400
Middlesex County	15,330,600	18,374,900	18,952,800
Monmouth County	17,334,600	18,381,800	18,649,000
Morris County	15,964,800	17,705,400	18,041,500
Ocean County	13,412,600	13,614,100	13,779,100
Passaic County	9,142,800	9,469,600	9,524,700
Somerset County	8,647,400	9,997,500	10,204,100
Sussex County	3,987,000	4,430,700	4,547,200
Union County	8,673,300	9,174,400	9,187,700
Total for Northern New Jersey/New York City/Long Island Nonattainment Area	134,619,100	144,000,700	145,645,300
Burlington County	12,470,000	13,274,600	NA
Camden County	11,432,600	11,575,600	NA
Cumberland County	3,747,400	4,120,800	NA
Gloucester County	7,036,800	7,859,600	NA
Mercer County	9,185,700	9,880,300	NA
Salem County	3,152,700	3,331,200	NA
Total for Phildelphia/Wilmington/ Trenton Nonattainment Area	47,025,200	50,042,100	NA
Warren County	4,177,600	5,151,300	5,208,800
Total for Allentown/ Bethlehem/Easton Nonattainment Area	4,177,600	5,151,300	5,208,800
Total for State	198,567,700	214,432,500	NA

VI. Attainment Demonstration Results Compared to MOBILE6

The purpose of this section is to compare the new MOBILE6 inventories with the previous MOBILE5a-H inventories for each nonattainment area to determine if attainment will still be predicted by the established attainment dates. In order to perform this comparison, the State's attainment demonstrations and the USEPA's subsequent re-analyses of the attainment demonstrations were examined in order to extract mobile on-road inventories which best represent conditions in both the base year and the attainment years. Inventories for both of these years are needed because the weight of evidence method was used to demonstrate attainment. Due to the use of the weight of evidence method, the determination of whether or not attainment is still demonstrated depends on the relative reduction of the ozone precursors between the base year and the attainment year. If these relative reductions with the new MOBILE6 inventories are equal to or greater than the relative reductions with the previous MOBILE5 inventories then attainment continues to be demonstrated.

In order to determine whether adequate attainment progress continues to be demonstrated with the new inventories revised with MOBILE6, inventories from the recent ROP SIP were used to determine whether the percent reduction in ozone precursors is greater or equal under MOBILE6 than under MOBILE5a-H. The on-road mobile source inventories from the ROP SIP are the most recently prepared SIP-quality inventories that include essentially all of the control measures anticipated for the areas to achieve attainment. In addition, the ROP SIP inventories were prepared for the 1996 base year, as well as, the attainment years of 2005 for the Philadelphia/Wilmington/Trenton nonattainment area and 2007 for the Northern New Jersey/New York City/Long Island nonattainment area. Therefore, the inventories in the ROP SIP represent the best available data to assess the impacts of the MOBILE5a-H to MOBILE6 model change on the demonstration of attainment for New Jersey.

The results of the comparisons between the previous MOBILE5a-H inventories from the ROP SIP and the new MOBILE6 inventories are summarized in Table 7. Table 7 presents the relative reductions (expressed as percent reductions) in on-road mobile source ozone precursor inventories between the base year and the attainment year for each nonattainment area. The differences in percent reductions are shown between the ROP SIP inventories and the new MOBILE6 based inventories.

As a result of the use of the weight of evidence method for demonstration of attainment, increases in percent reductions mean that the new inventories predict lower ozone precursor emissions in the attainment year relative to the base year. Similarly, decreases in percent reductions mean that the new inventories predict higher ozone precursor emissions in the attainment year relative to the base year. In Table 7 the magnitude that the ozone precursor emissions are lower or higher are represented by the calculated "increase" or "decrease", respectively.

