

**The State of New Jersey  
Department of Environmental Protection**

**Proposed Revisions to the Enhanced Inspection and  
Maintenance (I/M) Program for the State of New Jersey**

**Proposed I/M Program Modeling and Revised  
Performance Standard Modeling**

**SIP Revision**

**August, 2009**



## **Preface**

This document is a revision to the State of New Jersey's Inspection and Maintenance (I/M) program State Implementation Plan (SIP). Specifically, this document provides the United States Environmental Protection Agency (USEPA) with documentation on the emission impacts that will result from proposed changes to New Jersey's enhanced I/M program including a comparison to the USEPA I/M performance standard. The proposed changes to New Jersey's I/M program include: the establishment of a new exhaust emission test for gasoline fueled vehicles called the Two Speed Idle (TSI) test that will replace both the ASM5015 and 2500 RPM tests, the elimination of repair cost waivers, the increase in the inspection frequency (to annual) for certain classes of commercial vehicles such as limousines, taxis and jitneys, and the subjecting of light duty diesel vehicles to emissions testing. The primary reason for this SIP revision is to satisfy the USEPA's requirements for the State to implement the changes to the I/M program. The State of New Jersey entered into a contract, effective May 6, 2008, with Parsons Commercial Technology Group Inc. that includes the transition to the proposed I/M program.

## **Acknowledgments**

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## **Acronyms and Abbreviations:**

ASM	Acceleration Simulation Mode
CAA	Clean Air Act
CIF	Central Inspection Facility
CO	Carbon Monoxide
EGR	Exhaust Gas Recirculation
Fed. Reg.	Federal Register
gpm	Grams Per Mile
HC	Hydrocarbons
HDGV	Heavy Duty Gasoline Vehicle
I/M	Inspection and Maintenance
LDGT	Light Duty Gasoline Truck
LDGV	Light Duty Gasoline Vehicle
LEV	Low Emission Vehicle
MY	Model Year
NAAQS	National Ambient Air Quality Standards
NHSDA	National Highway System Designation Act
NJDEP	New Jersey Department of Environmental Protection
NJMVC	New Jersey Motor Vehicle Commission
NJDOT	New Jersey Department of Transportation
NO <sub>x</sub>	Oxides of Nitrogen
OBD	On-Board Diagnostics
OTR	Ozone Transport Region
PCTG	Parsons Commercial Technology Group Inc.
PCV	Positive Crankcase Ventilation
PIF	Private Inspection Facility
ppm	Parts Per Million
psi	Pounds Per Square Inch
ROP	Rate of Progress
RPM	Revolutions Per Minute
SIP	State Implementation Plan
TSI	Two-Speed Idle
USEPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
ZEV	Zero Emission Vehicle

## **Executive Summary**

This document is a revision to the State of New Jersey's enhanced Inspection and Maintenance (I/M) State Implementation Plan (SIP) due to proposed changes to the I/M program. This SIP revision includes emission modeling that quantifies the impacts of the proposed program changes including a comparison to the USEPA performance standard. The primary reason for this SIP revision is to satisfy the USEPA's requirements for the State to implement the changes to the I/M program. It demonstrates that the proposed changes to the I/M program do not compromise the State's efforts to meet and/or maintain National Ambient Air Quality Standards (NAAQSs) for ozone or carbon monoxide. It also demonstrates that New Jersey's I/M program continues to meet the USEPA I/M performance standard after the proposed changes to the I/M program are implemented. The State of New Jersey entered into a contract, effective May 6, 2008, with Parsons Commercial Technology Group Inc. that includes the transition to the proposed enhanced I/M program. In addition, the Department of Environmental Protection (Department) is finalizing new rules and rule amendments, and the Motor Vehicle Commission is finalizing changes to both regulation and law, that implement these changes to the I/M program.

New Jersey has proposed numerous changes to its enhanced I/M program to be fully implemented by 2012. These changes include the following:

- Emission tests will no longer require the use of a dynamometer. Emission tests will include On-Board Diagnostics (OBD), gas cap, visible smoke and two-speed idle (TSI) tailpipe tests. The TSI test replaces both the ASM5015 and 2500 RPM tests.
- Repair cost waiver provisions have been removed.
- Gas cap testing is excluded for vehicles of model year 2001 and newer.
- Certain classes of commercial vehicles, limousines, taxis and jitneys will require annual (more frequent) inspection.
- Central Inspection Facilities (CIFs) will not conduct any inspections for vehicles less than four years old, or for any cars at change of title. If a motorist wants a courtesy inspection, he/she will be directed to Private Inspection Facilities (PIFs).
- Light duty diesel vehicles will now be subject to emission testing.

This SIP revision evaluates the emission impacts of the proposed enhanced I/M program changes by comparing emission factors calculated using the USEPA MOBILE6 model for the existing and proposed programs. The emission factors were estimated for 2013 which follows the expected implementation of the proposed enhanced I/M program. The model results indicate that there is no significant difference between emission factors for the existing and proposed enhanced I/M programs for ozone precursors (VOCs and NO<sub>x</sub>). The proposed enhanced I/M program provides a small reduction in the predicted carbon monoxide emission factor relative to the existing program.

This SIP revision also revises the State's enhanced I/M performance standard modeling to account for the proposed I/M program changes. This revision shows that the State's proposed enhanced I/M program meets the low enhanced performance standard.

## I. Introduction:

### A. Background

In accordance with the requirements of the Clean Air Act (CAA), the State of New Jersey implemented an enhanced Inspection and Maintenance (I/M) program on December 13, 1999. The implementation of this program continues to be an integral part of New Jersey's plan to attain and maintain compliance with the health-based National Ambient Air Quality Standards (NAAQS) for ozone and for carbon monoxide. Reducing the emissions of carbon monoxide, as well as emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) (precursors to ozone formation), will help the State in its efforts to improve its air quality and protect the health and welfare of its citizens.

New Jersey's enhanced I/M program design is a hybrid network system that consists of both centralized (test-only) and decentralized (test-and-repair) facilities. A private contractor to the State operates the centralized portion of the inspection network. The decentralized network is comprised of over 1,300 Private Inspection Facilities (PIFs) that are privately owned and operated, and licensed by the NJMVC to perform vehicle inspections on behalf of the State. This hybrid network design gives motorists a choice as to where to have their vehicles inspected.

### B. Purpose

This document revises the State of New Jersey's enhanced Inspection and Maintenance (I/M) State Implementation Plan (SIP) due to proposed changes to the I/M program. A complete history of New Jersey's I/M SIP is provided in Appendix I. This SIP revision includes emission modeling that quantifies the impacts of the proposed program changes including a comparison to the USEPA performance standard. The primary reason for this SIP revision is to satisfy the USEPA's requirements for the State to implement the changes to the I/M program. It demonstrates that the proposed changes to the enhanced I/M program do not compromise the State's efforts to meet and/or maintain National Ambient Air Quality Standards (NAAQSs) for ozone or carbon monoxide. It also demonstrates that New Jersey's I/M program continues to meet the USEPA I/M performance standard after the proposed changes to the I/M program are implemented. The State of New Jersey entered into a contract, effective May 6, 2008, with Parsons Commercial Technology Group Inc. that includes the transition to the proposed enhanced I/M program. The Department of Environmental Protection (Department) is finalizing new rules and rule amendments to N.J.A.C. 7:27-14, 7:27-15, 7:27B-4 and 7:27B-5 that implement these changes to the I/M program. In addition, the Motor Vehicle Commission is finalizing changes to both regulation and law to implement these changes.

II. Proposed I/M Program Modeling and Revised Performance Standard Modeling

A. Background

As part of its final rule for Inspection and Maintenance (I/M) requirements, the USEPA established a “model” program for areas that were required to implement enhanced I/M programs. This model program is termed by the USEPA as the “I/M performance standard” and is defined by a specific set of program elements.<sup>1</sup> The purpose of the performance standard is to provide a gauge by which the USEPA can evaluate the adequacy and effectiveness of each state’s enhanced I/M program. As such, states are required to demonstrate that their enhanced I/M programs achieve applicable area-wide emission levels for the pollutants of interest that are equal to, or lower than, those which would be realized by the implementation of the model program. The USEPA allows for a margin of error of +/- 0.02 gpm in determining compliance with the performance standard.<sup>2</sup>

Originally, the USEPA only designed one enhanced performance standard, as specified at 40 C.F.R. §51.351, and required all enhanced I/M program areas to meet or exceed that standard. However, on September 18, 1995, the USEPA promulgated the “low” enhanced performance standard.<sup>3,4</sup> The low enhanced performance standard is a less stringent enhanced I/M performance standard established for those areas that have an approved SIP for Rate of Progress (ROP) for 1996, and do not have a disapproved plan for ROP for the period after 1996 or a disapproved plan for attainment of the air quality standards for ozone or carbon monoxide.<sup>5</sup>

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<sup>1</sup> 40 C.F.R. §51.351.

<sup>2</sup> 40 C.F.R. §51.351(g)(13).

<sup>3</sup> 60 Fed. Reg. 48029 (September 18, 1995).

