ENVIRONMENTAL PROTECTION

ENVIRONMENTAL REGULATION

OFFICE OF AIR QUALITY MANAGEMENT

Motor Vehicle Inspection and Maintenance

Adopted Amendments: N.J.A.C. 7:27-14.1 through 14.6, N.J.A.C. 7:27-15.1,

15.3, and 15.5 through 15.8, N.J.A.C. 7:27A-3.10,

N.J.A.C. 7:27B-4.1 through 4.4 and 4.6, N.J.A.C. 7:27B-

5.1, 5.2, 5.4, and 5.6 through 5.9

Adopted Repeal: N.J.A.C. 7:27B-5.5

Adopted New Rules: N.J.A.C. 7:27B-4.7 and 4.8

Proposed: April 20, 2009 as 41 N.J.R. 1606(a)

Adopted: , 2009 by Mark N. Mauriello, Acting

Commissioner, Department of Environmental Protection.

Filed: as R **without change**.

Authority: N.J.S.A. 13:1B-3(e), 13:1D-9, 26:2C-8 et seq., specifically

26:2C-8 through 8.5, and 8.11 and 39:8-41 et seq.;

specifically 39:8-41 through 58.

DEP Docket Number: 06-09-03/654

Effective Date:

Operative Date:

Expiration Date: Exempt

The Department is adopting new rules and amendments at N.J.A.C. 7:27-14, Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles, N.J.A.C. 7:27-15, Control and Prohibition of Air Pollution from Gasoline Fueled Motor Vehicles, N.J.A.C. 7:27A, Air Administrative Procedures and Penalties, N.J.A.C. 7:27B-4, Air Test Method 4: Testing Procedures for Diesel-Powered Motor Vehicles, and N.J.A.C. 7:27B-5, Air Test Method 5: Testing Procedures for Gasoline-Fueled Motor Vehicles, to update the motor vehicle emission tests and standards for both gasoline and diesel vehicles.

These adopted rules are part of a new motor vehicle inspection and maintenance (I/M) program developed by the Department, the Motor Vehicle Commission (MVC) and the Department of Treasury. The rules also represent a revision to the State Implementation Plan.

For gasoline-fueled vehicles, the adopted amendments at N.J.A.C. 7:27B-5 establish a new exhaust emission test that will replace two different exhaust emission tests currently in use. The new test will measure exhaust emissions in a manner similar to existing tests, but will not require the use of dynamometers, which are being phased out of the inspection program. The On Board Diagnostics (OBD) test at amended N.J.A.C. 7:27-15 and 7:27B-5 expands the failure criteria to include additional malfunctions. Amended N.J.A.C. 7:27-15 excludes vehicles of model year 2001 and newer from gas cap testing. The option for vehicles to comply with public highway and inspection standards by meeting provisions of a repair cost waiver has been removed. Amended N.J.A.C. 7:27-15 aligns the idle standard exemptions with N.J.A.C. 7:27-14, which applies to diesel vehicles. The Department is also adopting amendments to the

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administrative penalties at N.J.A.C. 7:27A for gasoline vehicle idling, in order that the

penalties are comparable to the penalties for diesel vehicles.

For diesel-powered vehicles, the adopted rules at N.J.A.C. 7:27-14 and 7:27B-4

establish new requirements, tests and standards for light-duty diesel vehicles. All light-

duty diesel vehicles will be subject to a visible smoke test, and model year 1997 and

newer light-duty diesel vehicles will additionally be subject to an OBD test. The visible

smoke test and OBD test applied to light-duty diesel vehicles are generally consistent

with those tests as applied to gasoline vehicles.

Summary of Hearing Officer's Recommendation and Agency Response:

A public hearing was held on June 8, 2009, at the Department's Public Hearing

Room, Trenton. David West, Chief of the Department's Bureau of Motor Vehicle

Inspection and Maintenance, Division of Air Quality, served as the Hearing Officer. No

one provided comments at the public hearing. After reviewing the comments received

during the public comment period, the Hearing Officer has recommended that the

proposal be adopted without change. The Department accepts the Hearing Officer's

recommendation.