For the Northern New Jersey/New York City/Long Island nonattainment area, the revised inventories predict lower emissions of both VOC and NO_x in the attainment year relative to the base year. In fact, if the MOBILE6 2007 emissions were higher by up to 5.27 tons per day

Table 7

Comparison of the On-Road MOBILE5 Inventories from the ROP SIP to the New On-Road MOBILE6 Inventories (Tons Per Day Unless Designated Otherwise)

	New Jersey Portion of the Northern New Jersey/New York City/Long Island Area - 2007 Attainment Year -		New Jersey Portion of the Philadelphia/Wilmington/ Trenton Area - 2005 Attainment Year -	
	VOC	**NO_x**	**VOC**	**NO_x**
MOBILE5a-H - ROP SIP-1996	206.52	302.92	82.70	112.94
MOBILE5a-H - ROP SIP-Attainment Year	89.82	165.11	42.64	66.04
MOBILE5a-H - ROP SIP-Reductions	116.70	137.81	40.06	46.90
MOBILE5a-H - ROP SIP-% Reductions	56.51%	45.49%	48.44%	41.53%
MOBILE6 - 1996	320.22	356.46	102.69	130.47
MOBILE6 - Attainment Year	134.00	186.93	50.48	77.72
MOBILE6 - Reductions	186.22	169.53	52.21	52.75
MOBILE6 - % Reductions	58.15%	47.56%	50.84%	40.43%
Difference in % Reductions (MOBILE6 – MOBILE5a-H)	1.65%	2.07%	2.40%	- 1.10%
Increase (+) or Decrease (-)[1]	+ 5.27	+ 7.36	+ 2.46	- 1.44

Notes: 1. The "increase" or "decrease" was calculated by multiplying the differences in % reductions by the new 1996 MOBILE6 inventories. These "increases" and "decreases" are calculated only for the purpose of demonstrating if the MOBILE6 inventories continue to meet the objectives of the attainment demonstration and potential "increases" cannot be reallocated without a more rigorous reassessment of the attainment demonstration.

(TPD) for VOC and 7.36 TPD for NO_x, the respective percent reductions between the base year and attainment year would still be higher than those in the ROP SIP.

For the Philadelphia/Wilmington/Trenton nonattainment area, the revised inventories predict that VOC emissions in the attainment year relative to the base year are lower, i.e., an "increase" of 2.46 TPD. However, the revised inventories predict that NO_x emissions in the attainment year relative to the base year are higher, i.e., a "decrease" of 1.44 TPD. In order to evaluate the net effect of these changes, a means of substitution of VOC reductions with NO_x reductions is needed. Section 182 (c)(2)(C) of the Clean Air Act allows for the substitution of VOC emission reductions with NO_x emission reductions if it can be demonstrated that such substitution yields equivalent ozone reductions. New Jersey made such an equivalency demonstration in its Phase I

Ozone SIP[29]. The other states in the Philadelphia/Wilmington/Trenton nonattainment area have also made such equivalency demonstrations. A NO_x to VOC ratio of 1.04 was calculated for the area, i.e., 1 ton of NO_x emission reduction is equivalent to 1.04 tons of VOC in terms of ozone reduction.[30] The 1.44 TPD NO_x "decrease" is therefore equivalent to: 1.44 TPD NO_x x 1.04 = 1.50 TPD VOC.

Therefore, in terms of their effects on ozone reduction, the net effect for both VOC and NO_x is a VOC "increase" of 2.46 TPD - 1.50 TPD = 0.96 TPD for the Philadelphia/Wilmington/Trenton nonattainment area.

Based on New Jersey's MOBILE6 revision of its on-road mobile emissions, the result of the test of the attainment demonstration for the on-road mobile source sector is that the New Jersey portions of both the Northern New Jersey/New York City/Long Island nonattainment area and the Philadelphia/Wilmington/Trenton nonattainment are still predicted to achieve attainment by their current attainment dates. In addition, New Jersey is unaware of any changes in the growth and control strategy assumptions for non-motor vehicle sources (i.e., point, area and non-road mobile sources) that would change the overall conclusions of the attainment demonstrations. As a result, none of the other source sector inventories were modified at this time. Therefore, in accordance with USEPA guidance[31], the two conditions are met that allow New Jersey to revise its motor vehicle emissions inventories and budgets using MOBILE6 without revising the entire attainment demonstration SIP or completing additional modeling.