<sup>4</sup> On July 19, 1996, the USEPA also establishing an additional enhanced I/M performance standard for qualified areas in the Northeast Ozone Transport Region (OTR), often referred to as the OTR low enhanced performance standard. The emission reduction targets for the OTR low enhanced performance standard are less than both the low enhanced performance standard and the basic performance standard. The USEPA established two criteria that areas have to meet in order to be eligible for the OTR low enhanced performance standard: 1) the standard applies only in attainment areas, marginal ozone non-attainment areas and certain moderate ozone non-attainment areas with populations under 200,000 in an OTR and 2) the standard program must be supplemented by other measures in order to achieve emission reductions equal to or greater than that which would have occurred had a regular low enhanced I/M program been implemented. New Jersey did not meet the criteria to qualify for use of the OTR low enhanced performance standard.

<sup>5</sup> 40 C.F.R. §51.351(g).

New Jersey is currently demonstrating compliance with the Clean Air Act requirements for ROP and attainment and is therefore now only required to meet the “low” enhanced performance standard. The revised performance standard modeling included as part of this submittal is designed to show attainment of the low enhanced performance standard.

In accordance with the USEPA’s final rule for I/M requirements, a state must design and implement its enhanced I/M program such that it meets or exceeds, within +/- 0.02 grams per mile (gpm)<sup>6</sup>, a minimum performance standard. The performance standard is expressed as average gpm emission levels from area-wide highway mobile sources as a result of the enhanced I/M program.<sup>7</sup> Areas must meet the performance standard for the pollutants that cause them to be subject to the enhanced I/M requirements.<sup>8</sup> New Jersey was required to implement its enhanced I/M program because of its non-attainment status for two criteria air pollutants; ozone (of which volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) are precursors) and carbon monoxide.

The USEPA’s final rule on I/M requirements also requires that the equivalency of the emission levels achieved by the State’s enhanced I/M program design compared to those of the performance standard must be demonstrated using the most current version of USEPA’s mobile source emission model.<sup>9</sup> Currently, the latest version is MOBILE 6.2.03 (dated September 24, 2003), which was used for this analysis.

## B. Modeling Parameters and Assumptions

Table 1 outlines the main program parameters of the low enhanced performance standard model program. In addition, this table presents New Jersey’s enhanced I/M program design for both the existing and proposed programs for evaluation year 2013. The emission factors were estimated for 2013 because it follows the expected implementation of the proposed enhanced I/M program. Although each state must model the performance standard using the parameters specified in Table 1, the performance standard emission factor results will vary for each state. This variation is the result of the use of state-specific inputs such as registration distribution and vehicle miles traveled (VMT) mix. Other local parameters, such as fuel type, add to state

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<sup>6</sup> 40 C.F.R. §51.351(g)(13) allows for a margin of error of +/-0.02 gpm for each pollutant result.

<sup>7</sup> 40 C.F.R. §51.351(a), 57 Fed. Reg. 52988 (November 5, 1992).

<sup>8</sup> Ibid.

<sup>9</sup> 40 C.F.R. §51.351(d), 57 Fed. Reg. 52988, (November 5, 1992).

variations in determining the emission factors for the USEPA's performance standard program.

**Table 1: Performance Standard and NJ Enhanced I/M Program Designs**

<b>Program Element</b>	<b>Low Enhanced Performance Standard</b>	<b>New Jersey's Existing Enhanced I/M Program</b>	<b>New Jersey's Proposed Enhanced I/M Program</b>
Network Type	100% centralized	hybrid – 70% centralized/30% decentralized	hybrid - 70% centralized/30% decentralized
Credit Assumed for Decentralized Program	NA	80%	80%
Program Start Date	1983 <sup>1</sup>	1974	1974
Test Frequency	annual	biennial <sup>2</sup>	biennial <sup>2</sup>
Emission Standards	Those specified at 40 C.F.R. Part 85, Subpart W	Initial ASM5015 exhaust emission standards	Two-Speed Idle Standards of 1.2% for carbon monoxide and 220ppm for HC
Model Year (MY) Coverage	1968 and later MY	all vehicles not specifically exempt	all vehicles not specifically exempt
Vehicle Type Coverage	All light-duty gasoline-fueled vehicles and trucks (up to 8,500 lbs. GVWR)	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	<u>Idle</u> - 1968-2050 MY	<u>OBD</u> - 1996 and later MY beginning 6/1/03 <u>ASM5015</u> – 1981-1995 MY amenable to dyno. testing <u>2500 RPM test</u> – certain exempt vehicles and those 1981 and newer MY not amenable to dyno. testing <u>Idle</u> - pre-1981 and HDGVs	<u>OBD</u> - 1996 and later MY beginning 6/1/03 <u>Two-Speed Idle</u> – 1981-1995 MY <u>Idle</u> - pre-1981 and HDGVs

Program Element	Low Enhanced Performance Standard	New Jersey's Existing Enhanced I/M Program	New Jersey's Proposed Enhanced I/M Program
Visual Inspections	<u>Positive Crankcase Ventilation (PCV) valve</u> -- 1968 – 1971 MY inclusive <u>Exhaust Gas Recirculation (EGR) valve</u> – 1972 and newer	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	<u>Gas Cap Testing</u> – 1971 and later vehicles <sup>3</sup> (beginning calendar year 1998)	<u>Gas Cap Testing</u> – 1971 – 2000 MY inclusive <sup>3</sup> (beginning calendar year 1998)
Pre- 1981 MY Stringency	20%	30%	30%
Waiver Rate	3%	3% <sup>4</sup>	0%
Compliance Rate	96%	98%	98%
Evaluation Date <sup>5</sup>	January 1, 2002	January 1, 2013	January 1, 2013
On-Road Testing	0.5% of the subject vehicle population or 20,000 vehicles (whichever is less)	0.5% of the subject vehicle population or 20,000 vehicles (whichever is less)	0.5% of the subject vehicle population or 20,000 vehicles (whichever is less)

<sup>1</sup> For programs with existing I/M programs, like New Jersey's basic I/M program.

<sup>2</sup> 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).

<sup>3</sup> Only those pre-1981 vehicles that were equipped with sealed gas caps will be subject to the gas cap check. The State estimates that model year vehicles prior to 1970 were not equipped with a sealed gas cap.

<sup>4</sup> The State assumed a zero percent waiver rate for pre-1981 vehicles as these vehicles are not eligible for a waiver based on the NJMVC inspection rules.

<sup>5</sup> For all scenarios, summer season and temperatures were used for VOC/NO<sub>x</sub> evaluations, while winter season and temperatures were used for carbon monoxide evaluations.

The remainder of this section discusses in detail the various New Jersey program parameters used to model the existing and proposed enhanced I/M programs. The State has also included, in Appendices II and III of this document, the MOBILE6 input and output files and the spreadsheet that compiles the results.

## 1. Network Type:

New Jersey's enhanced I/M program is comprised of a hybrid network of both centralized test-only facilities and decentralized test-and-repair facilities. The State has assumed a 70/30 CIF/PIF split for its enhanced I/M network (that is, 70 percent of the vehicle owners are expected to pass inspection at a centralized inspection facility and the remaining 30 percent are expected to pass inspection at a decentralized private inspection facility).

New Jersey claimed, in accordance with the flexibility afforded states by the NHSDA, that the decentralized portion of its enhanced I/M program would be 80 percent as effective as the centralized portion of its program.<sup>10</sup> As part of its August 31, 2001 enhanced I/M SIP revision submittal, New Jersey demonstrated that its private inspection network is achieving this 80 percent assessment. In fact, this analysis showed that the State was conservative in its initial 80 percent estimation. In addition, the effectiveness of the private inspection network may have increased further after the introduction of OBD testing. Therefore, New Jersey has assumed 80 percent credit for the decentralized portion of its program.

To address the State's inspection facility type split and the 80 percent credit for the decentralized portion of the program, the NJDEP calculated an overall I/M effectiveness rate. The I/M effectiveness rate was 94 percent (that is,  $0.70 * 100 \text{ percent} + 0.30 * 80 \text{ percent}$ ). This rate was used as an input to the MOBILE6 model to account for New Jersey's specific network type.

## 2. Start Date:

The I/M program start date is defined as the date on which vehicles were first inspected using an evaporative or tailpipe exhaust emission inspection in the State. As such, for New Jersey this date is 1974 (all modeling dates are assumed to be January 1 of the given year), the date when the State implemented its basic I/M program. Although this is New Jersey's start date as outlined in the low enhanced performance standard requirements, the NJDEP considers other programmatic start dates in determining the final emission factors associated with New Jersey's program. The State implemented its enhanced I/M program on December 13, 1999, which, for modeling purposes, is assumed to be January 1, 2000. As such, the January 1, 2000 date is assumed in modeling the enhanced portion of the State's program, while January 1, 1974 continues to be assumed for the basic (idle) portion of the State's program. Finally, the State assumed a January 1, 2004 start date for OBD implementation.

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<sup>10</sup> Revision to the State Implementation Plan (SIP) for the Control of Mobile Source Ozone Air Pollution--Enhanced Inspection and Maintenance (I/M) Program, March 27, 1996, Section 3, Network Type and Program Evaluation, pages 14-15.

### 3. Test Frequency:

The current test frequency of New Jersey's enhanced I/M program is biennial (that is, vehicle inspections are required once every two years). In addition, starting on January 1, 2003, New Jersey implemented a 4-year new vehicle exemption. The 4-year new vehicle exemption was modeling as a grace period with the age of vehicles first subject to mandatory I/M program requirements set to 4.