A record of the public hearing is available for inspection in accordance with

applicable law by contacting:

Department of Environmental Protection

Office of Legal Affairs

ATTN: Docket No. 06-09-03/654

401 East State Street

PO Box 402

Trenton, New Jersey 08625-0402

This adoption document can also be viewed or downloaded from the Department's website at www.nj.gov/dep/rules.

Summary of Public Comments and Agency Responses:

The Department received written comments on the proposed amendments from the following persons:

- 1. Raymond Werner, United States Environmental Protection Agency, Region 2
- 2. Thomas D. Sims, Department of the Air Force
- 3. Heath Meyers

A summary of the comments and the Department's responses follows. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above.

1. COMMENT: A number of statements in the document indicate that the proposed rules are primarily a result of the contract process, which includes the meetings with stakeholders, the MACTEC report, and the decisions of the evaluation committee. In the event that New Jersey receives comments with significant merit from the public regarding this action, the State should address them appropriately through the normal rulemaking process, as well as amend their contract accordingly. (1)

RESPONSE: The Department did not receive any comments necessitating any inspection program changes. However, in addition to the stakeholder meetings and other activities,

as part of the program development, the Department of Treasury (Treasury) sought comments on the draft Request for Proposal (RFP) for the new inspection program prior to the final RFP. Treasury received a number of comments on the draft RFP that significantly altered the final RFP and program design. Even though this rulemaking is at the end of a lengthy process that led to the development of the new inspection program, the Department and other agencies considered substantial public and stakeholder input during the process.

2. COMMENT: The State is proposing to perform both a smoke test and OBD on OBD-equipped light-duty diesel vehicles. The State should be aware that as a general matter, dual testing may result in duplicate data sets that may not necessarily agree with each other. (1)

RESPONSE: The Department recognizes that not all test methods agree with each other with respect to the emissions performance of a motor vehicle. For this reason, the Department is adopting both an instrument and a visual emissions inspection for this population of vehicles. If a vehicle emits visible smoke, yet still passes an OBD test, its emissions are not acceptable and the vehicle must be repaired to emit no visible smoke.

3. COMMENT: In deleting the reference to 1996 and newer vehicles from the definition of "on board diagnostics," does the State plan to include vehicles of model year (MY) 1994 and 1995 gasoline vehicles on the expanded list of vehicle types subject to OBD testing? In its original implementation guidance for OBD-I/M testing, the United States

Environmental Protection Agency (USEPA) noted that although some MY 1994 and 1995 vehicles included OBD as the requirement was being phased in by manufacturers, the USEPA explicitly advised against testing these vehicles. This is because identifying them correctly is administratively difficult and the reliability of the OBD system on those earliest vehicles has not been sufficiently studied. (1)

RESPONSE: The Department does not plan to extend the OBD inspection to model year 1994 or 1995 vehicles. The main reason for amending the OBD definition was to make it more generic for applicability to both gasoline and diesel vehicles of different weight classes. To determine which model years of gasoline or diesel vehicles are subject to the OBD test, see N.J.A.C. 7:27-15.5 or N.J.A.C. 7:27-14.5, respectively. N.J.A.C. 7:27-15.5(g)2i states that gasoline vehicles of model years 1981 through 1995 shall be tested with the two speed idle test, if it is not otherwise designated for testing with the idle test. Under N.J.A.C. 7:27-14.5(c)2, OBD inspections are for light-duty diesel vehicles of model year 1997 or later.