The base year and attainment year inventories for the New Jersey portions of each nonattainment area from the ROP SIP as modified by the estimated benefits from the control measures included in the September 12, 2001 SIP Revision[32] and including the MOBILE6 on-road inventories are summarized in Table 8.

VII. MOBILE6 Transportation Conformity Budgets

In this section the transportation conformity emission budgets previously established for the attainment years 2005 and 2007 are converted using the MOBILE6 model[33] for the appropriate

[29] NJDEP, "State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy, Phase I Ozone SIP Submittal", December 31, 1996, pages 38-39.

[30] NJDEP, "State Implementation Plan Revision for the Attainment and Maintenance of the 1-Hour Ozone National Ambient Air Quality Standard, Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy; Additional Emission Reductions, Reasonable Available Control Measure Analysis and Mid Course Review", September 12, 2001, page 26.

[31] Policy Guidance on the Use of MOBILE6 for SIP Development and Transportation Conformity, USEPA Office of Air and Radiation, January 18, 2002.

[32] NJDEP, "State Implementation Plan Revision for the Attainment and Maintenance of the 1-Hour Ozone National Ambient Air Quality Standard, Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy; Additional Emission Reductions, Reasonable Available Control Measure Analysis and Mid Course Review", September 12, 2001.

[33] The State of New Jersey Department of Environmental Protection, State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standard, New Jersey 1996 Actual Emission Inventory and Rate of Progress Plan for 2002, 2005 and 2007, March 31, 2001.

Table 8

Summary of Inventories for Each Nonattainment Area

(Tons Per Day)

	New Jersey Portion of the Northern New Jersey/New York City/Long Island Area				New Jersey Portion of the Philadelphia/Wilmington/ Trenton Area			
	VOC		NO_x		VOC		NO_x	
	1996	2007	1996	2007	1996	2005	1996	2005
Point Sources (ROP SIP)	140.87	162.13	154.13	93.64	28.72	31.83	94.47	71.34
Area Sources (ROP SIP)	215.28	238.40	29.58	30.14	72.36	7.86	79.42	7.89
Non-Road Sources (ROP SIP)	138.40	83.51	202.08	212.72	41.96	29.62	52.21	54.12
Subtotal	494.55	484.04	385.79	336.50	143.04	69.31	226.10	133.35
Emission Reductions (OTC Model Rules)*								
NO_x Rule	-	-	-	7.57	-	-	-	3.24
Consumer Products	-	8.48	-	-	-	2.43	-	-
Portable Fuel Containers	-	8.86	-	-	-	1.31	-	-
AIM Coatings	-	18.29	-		-	5.26	-	-
Mobile Equip. Refinishing	-	6.52	-		-	1.88	-	-
Solvent Cleaning Operations	-	2.86	-		-	0.82	-	-
OTC Model Rules Subtotal	-	45.00	-	7.57	-	11.71	-	3.24
Point/Area/Non-Road Sources Subtotal with OTC Model Rules Adjustment	494.55	439.04	385.79	328.93	143.04	57.60	226.10	130.11
On-Road Sources (MOBILE6 SIP)	320.22	134.00	356.46	186.93	102.62	50.48	130.47	77.72
Total Emissions (All Sources)	814.77	573.04	742.25	515.86	245.66	108.08	356.57	207.83

* These estimated emission reductions are from "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules", E.H. Pechan and Associates, Inc., March 31, 2001.