### 4. Model Year and Vehicle Type Coverage:

Vehicles currently receive different types of emission tests, depending on the type and model year of the vehicle. Pre-1981 vehicles are given an idle exhaust emission test. Currently, model year 1981-1995 vehicles which are: 1) classified as light-duty gasoline-fueled motor vehicles (LDGVs), or light-duty gasoline-fueled trucks 1 and 2 (LDGT1s and LDGT2s)<sup>11</sup>, 2) amenable to dynamometer-based testing, and 2) not specifically exempted<sup>12</sup> from enhanced testing, are subjected to the ASM5015 exhaust emission test. Those model year 1981-1995 vehicles that are not amenable to dynamometer testing currently receive a 2500 RPM test. All 1996 and newer vehicles receive an OBD inspection unless they are exempt from that test in which case they receive the applicable exhaust emission test.

New Jersey has proposed numerous changes to its enhanced I/M program to be fully implemented by 2012. These changes include the replacement of the ASM5015 and 2500 RPM tailpipe tests with the two-speed idle (TSI) tailpipe test. Also repair cost waiver provisions have been removed and gas cap testing is excluded for vehicles of model year 2001 and newer. Another proposed program change requires certain classes of commercial vehicles, limousines, taxis and jitneys to receive annual (more frequent) inspection. In addition, although it is not modeled by MOBILE6, it is proposed that light duty diesel vehicles will be subject to emission testing. As part of the documentation of the rule changes, the Department estimated emission reduction benefits of 49 tons per year of VOC + NO<sub>x</sub> for the extension of the I/M program to light duty diesel vehicles. Details regarding these estimated emission reduction benefits are provided in Appendix II.

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<sup>11</sup> To determine whether a vehicle is classified as a LDGV, LDGT1, LDGT2, or HDGV, please refer to the definition section of either of the NJDEP's rules for the implementation of the enhanced I/M program at N.J.A.C. 7:27-15.1 and N.J.A.C. 7:27B-4.1.

<sup>12</sup> Specifically exempted vehicles are those vehicles which have been exempted from enhanced emission testing, or alternatively, from emission testing all together, through NJMVC regulations and statute. These vehicles include collector motor vehicles, low mileage vehicles, and historic motor vehicles.

Table 2 (in Section B.5) shows each vehicle category and the applicable OBD, exhaust and/or evaporative emission tests to which that vehicle category is subjected for both the existing and proposed enhanced I/M programs.

5. Exhaust Emission Test Type:

The majority of gasoline-fueled motor vehicles inspected as part of the enhanced I/M program currently receive either an OBD inspection or an ASM5015 exhaust emission test. Table 2 outlines the different vehicle categories and the applicable tests for those categories.

**Table 2: Various Vehicle Categories and Applicable Emission Tests**

Vehicle Category	Exhaust Emission Test		Evaporative Emission Test(s)	
	NJ Existing Enhanced Program	NJ Proposed Enhanced Program	NJ Existing Enhanced Program	NJ Proposed Enhanced Program
pre-1981 vehicles	idle	idle	gas cap test only <sup>1</sup>	gas cap test only <sup>1</sup>
1981-1995	ASM5015 <sup>2</sup>	TSI	gas cap test only	gas cap test only
1981-1995 vehicles not amenable to dynamometer-based testing	2500 RPM	TSI	gas cap test only	gas cap test only
1981-1995 low mileage vehicles <sup>3</sup>	2500 RPM	TSI	gas cap test only	gas cap test only
1996 -2000 low mileage vehicles <sup>3</sup>	OBD	OBD	OBD and gas cap test <sup>4</sup>	OBD and gas cap test <sup>4</sup>
2001 and newer low mileage vehicles <sup>3</sup>	OBD	OBD	OBD and gas cap test <sup>4</sup>	OBD
1996-2000 vehicles	OBD	OBD	OBD and gas cap test <sup>4</sup>	OBD and gas cap test <sup>4</sup>
2001 and later vehicles	OBD	OBD	OBD and gas cap test <sup>4</sup>	OBD
collector motor vehicles <sup>5</sup>	exempt	exempt	exempt	exempt
historic motor vehicles	exempt	exempt	exempt	exempt
1981 and newer vehicles registered as school buses <sup>6</sup>	OBD	OBD	OBD and gas cap test <sup>4</sup>	OBD and gas cap test <sup>4</sup>

<sup>1</sup> Only those pre-1981 vehicles that were equipped with sealed gas caps will be subject to the gas cap check. The State estimates that model year vehicles prior to 1970 were not equipped with a sealed gas cap.

<sup>2</sup> Unless the vehicle is not amenable to dynamometer-based testing or is specifically exempt.

<sup>3</sup> The “low mileage vehicle” category, as required by the enhanced I/M legislation, is defined and discussed at P.L. 1995, Chapter 112, Section 39:8-2b.(1), approved June 2, 1995. The “low mileage vehicle” category is being removed in the proposed enhanced I/M program because there will no longer be a difference in the test requirements between low mileage and non-low mileage vehicles for each model year.

<sup>4</sup> The OBD test includes checks for monitored failures of both the exhaust and evaporative systems, thereby substituting for traditional tailpipe and evaporative pressure and purge tests. In addition to these checks, the State will also perform a traditional gas cap pressurization inspection on these vehicles.

<sup>5</sup> The “collector motor vehicle” category, as required by the enhanced I/M legislation, is defined and discussed at P.L. 1995, Chapter 112, Section 39:8-1a., approved June 2, 1995.

<sup>6</sup> All gasoline-fueled vehicles registered as school buses in the State are inspected by the NJMVC's School Bus Inspection Unit. If applicable, these vehicles receive an OBD test. School buses not amenable to an OBD test will receive the 2500 RPM tailpipe test instead of the ASM5015 tailpipe test under the proposed program.

As part of its last performance standard modeling submittal, the State estimated the number of vehicles that would be exempt from the ASM5015 exhaust emission test because they were not amenable to dynamometer testing (i.e., either vehicles which employ full-time, four-wheel drive or which are installed with non-switchable traction control). This estimation (10%) was then used to determine the loss in credit attributed to these vehicles receiving a 2500 RPM test in lieu of the ASM5015 exhaust emission test. In 2013 the number of vehicles that would be exempt from the ASM5015 exhaust emission test will be extremely small because the vast majority of the vehicles will be receiving OBD testing. Therefore for the 2013 model runs that represent the existing program it is no longer necessary to perform a separate set of runs to model the loss in credit for these vehicles. This will no longer be an issue for the model runs that represent the proposed enhanced I/M program because the ASM5015 test is being eliminated.

The NJMVC's regulations and State statute specifically exempt several types of vehicles that would otherwise be subjected to enhanced I/M testing from the enhanced tests or from emission testing as a whole. These vehicles include: 1) low mileage vehicles, and 2) collector motor vehicles. To determine whether or not a vehicle qualifies for either of these categories, see the NJMVC's definitions at N.J.A.C. 13:20-43.1. Note that the low mileage vehicle category is being removed in the proposed program because there will no longer be a difference in the test requirements between low mileage and non-low mileage vehicles for each model year.

In addition, the NJMVC's regulations maintain a vehicle category that exempts applicable vehicles from basic I/M emission testing. These vehicles are classified by the NJMVC as historic motor vehicles. To determine whether or not a vehicle qualifies as a historic motor vehicle, see the NJMVC's definitions at N.J.A.C. 13:20-43.1 and N.J.S.A. 39:3-27.3. The NJDEP did not include these vehicles as part of this revised performance standard modeling for two reasons: (1) the number of vehicles in these categories was so small that their emissions were not significant enough to impact the modeling, and (2) the vehicles in the category, by definition, fell well outside the 25 model year analysis window examined by the MOBILE model.

## 6. Emission Control Device Inspections:

A visual inspection to determine the presence of a catalytic converter is performed on all 1975 and newer motor vehicles. This was assumed in the State's revised performance standard modeling. In addition, the State assumed that all vehicles subject to the gas cap inspection also receive a visual gas cap inspection for the presence of a cap and to examine the cap for any cracks, outside damage, etc. Finally, the State included in its revised performance standard modeling fuel inlet restrictor testing for all applicable model years. The purpose of the fuel inlet restrictor test is to determine whether or not a leaded gasoline pump nozzle could fit into the vehicle's gasoline inlet, allowing for the possibility of leaded gasoline usage. Use of leaded gasoline interferes with effectiveness of the vehicle's catalytic converter. Although the State began fuel inlet restrictor testing as part of its annual inspections in June 1990, New Jersey stopped performing inlet restrictor tests in 1994 because it was no longer possible for New Jersey motorists to obtain leaded gasoline. However, according to a USEPA guidance memorandum on highway source modeling<sup>13</sup>, states that have, in the past, performed fuel inlet tests for at least one full cycle (and have required catalyst replacement upon failure) may claim the SIP credit associated with this testing without future testing. Since New Jersey meets these requirements, the State took emission credit for the fuel inlet restrictor test in this revised performance standard modeling.

## 7. Evaporative System Function Checks:

In addition to outlining the exhaust emission tests applicable to each vehicle category, Table 2 also shows which vehicle categories are currently subject to the State's evaporative emission tests. Although OBD monitors a vehicle's evaporative system, and as such has a "self-contained" evaporative functional check, the USEPA has recommended that states needing significant hydrocarbon reductions to meet their attainment goals should supplement OBD-I/M testing with a separate gas cap inspection.<sup>14</sup> This recommendation is based on the fact that when the USEPA compared failure rates for the evaporative portion of the OBD-I/M test to the failure rate for the stand-alone gas cap test, they found that the separate gas cap test was able to identify a substantial number of leaking gas caps that were not identified by the OBD monitors due to the different failure thresholds. For the proposed I/M program the gas cap applicability is amended to exclude vehicles of model year 2001 and newer. This is because by model year 2001 the vehicle manufacturers had refined their OBD systems to more reliably detect evaporative system malfunctions and tighter evaporative emission tests were imposed by the USEPA.