4. COMMENT: With respect to the proposal to delete references to oxides of nitrogen, the State is amending rule language to ensure that all standards in the general public highway standard are enforceable standards with quantitative measurements. However, although OBD does not measure oxides of nitrogen (NO_x) directly, it does lead to NO_x reductions. This is significant because section 182(c)(3) of the Clean Air Act requires enhanced I/M programs to achieve NO_x reductions. (1)

RESPONSE: The Department acknowledges that OBD inspections, and to some extent even exhaust emissions tests of vehicles that are not under load, can result in vehicles' failing the test, and lead to subsequent repairs that will control excess oxides of nitrogen emissions. The State Implementation Plan (SIP) for the I/M program does recognize the NO_x reductions achieved by the inspection program. As the commenter noted, the removal of references to oxides of nitrogen in the public highway standard, and elsewhere in the rule text, was to eliminate confusion with respect to an exhaust pollutant that the Department will no longer directly measure.

5. COMMENT: The State is suggesting it will not meet the statutory program evaluation requirement until "alternative test methods suitable for evaluating the effectiveness of the program become available for use." However, guidance is available for program evaluations that are not based on mass emission transient testing (METT). Therefore, the State's elimination of its IM240 testing capability is not an adequate justification for failing to comply with a statutory requirement. In this particular case, the State's assertion that it will implement an OBD-only program is not accurate, since New Jersey is proposing to replace ASM with an idle test on pre-OBD vehicles. Thus, there will still be a significant portion of the program that cannot be addressed by that newer program evaluation method when the USEPA releases OBD-centered program evaluation method(s). (1)

RESPONSE: The Department has explored and continues to research alternative program evaluation methods. In its previous program evaluation, the Department encountered a

number of difficulties, such as identifying a statistically significant number of vehicles with excess emissions, problems with portable roadside dynamometer-based test equipment and various issues with motorist cooperation. Federal regulations require the Department to perform a periodic program evaluation; accordingly, the Department will continue to work with the USEPA and other states to arrive at an acceptable solution that satisfies all concerns.

The Department is not implementing an OBD-only program. The State's inspection program retains an exhaust emission testing component in the form of idle testing for pre-1981 light-duty gasoline vehicles and all heavy-duty gasoline vehicles, and the newly-proposed two speed idle test for 1981 through 1995 light-duty gasoline vehicles.

6. COMMENT: In the section of the proposal that discusses changes to definitions at N.J.A.C. 7:27-14.1 (41 N.J.R. at 1608), one sentence reads, "The inspector can retrieve the diagnostic trouble code by inserting an analyzer to the data link connector." This should read, "The inspector can retrieve the diagnostic trouble code by connecting an OBD scanner to the data link connector." (1)

RESPONSE: The commenter is correct that the analyzer is "connected" to the data link connector, rather than "inserted." However, the Department uses the term "analyzer" in N.J.A.C. 7:27-14 to refer generally to testing equipment, of which an OBD scanner may be a component. The rules do not authorize the use of a standalone OBD scanner to perform an official inspection.

7. COMMENT: With respect to the estimated failure rate of light-duty diesel vehicles, basing assumptions about diesel testing on the State's experience with gasoline vehicles may not be valid. This is particularly true when one considers that the State intends to smoke-test vehicles that have never been previously subject to any kind of emission testing. Does the State plan to claim SIP-creditable emissions reductions as a result of subjecting light-duty diesel vehicles to the requirements of the enhanced I/M program?

RESPONSE: The Department based the failure rate estimates on the only data available to it, which are comparable light-duty gasoline vehicle failure rates for the same tests. The smoke test proposed for light-duty diesel vehicles is a visible smoke test only, as is currently performed on light-duty gasoline vehicles. The test does not involve an instrument to measure smoke opacity. The Department agrees that the initial failure rate will likely be higher than projected because light-duty diesel vehicles have never been subjected to emissions testing, but it has no data to provide a quantitative estimate. After the new inspection program has been implemented, the Department will gather actual data from the inspection of light-duty diesel vehicles.