Metropolitan Planning Organizations (MPOs) in New Jersey. As shown in Figure 7, New Jersey's twenty-one counties fall into one of three MPOs. Each MPO is responsible for the Transportation Plans, Transportation Improvement Programs (TIPs), and individual transportation projects for its designated area, and each one works in consultation with the

NJDEP and NJDOT to meet established transportation emission budgets for its area. In line with the MPO structure, transportation conformity budgets are established for the entire MPO area, which, in all cases, does not coincide fully with the associated nonattainment area. For example, the North Jersey Transportation Planning Authority (NJTPA) includes thirteen counties in New Jersey; however, the Northern New Jersey/New York City/Long Island nonattainment area includes only twelve of these counties (Warren County is part of the Allentown/Bethlehem/Easton nonattainment area). Figure 1 in Section II illustrates the various one-hour ozone nonattainment areas for New Jersey. Emissions budgets for New Jersey's portion of specific nonattainment areas can be created by adding or subtracting the on-road emissions from individual counties.

Attainment dates for specific nonattainment areas vary depending on the degree of ozone standard exceedance. The attainment year for the Delaware Valley Regional Planning Commission (DVRPC) area and the South Jersey Transportation Planning Organization (SJTPO) area is 2005 and the attainment year for the NJTPA area is 2007. Emission budgets for each area were established for the attainment years. In addition, for the NJTPA area budgets were also established for 2005 in order to update previously established budgets for this year. Emissions budgets are shown in Table 8.

The highway on-road source control measures assumed in these emissions budgets are consistent with those utilized in New Jersey's plans to achieve attainment of the one-hour ozone standard.

Table 9 provides a comparison of the MOBILE6 transportation conformity budgets in Table 8 for the attainment years with the conformity budgets previously established by the State in its March 31, 2001, 1996 Actual Emission Inventory and Rate of Progress Plan for 2002, 2005 and 2007 SIP Revision. The MOBILE6 emission budgets show an increase in both the VOC and NO_x values relative to the prior SIP budgets.

The increases are due primarily to certain changes in the MOBILE model between versions 5 and 6. The model changes which are contributing most significantly to the increases are likely the enhanced ability of the MOBILE model to account for emission increases due to vehicle acceleration and air conditioning. Although MOBILE5 accounted for the effects of vehicle acceleration by basing emissions on certain standard drive cycles, emission factors generated by MOBILE6 are based on drive cycles that are designed to more closely match real world driving conditions. In addition, the adjustments to emission factors due to air conditioning were significantly improved between MOBILE5 and MOBILE6.

The emissions budget values provided in Tables 8 and 9 were taken directly from the MOBILE6 computing system with one exception. The 2005 budget for DVRPC includes the results of an "off-model" calculation to account for the emissions impact of the Job Access and Reverse Commute Program (Project Database No. T199). The emission impacts of this non-exempt project are a VOC reduction of 0.000650 TPD and a NO_x reduction of 0.002689 TPD. These impacts are so small that they are not reflected in Tables 8 and 9 since the emissions budgets are rounded to the nearest 1/100 TPD.