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<sup>13</sup> Memorandum dated September 16, 1994 from Phil Lorang, then Director of the Emission Planning and Strategies Division, USEPA to All Regional Air Directors entitled "Discontinuation of Tail Pipe Lead and Fuel Inlet Tests."

<sup>14</sup> "Performing Onboard Diagnostic System Checks as Part of a Vehicle Inspection and Maintenance Program", EPA420-R-01015, June 2001.

The pressurized gas cap inspection is designed to insure that the gas cap seals properly and has no leaks. In the existing I/M program all gasoline-fueled motor vehicle manufactured with a sealed gas cap are subject to this pressured gas cap inspection, which the NJDEP determined is all 1971 and later vehicles.

8. Stringency:

For modeling purposes, a 30 percent emission test failure rate was assumed for pre-1981 vehicles.

9. Waiver Rate:

In accordance with 40 C.F. R. 51.360(d)(1), each state's SIP must include "a maximum waiver rate expressed as a percentage of initially failed vehicles." The purpose of this waiver rate is to estimate emission reduction benefits in a modeling analysis. In the USEPA enhanced low I/M performance standard, a 3 percent waiver rate was used. Using this 3 percent assumption as guidance for its own enhanced I/M program, New Jersey assumed a 3 percent waiver rate for 1981 and newer vehicles in its enhanced I/M SIP.

It should be noted here that under New Jersey's existing enhanced I/M program, any vehicle that applies for a waiver must show compliance with the idle test, in addition to meeting the minimum cost expenditure. Since all pre-1981 vehicles receive the idle test as their official inspection test under the enhanced I/M program, these vehicles are not eligible for a waiver. Thus, the pre-1981 waiver rate is assumed to be zero. In addition, the State extended the waiver option to those vehicles failing an OBD inspection, in addition to those failing an ASM5015 exhaust emission test, so long as they meet the minimum cost expenditure and pass an idle exhaust emission test.

The proposed enhanced I/M program has removed the option for vehicles to comply with emission standards by receiving a waiver. Waiver rates are zero for all vehicles in the proposed I/M program.

10. Compliance Rate:

For modeling purposes, a 98 percent compliance rate was assumed for the overall enhanced I/M program.

11. Evaluation Date:

An evaluation date of January 1, 2002 is used for the performance standard runs.<sup>15</sup> An evaluation date of January 1, 2013 is used for the program evaluation runs because the proposed I/M program should be fully implemented by this date.

In addition to the parameters and assumptions discussed previously in Subsection B, the NJDEP had to make other assumptions in order to complete its performance standard and program evaluation modeling. The following table shows what those assumptions were and what values were used to complete the modeling:

**Table 3: Other Modeling Assumptions**

<b>Modeling Parameters</b>	<b>Value Used for Average Summer Runs (VOC and NO<sub>x</sub>)</b>	<b>Value Used for Average Winter Runs (Carbon Monoxide)</b>
Maximum Temperature (F)	82.9	41.2
Minimum Temperature (F)	66.3	26.7
Absolute Humidity (grains/pound)	85.59	20.00
Speed	MOBILE6 Defaults	MOBILE6 Defaults
Mechanic Training and Certification	yes - 100%	yes - 100%
NJ Low Emission Vehicle Program w/o ZEV Mandate	yes	yes
Gasoline RVP (psi)	6.8	15
Oxygenated Gasoline	10% Ethanol	10% Ethanol

C. Modeling Results:

The following table shows the emission factors (in grams per mile) obtained for the USEPA performance standard program, New Jersey's existing enhanced I/M program, and New Jersey's proposed enhanced I/M program for VOC, NO<sub>x</sub> and carbon

<sup>15</sup> 40 C.F.R. §51.351(g)(13).

monoxide, respectively. Modeling files are provided in Appendix III and the modeling results are summarized in Appendix IV.

**Table 4: Modeling Results**

Program Type	VOC (gpm)	NO <sub>x</sub> (gpm)	Carbon Monoxide (gpm)
USEPA Low Enhanced Performance Standard (2002)	0.903 - 0.943*	2.376 - 2.416*	21.834 - 21.874*
New Jersey Existing Enhanced I/M Program (2013)	0.349	0.687	10.045
New Jersey Proposed Enhanced I/M Program (2013)	0.348	0.688	10.025

\* The performance standard values are expressed as a range to account for the +/- 0.02 gpm margin for error allowed for by the USEPA. Therefore, the standards are met so long as they fall below the upper limit of the range.

#### IV. Conclusion

As shown in Table 4, the model results indicate that there is no significant difference between emission factors for New Jersey's existing and proposed enhanced I/M programs for ozone precursors (VOCs and NO<sub>x</sub>).

A slight increase in the emission factor for NO<sub>x</sub> is offset by a slight decrease in the emission factor for VOCs although the magnitude of the increases and decreases are well below the USEPA margin of error of +/- 0.02 gpm. In addition, the emission factors calculated for New Jersey's proposed enhanced I/M program do not reflect the emission reductions associated with the addition of light duty diesel vehicles to New Jersey's I/M program. As part of the documentation of the rule changes, the Department estimated emission reduction benefits of 49 tons per year of VOC + NO<sub>x</sub> for the extension of the I/M program to light duty diesel vehicles.

The proposed enhanced I/M program provides a small reduction in the predicted carbon monoxide emission factor relative to the existing enhanced I/M program.

This demonstrates that the proposed changes to the enhanced I/M program do not compromise the State's efforts to meet and/or maintain National Ambient Air Quality Standards (NAAQSs) for ozone or carbon monoxide. Also, as shown in Table 4, the

State's proposed enhanced I/M program meets the USEPA low enhanced performance standard.

**The State of New Jersey  
Department of Environmental Protection**

**Proposed Revisions to the Enhanced Inspection and  
Maintenance (I/M) Program for the State of New Jersey**

**Proposed I/M Program Modeling and Revised  
Performance Standard Modeling**

**SIP Revision  
Appendix I  
History of New Jersey's I/M SIP**

**August, 2009**



## History of New Jersey's I/M SIP

### A. Basic I/M SIP

In 1974, New Jersey, under commitments made in its basic I/M SIP, implemented its basic I/M program. At that time, the State's basic I/M SIP consisted of an annual inspection program whereby all gasoline-fueled motor vehicles, unless specifically exempt through law or regulation, were subject to an idle exhaust emission test. Although several subsequent revisions were made to the State's basic I/M SIP, the core program remained unchanged. Major changes in the State's basic I/M program over time included: 1) the addition of a visual inspection for the presence of a catalytic converter, 2) the addition of an inlet restrictor test to determine whether a vehicle's fuel inlet was sufficiently narrow as to preclude use of a leaded gasoline nozzle, thereby preventing the use of leaded fuel, and 3) modification of the program network design to allow for private inspection facilities (PIFs). This third major change expanded the inspection facility network to include non-state-operated inspection facilities that could do both inspections and repairs. Although these private facilities were originally only allowed to perform re-inspections, their responsibilities were later augmented to include initial inspections as well.

### B. Enhanced I/M SIP

The Clean Air Act Amendments of 1990 require the implementation of enhanced I/M programs for areas meeting one or more of the following criteria:

- 1) Designated as a serious, severe or extreme ozone non-attainment area with urbanized populations of 200,000 or more<sup>1</sup> ;
- 2) Designated as a carbon monoxide non-attainment area that exceeded a 12.7 ppm design value with urbanized populations of 200,000 or more<sup>2</sup>; or,
- 3) Part of a Metropolitan Statistical Area with a population of 100,000 or more in the northeast Ozone Transport Region (OTR)<sup>3</sup>.

New Jersey met all three of these criteria for required implementation of an enhanced I/M program. As part of this requirement, Congress established performance specifications that were further elucidated by the USEPA. Specifically, the USEPA's

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<sup>1</sup> 42 U.S.C.A. §7511a (c)(3).

<sup>2</sup> 42 U.S.C.A. §7512a(a)(6).

<sup>3</sup> 42 U.S.C.A. §7511c(b)(1)(A).

promulgated rules and established guidance, including a performance standard and program administration features, for the implementation of enhanced I/M programs. The USEPA's final rule on Inspection/Maintenance Program Requirements was promulgated on November 5, 1992.<sup>4</sup> Subsequently, on June 29, 1995, New Jersey submitted a SIP to the USEPA that described its enhanced I/M program design. This SIP described an inspection program whereby all 1968 and newer gasoline-fueled motor vehicles, unless specifically exempt through law or regulation, would be subject to a steady-state dynamometer-based exhaust emission test known as the ASM5015. In addition, all 1975 and newer vehicles would receive evaporative pressure and purge tests designed to detect any malfunctions with the vehicle's evaporative emission control system. All pre-1968 vehicles would continue to be subject to the idle exhaust emission test. New Jersey's enhanced I/M SIP also accounted for a hybrid (i.e., both centralized, test-only and decentralized, test-and-repair facilities) inspection network, similar to the one established for New Jersey's basic I/M program. This SIP stated that once the enhanced I/M program was fully implemented, all subject motor vehicles would be inspected at least once every two years (i.e., biennially).