Currently, New Jersey does not claim emission reduction credits for its diesel I/M programs primarily because the USEPA's MOBILE6 model (USEPA's official highway vehicle emission factor model for hydrocarbons, carbon monoxide, oxides of nitrogen, particulate matter and air toxics) does not include the deterioration of diesel emission control systems nor any benefits for testing these vehicles. The Department will

reconsider claiming emission reduction credits after the USEPA's Motor Vehicle

Emissions Simulator (MOVES) replaces MOBILE6 as the accepted model for all official
analyses associated with regulatory development, compliance with statutory requirements
and inventory projections. It is widely accepted, however, that diesel exhaust emissions
are toxic air pollutants, having serious adverse health effects. The Department firmly
believes that the inspection of diesel vehicles does yield a measureable reduction in air
pollutants thereby reducing the adverse health effects associated with diesel exhaust
emissions. The Department strongly urges the USEPA to grant appropriate and realistic
credits for the inspection of diesel vehicles.

8. COMMENT: Where the Department's proposal discusses amendments to N.J.A.C. 7:27-15.3 (41 N.J.R. at 1610), the statement regarding waivers should read, "The waiver was implemented as an alternative to passing the ASM5015 test." (1)

RESPONSE: The Department acknowledges the commenter's correction as a more precise statement. The repair cost waiver is not offered to vehicles that have passed the ASM5015 test. However, when the repair cost waiver was in place, eligible vehicles were required to pass an idle test, emit no visible smoke and not exhibit any emissions control system tampering. The waiver is being repealed largely because the underlying condition that created a potential need for a waiver, the ASM5015 test, is also being repealed.

9. COMMENT: In the discussion of amendments to N.J.A.C. 7:27-15.5, the proposal states, "The Department believes that this transition to more limited gas cap testing is

appropriate, based on changes in vehicle technology. Early OBD systems (model year 1996 to 2000) developed by motor vehicle manufacturers were not able to reliably detect malfunctioning evaporative emissions system components. By model year 2001, the vehicle manufacturers had refined their OBD systems and tighter evaporative emissions standards were imposed by the USEPA." The underlined statement is not strictly correct. The difference between failure rates for the gas cap test and the OBD evap check on pre-2000 vehicles was primarily due to a difference in the stringency of the failure thresholds. If this statement is based upon findings from the State's own data, it should be appropriately noted in the document. See the report located at http://www.epa.gov/otaq/epg/evap.htm (1)

RESPONSE: The Department's statement regarding the reliability of model year 1996 to 2000 OBD evaporative systems is based upon more than one factor. The USEPA and other entities have identified a number of pre-2001 model year vehicles with OBD evaporative system readiness issues. In vehicles where the evaporative monitor is not "ready," the Department does not have confidence that the vehicle's OBD system is adequately monitoring evaporative leaks. With regard to the State's own data, as portrayed in Figure 1, the State's inspection data shows a significantly higher threshold of evaporative system readiness, on the order of a 90th percentile, with model year 2001 and newer vehicles.

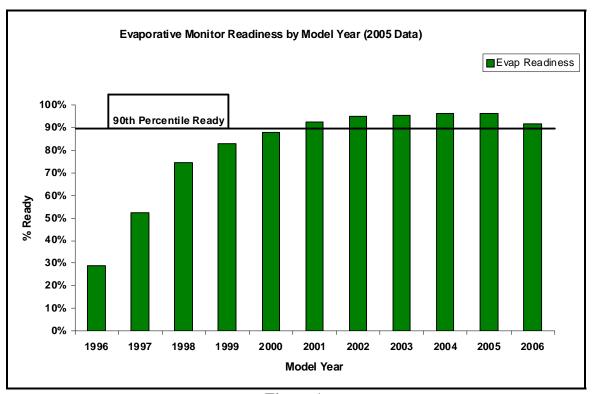


Figure 1

In addition, as noted by the commenter, model year 2001 and newer vehicles conform to a tighter standard for evaporative leak detection by the OBD system. The USEPA report cited by the commenter recommends the continuation of gas cap testing for pre-2001 model year vehicles on the basis that the gas cap test detects more failures than the OBD systems in these vehicles. The Department agrees and is retaining the gas cap test for pre-2001 model year vehicles.