Figure 7

Metropolitan Planning Organizations in New Jersey

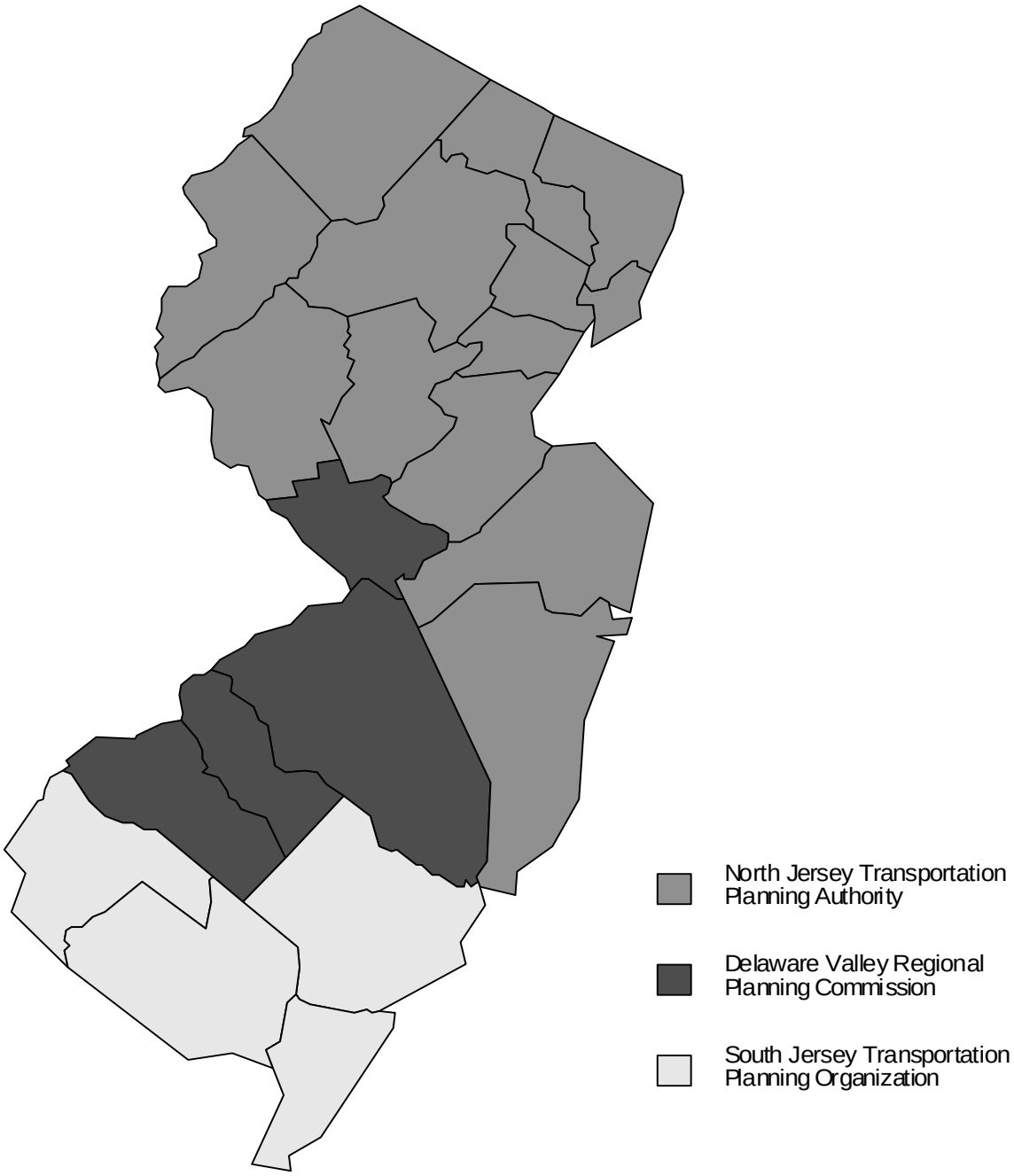

Table 9
MOBILE6 Transportation Conformity Budgets by MPO

Transportation Planning Area	VOC Emissions (tons per day)		NO_x Emissions (tons per day)	
	2005	2007	2005	2007
North Jersey Transportation Planning Authority (NJTPA)	161.97	138.77*	250.05	197.19*
South Jersey Transportation Planning Organization (SJTPO)	22.12*	NA	36.36*	NA
Delaware Valley Regional Planning Commission (DVRPC)	42.99*	NA	63.44*	NA

*denotes the attainment year budget

Table 10

Comparison of the MOBILE6 Transportation Conformity Budgets with the Prior Budgets