### C. Enhanced I/M SIP Revision - March 27, 1996

On March 27, 1996, New Jersey submitted a revision to its June 29, 1995 enhanced I/M SIP, modifying its enhanced I/M program design to take advantage of the additional flexibility afforded states by Congress in designing their enhanced I/M programs. Specifically, the National Highway System Designation Act of 1995, P.L. 104-59 [S.440], (NHSDA) prohibited the USEPA from automatically discounting decentralized program formats by 50 percent, as had previously been prescribed in the USEPA's final rule on I/M program requirements.<sup>5</sup> Rather, the NHSDA allowed states to claim any reasonable amount of credit for their decentralized programs that they deemed appropriate, so long as 18 months from the approval of their enhanced I/M SIP the state could show six months of full implementation enhanced I/M program data substantiating their credit claim. Consistent therewith, as part of its March 27, 1996 enhanced I/M SIP revision, New Jersey claimed 80 percent credit for the decentralized portion of its enhanced I/M program. Refer to Section F. for more information on New Jersey's analyses to substantiate its 80 percent credit claim.

In addition to taking advantage of the flexibility afforded by the NHSDA, the March 27, 1996 enhanced I/M SIP revision modified the model year coverage of the ASM5015 exhaust emission test and evaporative system pressure and purge tests to the following: all 1981 and newer light-duty vehicles, other than low annual mileage and full-time four-wheel drive vehicles, would be subject to the steady-state dynamometer-based ASM5015 exhaust emission test, as well as evaporative system pressure and purge tests. Vehicles 1980 and older would continue to be subject to the basic idle

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<sup>4</sup> 40 C.F.R. §51, 57 Fed. Reg. 52987 (November 5, 1992).

<sup>5</sup> 40 C.F.R. §51.353, 57 Fed. Reg. 52990 (November 5, 1992).

exhaust emission test, as well as a gasoline cap pressure test for those vehicles with sealed gas cap systems.

Finally, as part of this March 27, 1996 revision to the State's enhanced I/M SIP, the test frequency of the State's current inspection process was slightly modified in connection with an enhanced demonstration phase. During this demonstration phase, vehicles that successfully passed a voluntary enhanced exhaust emission test would receive an inspection sticker valid for two years.

On May 14, 1997, the USEPA granted conditional interim approval to New Jersey's enhanced I/M SIP.<sup>6</sup> This conditional interim SIP approval, which became effective on June 13, 1997, addressed both the State's original June 29, 1995 enhanced I/M SIP submittal and its subsequent March 27, 1996 SIP revision. New Jersey subsequently satisfied the conditions of this approval by rectifying the two major deficiencies in its enhanced I/M SIP identified by the USEPA (New Jersey cured the first major enhanced I/M SIP deficiency by providing final and complete test equipment specifications, test procedures and emission standards to the USEPA by January 31, 1997<sup>7</sup>; and cured the second major enhanced I/M SIP deficiency by providing enhanced I/M performance standard modeling to the USEPA by February 1, 1998<sup>8</sup>). In addition, on December 14, 1998, New Jersey cured the eight (8) de minimis deficiencies identified by the USEPA<sup>9</sup>, even though the satisfaction of those de minimis deficiencies had no effect on the USEPA's interim approval.<sup>10</sup>

#### D. Enhanced I/M SIP Revision - June 5, 1998

On June 5, 1998, New Jersey submitted a revision to its I/M SIP, clarifying the testing frequency during the transition between the basic I/M program and the full implementation of the enhanced I/M program. Although the previous SIP revisions

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<sup>6</sup> 40 C.F.R. 52, 62 Fed. Reg. 26401 (May 14, 1997).

<sup>7</sup> These documents were submitted as an attachment to a letter dated January 31, 1997 from Commissioner Robert C. Shinn, Jr., New Jersey Department of Environmental Protection, to Jeanne M. Fox, Regional Administrator, USEPA, Region II.

<sup>8</sup> This modeling and its supporting documentation were submitted as an attachment to a letter dated January 30, 1998 from Commissioner Robert C. Shinn, Jr., New Jersey Department of Environmental Protection to William J. Muszynski, P.E., Deputy Regional Administrator, USEPA, Region II.

<sup>9</sup> The State of New Jersey Department of Environmental Protection, Revision to the State Implementation Plan (SIP) for the Inspection and Maintenance (I/M) Program for the State of New Jersey, December 14, 1998.

<sup>10</sup> 61 Fed. Reg. 56172, (October 31, 1996).

clearly define the testing frequency of both New Jersey's basic and enhanced I/M programs, they did not definitively specify the testing frequency during the transition period between the two programs.

As part of the June 5, 1998 SIP revision, the State determined that during the transition period, the basic I/M program would continue to operate, but on a biennial, rather than annual, test frequency. This was done to accommodate the decreased availability of centralized inspection lanes while they were being retrofitted for enhanced testing. To make this modification to the basic I/M program's test frequency, this SIP revision quantified the emission reduction losses anticipated from this modification and provided an equivalency demonstration showing the State's plan to offset those losses in emission reduction benefit. Specifically, to compensate for the loss in VOC emission reduction benefit from modifying the basic I/M program's test frequency, New Jersey: 1) began administering fuel cap pressure tests as part of its basic I/M program in its centralized inspection facilities, and 2) began fuel cap/evaporative emission control system visual inspections as part of its basic I/M program in its decentralized inspection facilities. The loss in carbon monoxide emission reduction benefit from modifying the basic I/M program's test frequency was offset by taking credit for emission reduction benefits gained through vehicle fleet turnover which had not already been claimed by the State in its carbon monoxide SIP.<sup>11</sup> Vehicle fleet turnover results when newer vehicles with more advanced emission controls replace older, less advanced vehicles within the State vehicle population. The State submitted modeling analyses showing that both of the above strategies more than compensated for the loss in VOC and carbon monoxide emission reduction benefits from modifying the basic I/M program's test frequency. The USEPA approved the State's June 5, 1998 revision to its enhanced I/M SIP on August 26, 1998.<sup>12</sup>

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<sup>11</sup> The New Jersey State Implementation Plan (SIP) Revision for the Attainment and Maintenance of the Carbon Monoxide National Ambient Air Quality Standard, November 17, 1994. The State, on July 10, 1997, proposed a revision to this SIP. A hearing on this proposal took place on August 11, 1997 and the comment period closed on August 20, 1997. This SIP revision was submitted to the USEPA on August 7, 1998. To date, the USEPA has taken no action on New Jersey's submittal.

<sup>12</sup> 63 Fed. Reg. 45402 (August 26, 1998).

E. Proposed Enhanced I/M SIP Revision - June 9, 2001

On June 9, 2001, the State proposed to revise its enhanced I/M SIP to include amendments to the NJMVC's rules governing the implementation and operation of the State's I/M program. The proposed rulemaking<sup>13</sup> made the following changes to the NJMVC's I/M regulations that could impact the air quality benefits associated with the enhanced I/M program, and therefore impact the SIP:

- Provide that if leasing companies and out-of-state new motor vehicle dealerships inspect a new motor vehicle's safety and emission control devices to insure that they conform to the specifications established by the manufacturer and contained in the pre-delivery checklist, those facilities could issue a temporary inspection decal. This decal allows the motorist to present the vehicle at the exit end of any CIF and be issued a two-year inspection decal. This regulatory change gives these leasing companies and out-of-state new motor vehicle dealerships equivalent privileges to those previously given to in-state new motor vehicle dealerships;
- Exempt gasoline-fueled school buses which are subject to inspection by the NJMVC's School Bus Inspection Unit from the inspection requirements of the enhanced I/M program;
- Allow any motor vehicle that passes an on-road inspection within the two-month period prior to its regularly scheduled biennial inspection to use the on-road inspection result in lieu of the complete biennial inspection, so long as the tests performed on-road are the same tests that would be performed on the vehicle as part of the biennial inspection process;
- Exempt from dynamometer testing any motor vehicle " with a chassis height that has been modified so as to make its operation on a dynamometer either impractical or hazardous, as will be determined in the discretion of the Director [of the NJMVC]"; and,
- Change the minimum cost expenditure value needed for the issuance of a cost waiver from \$200 to \$450 as of January 1, 2002.

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<sup>13</sup> 33 N.J.R. 1894(a) (June 4, 2001).

A hearing on this proposed SIP revision, as well as the NJMVC's proposed rulemaking, was held on July 9, 2001. The NJMVC subsequently adopted its regulations on October 15, 2001.<sup>14</sup>

F. Enhanced I/M SIP Revision - August 31, 2001

On December 13, 2000, in compliance with its NHSDA credit claim, New Jersey submitted to the USEPA a qualitative analysis of four months of data showing the effectiveness of the decentralized portion of its enhanced I/M program relative to its centralized test-only network.<sup>15</sup> Subsequently, on May 4, 2001, New Jersey proposed its final report for NHSDA compliance, which evaluated six full months of program implementation data (the period from July 1, 2000 through December 31, 2000) using various analysis methodologies. On August 31, 2001<sup>16</sup>, the State of New Jersey submitted to the USEPA a revision to its enhanced I/M SIP that included:

- 1) The State's final submittal for compliance with the National Highway Systems Designation Act (NHSDA); and,
- 2) A revision to New Jersey's enhanced I/M performance standard modeling.