10. COMMENT: The State should also consider using the current draft MOVES model in estimating program benefits, that is, to facilitate the State's familiarity with this new model, including differences in model inputs and outputs relative to MOBILE6.

Potentially, differences may be seen in the MOVES model output compared to MOBILE6, which may lead to modifications in the State's program and therefore these

potential differences should be identified as soon as possible. Also, the MOVES model is currently in draft form with the intention of releasing a final version by the end of this calendar year. If the State experiences any issues or problems with the draft model, there is potential for these issues or problems to be resolved prior to the release of the final version of the model. (1)

RESPONSE: The USEPA did not release the draft MOVES2009 model until April 2009, as the proposal of the within adopted rules was going to press for the New Jersey Register. Since the modeling and background development for the proposal had to be completed well in advance of publication, the MOVES model was not available in a sufficiently timely manner for the Department to employ it in estimating emission reductions for the new inspection program.

The Department is in the process of having staff trained in the use of MOVES and will be prepared to use MOVES when its use is required for official submittals or evaluations.

The MOBILE6 model is the currently approved mobile source emission factor model; thus, all modeling for the adopted rules and proposed SIP revision were produced using MOBILE6. Any relevant rule proposals or SIP revisions that the Department proposes after MOVES is adopted as the official model will be produced using MOVES.

11. COMMENT: The decline in vehicle sales and vehicle turnover related to the current economic crisis has the potential to alter the emissions estimates associated with the State's proposed I/M SIP revision. The State regularly receives registration data which

will provide for the inclusion of effects from the current economic conditions in future analyses. (1)

RESPONSE: The modeling used for the proposed rules and proposed SIP revision did not include the recent effects of the economic crisis and the impact on vehicle age distributions. The modeling and documentation was prepared well in advance of the proposal publication, and the effects of the economic crisis were not apparent when the background material was developed. As the Department moves forward with new modeling, the latest planning assumptions (at that time) will be used, including updates to the vehicle age distribution. This will include the efforts to develop emissions inventories for future SIP revisions to satisfy requirements related to attainment demonstrations, rate of progress and transportation conformity budgets for the Metropolitan Planning Organizations.

12. COMMENT: N.J.A.C. 7:27-14.2 should be revised to include a specific exemption for military tactical vehicles in order to clarify to United States Department of Defense installations in New Jersey that military tactical vehicles are not subject to compliance with the diesel powered motor vehicle inspection program. (2)

RESPONSE: N.J.S.A. 26:2C-8.1 authorizes the Department to develop test procedures and emission standards that are appropriate for the age and technology of different vehicle and engine classes. N.J.A.C. 7:27-14.2, Applicability, identifies the vehicles to which those test procedures and standards apply. However, N.J.S.A. 39:8-2 gives the

MVC the authority to determine which vehicle classes are subject to inspection, and at what intervals. The MVC regulations at N.J.A.C. 13:20-7.2(b) exempt military tactical vehicles from the inspection requirements. Accordingly, the test procedures and standards in N.J.A.C. 7:27-14 are not applied to military tactical vehicles.

13. COMMENT: The Department should amend the Economic Impact to include estimated costs associated with vehicles that must be repaired in order to pass the emissions test. The information would be useful to the Department of Defense in assessing the cost of repairing vehicles that fail the emissions test. (2)

RESPONSE: The Economic Impact mentions an increase in repair costs associated with the failure of light-duty diesel vehicles. Since these vehicles have never been tested for emissions in New Jersey and their numbers are small and not widely studied, the Department is not aware of any repair cost data relevant to light-duty diesel vehicles. The Department anticipates that the costs to repair emission-related failures of light-duty diesel vehicles will be similar to those costs for light-duty gasoline vehicles. Many of the components that would require repair or replacement, such as fuel injectors, air cleaners, exhaust gas recirculation (EGR) valves, fuel pumps, turbo and superchargers and exhaust catalysts are fundamentally similar. In addition, common procedures such as injector cleaning and timing adjustment would also be similar.