Transportation Planning Area	Attainment Year	VOC Emissions (tons per day)		NO_x Emissions (tons per day)	
		Prior SIP Budgets	MOBILE6 Budgets*	Prior SIP Budgets	MOBILE6 Budgets*
North Jersey Transportation Planning Authority (NJTPA)	2007	93.20	138.77	175.51	197.19
South Jersey Transportation Planning Organization (SJTPO)	2005	13.36	22.12	26.42	36.36
Delaware Valley Regional Planning Commission (DVRPC)	2005	38.03	42.99	55.62	63.44

* Attainment projections are dependent on the relative emission reductions from the base to attainment years. Therefore, even though the MOBILE6 budgets are higher than the prior budgets, New Jersey's portions of each ozone nonattainment area are still predicted to achieve attainment by their current attainment dates. See Section VI for details.

VIII. Mid-Course Review

On August 31, 1998, New Jersey submitted to the USEPA a SIP revision entitled, "Attainment and Maintenance of the Ozone National Ambient Air Quality Standards - Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy." This SIP revision addressed the USEPA requirements related to attainment of the one-hour NAAQS for ozone as contained in a March 2, 1995 memorandum from Mary Nichols, and a December 29, 1997 memorandum from Richard D. Wilson. The submittal included: a demonstration of attainment of the one-hour NAAQS for ozone for the two multi-state nonattainment areas- the Philadelphia/Wilmington/Trenton nonattainment area which has a 2005 attainment date, and the Northern New Jersey/ New York City/Long Island nonattainment area, which has a 2007 attainment date, a list of control measures adopted to date, and several commitments including conducting a Mid-Course Review to determine whether New Jersey's plan for attainment is on track, and submitting a report on the Mid-Course Review to the USEPA by December 31, 2002. In a subsequent SIP submittal[34] New Jersey revised the commitment date for the Mid-Course Review to no later than December 31, 2003.

On September 12, 2001, New Jersey submitted to the USEPA a SIP revision entitled, "State Implementation Plan Revision for the Attainment and Maintenance of the 1-Hour Ozone National Ambient Air Quality Standard – Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy: Additional Emission Reductions, Reasonably Available Control Measure Analysis, and Mid-Course Review." A mid-course review analysis was presented in that SIP. That analysis concluded that, assuming that regional NO_x emission reductions proceed as planned, New Jersey was on-track to attain the one-hour ozone standard in both areas. The USEPA decided not to act on this mid-course review stating that several more years of air monitoring data and implementation of the NO_x SIP Call in upwind states were needed before a true mid-course review of the attainment demonstration could be made.[35] Due to legal challenges associated with the NO_x SIP Call, many of the states outside the Ozone Transport Region will not implement the NO_x SIP Call until May 2004. Given the USEPA's comments and the delay in the implementation of the NO_x SIP Call, New Jersey is proposing to work with the USEPA and our neighboring states to submit a future review by December 31, 2004 consistent with USEPA guidance.

IX. McGuire Air Force Base General Conformity Budget

McGuire Air Force Base (AFB) was assigned an emission budget under the General Conformity rule. In order to ensure that any increases in activity at McGuire AFB conform to the State SIP and the General Conformity rule, emission budgets for VOC and NO_x for 1990, 1996 and 1999

[34] NJDEP, "State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Update to Meeting the Requirements of the Alternative Ozone Attainment Demonstration Policy - Additional Emission Reduction Commitment and Transportation Conformity Budgets", April 26, 2000.

[35] Letter from William J. Muszynski, Acting Regional Administrator, USEPA Region II, to Robert C. Shinn, Jr., Commissioner, NJDEP, dated November 16, 2001.

were established in cooperation with the United States Air Force.[36] [37] In 2001, the general conformity emission budgets for McGuire AFB were extended to 2002 and 2005.[38]

McGuire AFB is in the process of preparing the base for the retirement of the 1960 era C-141 Starlifters and the arrival of their replacement, the C-17. The arrival of the C-17s is expected to commence in 2005. In the future, McGuire AFB would like to be in the position to be considered for placement of additional C-17s. However, McGuire AFB has calculated that they will need an increased NO_x budget to be in such a position. Therefore, McGuire AFB has requested a change in their SIP emission budgets.