The first part of this SIP revision included New Jersey's final NHSDA report. This report was designed to support the claim New Jersey made in its March 27, 1996 enhanced I/M SIP revision that its decentralized network (the private inspection facilities, or PIFs) is at least 80 percent as effective as its centralized network (the centralized inspection facilities, or CIFs). The NHSDA report showed that both New Jersey's centralized test-only and decentralized test-and-repair program networks are effectively identifying vehicles with unacceptably high levels of emissions, and that the State-registered Emission Repair Facilities (ERFs) are significantly reducing vehicle emissions through effective repairs. Specifically, the NHSDA analyses show overall emission reductions of 55 percent for hydrocarbons (HC), 58 percent for nitrogen oxide (NO) and 84 percent for carbon monoxide from the vehicles repaired and successfully passing re-inspections following initial inspection failures. These analyses show relatively uniform emission reductions attributable to both network types of New Jersey's enhanced I/M program, indicating that the emission reductions attributable to the PIFs are at least 80 percent of those attributed to the CIF network. In fact, the analyses show that the State was conservative in this original credit estimation.

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<sup>14</sup> 33 N.J.R. 3651(b) (October 15, 2001).

<sup>15</sup> The State of New Jersey Department of Environmental Protection, Report on the Inspection and Maintenance (I/M) Program for the State of New Jersey, National Highway Systems Designation Act (NHSDA) Submittal, December 13, 2000.

<sup>16</sup> Although this document was submitted to the USEPA on August 31, 2001, the date on the SIP submittal document is August 20, 2001.

The second part of the August 20, 2001 enhanced I/M SIP revision addressed the State's performance standard modeling for its enhanced I/M program. The State originally submitted its performance standard modeling to the USEPA on January 30, 1998, to satisfy a condition of the USEPA's conditional interim approval of New Jersey's enhanced I/M program SIP.<sup>17</sup> At that time, the State had not yet implemented its enhanced I/M program, requiring the NJDEP to make certain assumptions about the program, such as the expected date for the implementation of final standards. After the State successfully implemented its enhanced I/M program, the USEPA requested that the State update its performance standard modeling to more accurately reflect the program as implemented. The August 20, 2001 revised performance standard modeling demonstrated that for an evaluation year of 2002, the State exceeded the applicable enhanced performance standard.

On September 11, 2001, the USEPA proposed to: 1) approve New Jersey's August 20, 2001 SIP revision; and, 2) give final approval to New Jersey's overall enhanced I/M SIP. Prior to this, the State's enhanced I/M SIP had interim approval from the USEPA. On January 22, 2002, the USEPA finalized its approval of New Jersey's August 20, 2001 SIP revision and gave final approval to New Jersey's overall enhanced I/M SIP.<sup>18</sup>

#### G. Proposed Enhanced I/M SIP Revision - December 31, 2001

On December 31, 2001, the State of New Jersey submitted a proposed revision to its enhanced I/M SIP to the USEPA.<sup>19</sup> This proposed revision included the following:

- 1) A formal request to defer of the mandatory implementation date for inclusion of On-Board Diagnostic (OBD) inspections into the State's I/M program from January 1, 2002 to January 1, 2003;
- 2) A formal request that the State be allowed to phase-in the mandatory OBD inspection portion of its I/M program;
- 3) Submittal, for inclusion as part of the overall enhanced I/M SIP, of those proposed amendments to the Department of Environmental Protection's (NJDEP) rules which establish the necessary test procedures and standards for implementation of an enhanced I/M program for gasoline-fueled motor vehicles in New Jersey; and,
- 4) Submittal, for inclusion as part of the overall enhanced I/M SIP, of those emission-related portions of the NJMVC-proposed amendments to its rules governing school

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<sup>17</sup> 40 C.F.R. 52, 62 Fed. Reg. 26401 (May 14, 1997).

<sup>18</sup> 67 Fed. Reg. 2811 (January 22, 2002).

<sup>19</sup> Submitted December 31, 2001 under cover letter from then NJDEP Commissioner Robert C. Shinn, Jr. to Jane M. Kenny, Regional Administrator, USEPA Region II.

bus inspections in New Jersey.<sup>20</sup>

The proposed NJDEP regulatory amendments were attached as Appendix I to the December 31, 2001 proposed SIP submittal and proposed the following major modifications to N.J.A.C. 7:27-15 (Control and Prohibition of Air Pollution from Gasoline-Fueled Motor Vehicles) and N.J.A.C. 7:27B-5 (Air Test Method 5: Testing Procedures for Gasoline-Fueled Motor Vehicles):

- Modify the framework, procedures and testing schedule by which 1996 and newer model year vehicles will be subject to OBD inspections;
- Extend the end date for the current initial ASM5015 standards for all 1981 and newer light duty gasoline vehicles (LDGVs), light duty gasoline trucks 1 and 2 (LDGT1s and LDGT2s)<sup>21</sup> from December 31, 2001 to December 31, 2002;
- Replace the final standards for the ASM5015 exhaust emission test for all model year 1994 and newer Tier I light-duty gasoline-fueled trucks 1 and 2 (LDGT1 and LDGT2s), currently scheduled for implementation on January 1, 2002, with new "interim" standards that will go into effect on January 1, 2003;
- Replace the final standards for the ASM5015 exhaust emission test for all pre-1996 non-Tier I LDGT1s and LDGT2s, and for all 1981 and newer light-duty gasoline-fueled vehicles (LDGVs) with the current initial ASM5015 standards for those vehicles, and change the implementation date from January 1, 2002 to January 1, 2003;
- Remove all references to the evaporative pressure and purge tests, and;
- Change the test procedure requirements for those gasoline-fueled motor vehicles registered as school buses by the NJMVC, and subject to inspection by the NJMVC's School Bus Inspection Unit.

A hearing on the proposed SIP revision, as well as both NJDEP and NJMVC's proposed rulemakings, was held on February 25, 2002. The State received significant comments on two aspects of its January 22, 2002 proposal; the implementation plan for integrating mandatory OBD inspections, and the implementation of interim standards for the ASM5015 exhaust emissions test to replace the current final standards.

In addition to considering the comments, the NJDEP also took into account other factors with regard to OBD implementation, such as the determination that implementation of the USEPA's original OBD inspection component design without "second chance"

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<sup>20</sup> Please note that the NJDMV's school bus rule proposal was forwarded to the USEPA under separate cover from the original proposed SIP revision. Specifically, this proposal was forwarded on March 26, 2001 from Chris Salmi, Manager of the Bureau of Air Quality Planning in the NJDEP to Raymond Werner, Chief of the Air Programs Branch, USEPA - Region II.

<sup>21</sup> To determine whether a vehicle is classified as a LDGV, LDGT1, LDGT2 or HDGV please refer to the definition section of the NJDEP's rules at N.J.A.C. 7:27-15.1.

testing would impose less of a burden on the State than implementation of a "phase-in" OBD inspection program that still required the motor vehicle to be repaired to pass an OBD inspection on re-inspection. After evaluating all of these issues, the State determined not to adopt the proposed OBD implementation plan or the interim standards for ASM5015 exhaust emission test. Although the State considered adopting the remaining changes proposed in its January 22, 2002 proposal, it determined that it would be clearer to the public if the NJDEP developed a new proposal that included the State's revised OBD implementation plan, and provided for continuation of the initial ASM standards without the implementation of final standards. As such, the NJDEP determined not to adopt its January 22, 2002 rule proposal and, on April 22, 2002<sup>22</sup>, the NJDEP submitted a SIP revision that took the following action with regard to the State's enhanced I/M program:

- 1) Withdrew the State's request to phase-in OBD inspections into New Jersey's enhanced I/M program;
- 2) Withdrew the State's submittal of the January 22, 2002 NJDEP rule proposal, and;
- 3) Submitted a final SIP revision requesting a deferral of the mandatory implementation date for inclusion of OBD inspections into the State I/M program from January 1, 2002 to January 1, 2003. This request included a commitment to modify the rule date for OBD inspection.

In the letter transmitting this SIP revision to the USEPA, the State indicated that, should the NJMVC act to adopt its latest school bus rule proposal, the NJDEP would then submit to the USEPA for their review and approval, a final SIP revision that includes that adoption, as well as the NJMVC's previous rule adoption which removed from the I/M program those gasoline-fueled vehicles registered as school buses, and thus subject to inspection by the NJMVC's school bus inspection unit, from the enhanced I/M program requirements. This second rule adoption was submitted to the USEPA as a proposed SIP revision on June 9, 2001 and the adoption appeared in the October 15, 2001 edition of the New Jersey Register.

#### H. Proposed Enhanced I/M SIP Revision - April 24, 2002

On April 24, 2002, the NJDEP submitted a revision to its enhanced I/M SIP that consisted of proposed amendments to the NJDEP rules governing the implementation of the enhanced I/M program in New Jersey. Specifically, the NJDEP's rule proposal made the following major changes to the State's enhanced I/M program:

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<sup>22</sup> The State of New Jersey Department of Environmental Protection, Enhanced Inspection and Maintenance (I/M) Program for the State of New Jersey, Request to Defer the Integration of On-Board Diagnostic (OBD) Inspections into the State's I/M Program, SIP Revision, April 22, 2002.