14. COMMENT: The idling exemptions for gasoline vehicles should be revised to include an additional exemption for vehicles with elderly or infant occupants when the ambient temperature is below 23 degrees Fahrenheit or above 77 degrees Fahrenheit. (3)

RESPONSE: The Department is not modifying the rule to provide an exemption for vehicles with elderly or infant occupants. Although the rules do not require specific measures to heat or cool the interior of a vehicle, in circumstances where the ambient outside temperature is sufficiently extreme to be potentially hazardous to at-risk populations, the Department suggests that exposure to the extreme temperatures be minimized. How this is best accomplished depends upon the specific circumstances, but may include keeping the subject individuals indoors until the motor vehicle is ready to depart, at which time the cabin temperature will quickly stabilize during normal vehicle operation. An option for extreme cold temperatures is to dress the infant or elderly person in warmer clothing or additional outer layers that may be removed once the vehicle cabin warms up.

A method for quickly cooling a very hot vehicle interior is to roll down all the windows, turn on the vehicle air conditioning and proceed with your driving trip. After driving a short distance, outside air moving through the cabin will cool the vehicle and the windows can be closed so the air conditioning will provide further cooling. In the examples provided, vehicle cabin temperature adjustment is best performed with the vehicle moving, not while idling for an extended period.

It is also important to note that the populations about which the commenter is concerned are those most susceptible to the effects of air contaminants from vehicle

exhaust produced by extended idling. Young children and elderly persons have either developing lungs and/or reduced lung capacity, and the Department seeks to minimize exposure to air pollution to these individuals through its idling restrictions.

15. COMMENT: The table at N.J.A.C. 7:27A-3.10(m)15 should be revised to reduce the penalty for passenger vehicle registration to \$500.00 for the fourth and each subsequent offense. The penalties should be collapsed to make the heading of the third offense column into "third and each subsequent offense," thus eliminating a fourth and each subsequent offense column that is identical to the third offense column. (3)

RESPONSE: The Department did not propose amendments to the penalty for violations of the idling standard for passenger vehicle registrations. Accordingly, the comment is beyond the scope of this rulemaking.

The Department proposed to amend the civil administrative penalties for violations of the idling standard by gasoline vehicles to match the recently adopted changes to the civil administrative penalties for diesel vehicles. In this case the civil administrative penalty for passenger vehicle registrations is identical for both gasoline and diesel vehicles.

The structure of N.J.A.C. 7:27A-3 is such that all listed violations have a penalty for "Fourth and Each Subsequent Offense," even though in some cases the penalty is the same as that for the third offense. The Department prefers to maintain consistent structure throughout the civil administrative penalties.

Federal Standards Statement

Executive Order No. 27(1994) and P.L. 1995, c. 65 require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a comparison with Federal law.

The adopted new rules and amendments to the Department's enhanced I/M program rules do not modify the program design so as to impose standards or requirements that exceed any Federal standards or requirements. (The Federal regulations that control establishment of enhanced I/M programs are set forth generally at 40 C.F.R. Parts 51 and 85.) Specifically, the Department is adopting updates to the regulatory framework for the implementation of mandatory OBD inspections, and to continue exhaust emissions testing. The adopted program design does not exceed the Federal requirements set forth at 40 C.F.R. Parts 51 and 85, nor does this adoption impose standards that exceed Federal requirements for those standards provided by the USEPA. Accordingly, no Federal standards analysis is required.

Full text of the adoption follows:

(No change from proposal.)