McGuire AFB holds a vital status in the national defense. Mission responsibilities include the movement of troops, passengers, military equipment, cargo and mail, and aerial refueling. McGuire AFB's mission carries its aircrews and aircraft throughout more than 50 countries around the globe on an around-the-clock basis. With peacetime taskings serving as training for wartime requirements, the base is continually postured in a state of preparedness. Approval of the SIP emission budgets change would enhance the base's ability to meets its overall mission.

McGuire AFB has had success over the years in reducing emissions through pollution prevention projects. However, their efforts have been more successful in reducing VOC emissions than reducing NO_x emissions. This has resulted in the base's current and projected future VOC emissions to be well below budget levels. Therefore, McGuire AFB's request for an increase in their NO_x budget could be offset by a decrease in their VOC budget.

For the reasons listed above, the Department has agreed to grant McGuire AFB's request for a SIP emission budgets change and is proposing the change in this document. The year 2005 NO_x budget is being increased by 200 TPY and the VOC budget is being decreased by 208 TPY (Table 11).

Such a change in McGuire AFB's emission budgets is an acceptable air quality solution since VOC reductions are just as important in reducing ozone concentrations as NO_x. Consistent with the USEPA policy on substitution of ozone precursor emission reductions,[39] it can be shown that approximately 1 TPY of NO_x emissions equals 1.04 TPY of VOC emissions, as the emissions relate to their potential to form ozone. Air quality modeling conducted for the Philadelphia airshed has also confirmed almost a one to one relationship between the effectiveness of VOC vs. NO_x emissions in forming ozone. Therefore, increasing NO_x and decreasing VOC by their equivalent amounts should result in offsetting effects with respect to ozone formation.

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[36] McGuire Air Force Base Conformity Determination. July, 1995.

[37] NJDEP, 1996, State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, Phase I Ozone SIP Submittal, p. 123.

[38] NJDEP, 2001, State Implementation Plan Revision for the Attainment and Maintenance of the Ozone National Ambient Air Quality Standards, New Jersey 1996 Actual Emission Inventory and Rate of Progress Plans for 2002, 2005 and 2007, p. 71.

[39] USEPA, 1993, "NO_x Substitution Guidance".

Table 11
Emission Budgets for McGuire Air Force Base

	Old Budget		New Budget to Accommodate Additional Aircraft	
	VOC (Tons/Year)	**NO_x (Tons/Year)**	**VOC (Tons/Year)**	**NO_x (Tons/Year)**
1990 Baseline	1,112	1,038	1,112	1,038
1996	1,186	1,107	1,186	1,107
1999	1,223	1,142	1,223	1,142
2002	1,405	875	1,405	875
2005*	1,406	884	1,198	1,084

* 2005 budgets updated such that the increase in NO_x is offset by a decrease in VOC such that there is no expected net increase in ozone formation.

X. Public Participation

The announcement on the proposed revision to New Jersey's Ozone State Implementation Plan (SIP), specifically the New Jersey Revised Motor Vehicle Emission Inventories and Budgets Using the MOBILE6 Model appeared in approximately six (6) newspapers throughout the State on or before February 12, 2003. In addition, it appeared as a Miscellaneous Notice in the March 3, 2003 edition of the New Jersey Register. The proposed SIP was transmitted to the USEPA Region II Administrator on January 29, 2003. The final SIP was transmitted to the USEPA Region II Administrator on April 4, 2003.

The Public Hearing on this proposed SIP Revision took place on March 14, 2003, at 10 A.M. in the Public Hearing Room at the New Jersey Department of Environmental Protection, at 401 E. State Street in Trenton, NJ. No testimony was received at the public hearing. The Notice of Public Hearing and Availability is provided in Appendix IV to this document.

The comment period closed on March 18, 2003. No written comments were received.