- Modified the framework, procedures and testing schedule by which model year 1996 and newer vehicles would be subject to on-board diagnostic (OBD) inspections. The proposed program modifications included changing the start date for mandatory OBD inspections (pass/fail determinations) from January 1, 2001, to June 1, 2003. The proposal set forth the testing protocols for OBD inspections on 1996 and newer vehicles;
- Eliminated the end date for the use of the "initial" emission standards for the ASM5015 exhaust emission test. This would allow for the continued use of these initial standards;
- Removed the "final" emission standards for the ASM5015 exhaust emission test<sup>23</sup>;
- Removed all references to the evaporative pressure and purge tests while retaining the evaporative fuel cap (or gas cap) leak test; and;
- Exempted from dynamometer testing those pre-1996 light-duty vehicles that are registered as school buses and that are under the jurisdiction of the NJMVC's School Bus Inspection Unit. 1996 and newer light-duty vehicles registered as school buses would receive an OBD inspection.

A hearing on the NJDEP's new proposal, and the associated proposed SIP revision, was held on June 24, 2002 and the comment period ended on July 30, 2002. On December 15, 2003 (68 Fed. Reg. 69640), the USEPA proposed approval of this revision to New Jersey's enhanced I/M SIP. USEPA gave final approval of this revision on May 21, 2004 (69 Fed. Reg. 29234).

I. Revised Performance Standard Modeling SIP Revision - November 27, 2002

On November 27, 2002, the NJDEP submitted a revision to New Jersey's enhanced Inspection and Maintenance (I/M) program State Implementation Plan (SIP) which contained a revision to New Jersey's enhanced I/M performance standard modeling. The primary reason for this revised performance standard modeling was to satisfy the USEPA's requirements for securing their approval for the State to extend the new vehicle emission inspection exemption from one inspection cycle (i.e., 2 years) to two inspection cycles (i.e., 4 years). Governor James E. McGreevey enacted this new car emission inspection exemption on July 1, 2002, however, implementation of this exemption was contingent on USEPA approval.

In addition to the extension to the new car emission inspection exemption, New Jersey

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<sup>23</sup> Although the NJDEP proposed the elimination of the final standards for dynamometer testing, the basis and background document for the proposal discusses the USEPA's intention to finalize a comprehensive set of revised final standards for the ASM5015 test, and the State's determination to consider including those final standards as part of its enhanced I/M program, once they are made available.

proposed several modifications to its enhanced I/M program design since the State's previous performance standard submittal on August 20, 2001. These proposed changes would impact the effectiveness of the overall I/M program. Specifically, the NJDEP proposed the following changes to its enhanced I/M regulations in the May 20, 2002 New Jersey Register (N.J.R.):

- Modified the framework, procedures and testing schedule by which model year 1996 and newer vehicles would be subject to on-board diagnostic (OBD) inspections. The proposed program modifications included changing the start date for mandatory OBD inspections (pass/fail determinations) from January 1, 2001, to June 1, 2003 and set forth the testing protocols for OBD inspections on 1996 and newer vehicles;
- Eliminated the end date for the use of the "initial" emission standards for the ASM5015 exhaust emission test to allow for the continued use of these initial standards;
- Removed the "final" emission standards for the ASM5015 exhaust emission test;
- Removed all references to the evaporative pressure and purge tests while retaining the evaporative fuel cap (or gas cap) leak test; and,
- Exempted from dynamometer testing those pre-1996 light-duty vehicles that are registered as school buses and that are under the jurisdiction of the NJDMV's School Bus Inspection Unit. 1996 and newer light-duty vehicles registered as school buses would receive an OBD inspection.

The NJDEP's November 27, 2002 revision revised the State's enhanced I/M performance standard modeling to account for the four-year new car exemption, as well as the NJDEP's May 20, 2002 proposed rule changes. This revision showed that for the evaluation years 2002, 2005 and 2007, the State's I/M program meets the low enhanced performance standard. On November 5, 2002 (67 Fed. Reg. 67345), the USEPA proposed approval of this revision to New Jersey's enhanced I/M SIP. The USEPA gave this revision final approval on February 18, 2003 (68 Fed. Reg. 7704).

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Documentation of the Emission Benefit Estimates  
for the Performance of I/M on Light Duty Diesel  
Vehicles**

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## Appendix II – Documentation of the Emission Benefit Estimates for the Performance of IM on Light Duty Diesel Vehicles

### **Calculation Methodology – See EXCEL Spreadsheet for Numeric Results and References**

The preferred methodology for estimating emission benefits of increasing the stringency of an IM program is to use the federal MOBILE6.2 model. However, the MOBILE6.2 model does not contain the capability to model IM programs for diesel vehicles. The NJDEP Bureau of Motor Vehicle Inspection and Maintenance (BMVIM) has developed the following methodology for estimating benefits for an IM program for light duty diesel vehicles (LDDV) that involves OBDII testing and smoke testing components.

The first step is to obtain estimates of LDDV counts from the New Jersey Motor Vehicle Commission (MVC) registration database quarterly extract from December 2007 data. Then estimate the projected inspection failures that will result from each of the new IM program components. The projected failures for LDDVs were estimated by considering current failure rates for gasoline vehicles undergoing a similar inspection test. The smoke test failure rate was for vehicles that failed for smoke only, i.e., vehicles that failed for smoke and some other test were not included. In addition, the failure rates and test volumes were adjusted to account for the differing age distributions between light duty gasoline and light duty diesel vehicles. Emission benefits were then calculated by multiplying the total benefits from the current analogous gasoline IM program by the ratio of the projected new LDDV failures to the current gasoline vehicle failures.

#### **OBDII testing of Light Duty Diesel Vehicles:**

Adding these vehicles currently untested for emissions to the IM program will result in an estimated 4,190 new inspections per year with an additional 356 failures. This represents about 0.3% of the current program OBDII failure rate. The true impact will be driven by technology changes implemented by the manufacturers and diesel vehicle sales in the ensuing years.

#### **Smoke testing of Light Duty Diesel Vehicles:**

Adding these vehicles currently untested for emissions to the IM program will result in an estimated 9,399 new inspections per year with an additional 9 failures. This represents an added 0.008% to the overall emission failure rate. Potential failure rates for Smoke tests on vehicles equipped with new diesel particulate filter technology is still an unknown. The true impact will be driven by technology changes implemented by the manufacturers and diesel vehicle sales in the ensuing years.

### LDDV New Program Testing Benefits

Pollutants	Original Benefits Tons/Day <sup>1</sup>	Current OBDII Fails <sup>2</sup>	LDDV Smoke Tests <sup>3</sup>	LDDV Smoke Test Fails <sup>4</sup>	LDDV Smoke FailRate % Increase <sup>5</sup>	LDDV Smoke Benefit Tons/Day <sup>6</sup>	LDDV OBDII Tests <sup>7</sup>	LDDV OBDII Fails <sup>8</sup>	LDDV OBDII FailRate % Increase <sup>9</sup>	LDDV OBDII Benefit Tons/Day	Combined LDDV Smoke and OBDII Testing Benefits Tons/Year
VOC+NOx	43.79	118,743	9,399	9	0.008%	0.0033	4,190	356	0.300%	0.1313	49.13
	1 Source: Baseline 2013 Mobile 6 Runs (With OBDII Insp and Without) to Determine Baseline Year OBDII IM Benefits										
	2 Source: USEPA Annual Report NJ 2006 Initial OBDII Failures										
	3 Source: December 2007 NJ MVC Quarterly Registration Database Extract for LDDVs Less Last 4 Years (to account for 4 yr grace period)										
	4 Source: Weighted LDGV Age Dist Fail Rate From 2006 Stand-alone Smoke Test Failure Rate * Additional Tests										
	5 Source: Additional LDDV Smoke Test Fails/ Current OBDII Fails										
	6 Source Current LDGV OBDII Benefits * LDDV Smoke Fail Rate Increase										
	7 Source: December 2007 NJ MVC Quarterly Registration Database Extract for LDDVs Less Last 4 Years (to account for 4 yr grace period)										
	8 Source: Weighted LDGV Age Dist Fail Rate From EPA Annual OBDII Test Failure Rate * Additional Tests										
	9 Source Current LDGV OBDII Benefits * LDDV OBDII Fail Rate Increase										

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MOBILE Input and Output Files for 2013 Modeling  
of the NJ Existing I/M Program, NJ Proposed I/M  
Program and USEPA I/M Performance Standard**

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Appendix III

MOBILE Input and Output Files for 2013 Modeling of the NJ Existing I/M  
Program, NJ Proposed I/M Program and USEPA I/M Performance Standard

This folder contains that files used to run the USEPA MOBILE6.2 model. The input file is labeled “M6input.in” and the output file is labeled “M6INPUT.TXT”. The other MOBILE6 files are either NJ specific files or MOBILE6.2 default files. The emission factors from the output file are compiled in the Appendix IV spreadsheet.

These MOBILE files are available electronically upon request.

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**Calculation Spreadsheet for 2013 Modeling of the NJ  
Existing I/M Program, NJ Proposed I/M Program and  
USEPA I/M Performance Standard**

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A public hearing on this SIP revision was held on Monday, June 8, 2009 at 10:00 a.m. at the NJDEP Building, Public Hearing Room (1<sup>st</sup> Floor) 401 East State Street Trenton, New Jersey. This hearing is being held in accordance with the provisions of the Air Pollution Control Act (1954), N.J.S.A. 26:2C; and the Administrative Procedure Act, N.J.S.A. 52:14B. Written comments relevant to the proposal were accepted until the close of business, Friday, June 19, 2009. Notice of the hearing appeared in the April 20, 2009 edition of the New Jersey Register. In addition, timely notice of the hearing was published in six newspapers circulated in New Jersey at least 30 days prior to the hearing. Notices of the hearing and of the availability of the SIP revision was also mailed to interested parties.

Attachment A contains the notice announcing the availability of the proposed SIP revision and the hearing.

Attachment B contains the documentation of the notices that appeared in the newspapers and the New Jersey Register.

Attachment C contains the response to comment document.

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**Attachment A: Notice of Availability**

**August, 2009**



New Jersey Department of Environmental Protection

**NOTICE OF PUBLIC HEARING AND AVAILABILITY:**

**PROPOSED NEW RULES AND AMENDMENTS TO IMPLEMENT CHANGES TO  
NEW JERSEY'S MOTOR VEHICLE INSPECTION AND MAINTENANCE (I/M)  
PROGRAM**

**N.J.A.C. 7:27-14, 7:27-15, 7:27A-3, 7:27B-4, and 7:27B-5**

**NOTICE OF PUBLIC HEARING AND AVAILABILITY:**

**PROPOSED REVISIONS TO NEW JERSEY'S STATE IMPLEMENTATION PLAN  
ADDRESSING NEW JERSEY'S MOTOR VEHICLE INSPECTION AND  
MAINTENANCE (I/M) PROGRAM**

Take notice that the New Jersey Department of Environmental Protection (Department) is proposing amendments and new rules to implement changes to New Jersey's motor vehicle Inspection and Maintenance (I/M) program. This proposal also constitutes a proposed revision to the State's I/M State Implementation Plan (SIP); a copy of the proposal has been forwarded to the United States Environmental Protection Agency (USEPA). A statement of the substance of the proposal follows:

The proposed rules will substantially amend the inspection requirements, standards and test procedures for both gasoline and diesel vehicles. These amendments are required to align Department regulations with the new inspection program design as agreed upon by the Department, the Motor Vehicle Commission, Treasury and the Office of Information Technology. The Department is proposing new rules and rule amendments to N.J.A.C. 7:27-14, 7:27-15, 7:27B-4 and 7:27B-5 that implement these changes to the I/M program. The Department's rulemaking coordinates with changes to the I/M laws and changes by the Motor Vehicle Commission to its I/M rules.

These changes include the following:

- Emission tests will no longer require the use of a dynamometer. Emission tests will include On-Board Diagnostics (OBD), gas cap, visible smoke and two-speed idle tailpipe tests. The two-speed idle tailpipe test replaces both the ASM5015 and 2500 RPM tests.
- Repair cost waiver provisions have been removed.
- Gas cap testing is excluded for vehicles of model year 2001 and newer.
- Certain classes of commercial vehicles, limousines, taxis and jitneys will require annual (more frequent) inspection.

- Light-duty diesel vehicles will be subject to emission testing. Model year 1997 and newer light-duty diesel vehicles will receive an OBD test and all light-duty diesel vehicles will be subject to a visible smoke test.
- Emission test exemptions for alternative fuel and hybrid electric vehicles have been removed. These vehicles will be subject to the appropriate OBD or tailpipe test, as applicable.

In addition to the proposed amendments and new rules, the SIP revision includes an evaluation of the emission impacts of the proposed I/M program changes. The results indicate that there is no significant difference between the existing and proposed I/M programs in addressing the emissions of ozone precursors (VOCs and NO<sub>x</sub>). The proposed changes to the I/M program do not compromise the State's efforts to meet and/or maintain National Ambient Air Quality Standards (NAAQS) for ozone or carbon monoxide. This SIP revision also revises the State's enhanced I/M performance standard modeling to account for the proposed I/M program changes. This SIP revision shows that the State's proposed enhanced I/M program meets the applicable USEPA performance standard.

In an effort to better align and coordinate the Department's enforcement of its anti-idling provisions for gasoline vehicles with the enforcement of its anti-idling provisions for diesel vehicles, the Department will amend the idling exemptions for gasoline vehicles and associated administrative penalties at N.J.A.C. 7:27A to substantially match, where appropriate, those exemptions and penalties already adopted for diesel vehicles. This will not fundamentally alter the existing three-minute idling standard, but will clarify the exemptions and revise the penalties.

The Department's proposal will appear in the **April 20, 2009** New Jersey Register. A copy of the proposal is now available for inspection, as described more fully below. A **public hearing** concerning the Department's proposal/proposed SIP revision is scheduled as follows:

**Monday, June 8, 2009 at 10:00 a.m.**

The NJDEP Building, Public Hearing Room (1<sup>st</sup> Floor)  
401 East State Street  
Trenton, New Jersey

This hearing is being held in accordance with the provisions of the Air Pollution Control Act(1954), N.J.S.A. 26:2C; and the Administrative Procedure Act, N.J.S.A. 52:14B. Written comments may be submitted by close of business **Friday, June 19, 2009**, to:

NJ Department of Environmental Protection  
Alice A. Previte, Esq.  
Attn: DEP Docket # 06-09-03/654  
Office of Legal Affairs  
P.O. Box 402  
Trenton, New Jersey 08625-0402

**The following are options for obtaining a copy of the proposal/proposed SIP revision:**

1. Visit the DEP's website at: <http://www.nj.gov/dep/aqm>, where Air Quality Management rules, proposals, adoptions and SIP revisions are available. The Department's proposal/proposed SIP revision can be viewed or downloaded from the following url:

<http://www.nj.gov/dep/aqm/whatsnew.htm>.

2. Look for the Department's proposal in the **April 20, 2009** issue of the New Jersey Register.

3. Go and inspect the proposal/proposed SIP revision during normal office hours at any of these locations:

DEP Public Information Center  
401 E. State Street, 1st Floor  
Trenton, New Jersey 08625

DEP Bureau of Enforcement  
Northern Region  
1259 Route 46 East  
Parsippany, N.J. 07054-4191

DEP Bureau of Enforcement  
Central Region  
Horizon Center, P.O. Box 407  
Robbinsville, N.J. 08625-0407

DEP Bureau of Enforcement  
Southern Region  
2 Riverside Drive, Suite 201  
Camden, N.J. 08103

DEP Bureau of Enforcement  
Metropolitan Region  
2 Babcock Place  
West Orange, N.J. 07052-5504

Atlantic City Public Library  
1 North Tennessee Avenue  
Atlantic City, N.J. 08401

Trenton Public Library  
Association  
120 Academy Street  
Trenton, N.J. 08608

Penns Grove/Carney's Point Public Library  
222 South Broad Street  
Penns Grove, N.J. 08069

Newark Public Library  
5 Washington Street  
P.O. Box 630  
Newark, N.J. 07102-0630

New Brunswick Free Public Library  
60 Livingston Avenue  
New Brunswick, N.J. 08901

Burlington County Library  
University  
3 Pioneer Blvd. and Woodlane Rd.  
Mt. Holly, N.J. 08060

Ms. Ellen Calhoun  
Library of Science and Medicine, Rutgers  
P.O. Box 1029  
Piscataway, N.J. 08855-1029

Joint Free Public Library  
Morristown & Morris County  
1 Miller Road  
Morristown, N.J. 07960

Freehold Public Library  
28½ East Main Street  
Freehold, N.J. 07728

Burlington City Library  
23 West Union Street  
Burlington, N.J. 08016

Camden Free Public Library  
418 Fredericks Street  
Camden, N.J. 08103

Perth Amboy Public Library  
193 Jefferson Street  
Perth Amboy, N.J. 08861

Somerville Public Library  
35 W. End Avenue  
Somerville, N.J. 08876

Toms River Public Library  
101 Washington Street  
Toms River, N.J. 08753-7625

**4.** Request a copy of the proposal/proposed SIP revision by calling Willa Williams at (609) 292-6722, by e-mailing her at [willa.williams@dep.state.nj.us](mailto:willa.williams@dep.state.nj.us), or by mailing or faxing the attached form to her as indicated on the form.

**IF YOU HAVE QUESTIONS:** For more information about the Department's rule proposal, please call our Bureau of Air Quality Planning at (609) 292-6722.

**MAIL OR FAX THIS RULE PROPOSAL REQUEST FORM TO:**

Ms. Willa Williams  
New Jersey Department of Environmental Protection  
Air Quality Planning  
401 E. State Street, 7<sup>th</sup> Floor  
P.O. Box 418  
Trenton, N.J. 08625-0418

phone: (609) 292-6722  
fax: (609) 633-6198  
willa.williams@dep.state.nj.us

- Please send me a copy of **the Department's proposal of new rules and amendments to implement changes to the motor vehicle I/M program and proposed revision to the I/M SIP.**

Name:

Organization:

Address:

Telephone:

- Please remove my name from the Air Quality SIP and rulemaking mailing list.

Please consider subscribing to our Air Rules Listserv to receive e-mail updates of all proposed Department rulemaking relating to air pollution control and changes to New Jersey's State Implementation Plan. Signing up is easy through our AIRRULES LISTSERV Info Page at <http://www.state.nj.us/dep/baqp/airrules.html>.

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**Attachment B: Documentation of the Notices that  
Appeared in the Newspapers and the New Jersey  
Register**

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**This attachment includes the documentation of the notices that appeared in the newspapers and the New Jersey Register. This documentation is only available in hardcopy format.**

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**Attachment C: Response to Comment Document**

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Documentation of the comments received and associated responses is provided in the NJDEP rule documents.