

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
AIR AND RADIATION

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MEMORANDUM

SUBJECT: Guidance on Interim Approval of I/M Plans

FROM: Margo Oge, Director
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TO: Directors, Air, Pesticides and Toxics Management Division, Regions I & IV
Director, Air and Waste Management Division, Region II
Director, Air, Radiation and Toxics Division, Regions III
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On November 28, 1995, President Clinton signed the National Highway System Designation Act of 1995. Section 348 of this legislation pertains to inspection and maintenance (I/M) programs (see attachment). There are two key features of this section. First, EPA can no longer disapprove an I/M State Implementation Plan (SIP) based on the 1992 regulations providing for a default discount for test-and-repair I/M programs nor can the default discounts be applied to any plan. Second, EPA is required to approve, on an interim basis, SIPs that claim credits that reflect "good faith estimates." This memorandum provides guidance on the implementation of this legislation.

We believe that Congress' intent in passing this legislation is to provide states the incentive to implement innovative program designs, including test-and-repair systems as well as hybrid programs without facing an up-front credit loss. This legislation fits in very nicely with EPA's actions to provide states with greater flexibility in designing and implementing enhanced I/M programs. The legislation does have stringent timing requirements, however, so it is essential that states move quickly to take advantage of this opportunity. The second attachment provides details on the timing of plan submissions, the approval process for these plans, and the process for determining emission reduction credits for these plans.

Given the short time frame for states to take advantage of this alternative, I encourage you to forward this guidance to states immediately and to meet with them as soon as possible to initiate discussions to prepare an interim I/M plan. My staff is ready to assist you in this process.

Attachments

NATIONAL HIGHWAY SYSTEM DESIGNATION ACT OF 1995
Final Language

SEC. 348. MORATORIUM ON CERTAIN EMISSIONS TESTING REQUIREMENTS

(a) **IN GENERAL.** The Administrator of the Environmental Protection Agency (hereinafter in this section referred to as the "Administrator") shall not require adoption or implementation by a State of a test-only I/M240 enhanced vehicle inspection and maintenance program as a means of compliance with section 182 or 187 of the Clean Air Act (42 U.S.C. 7511a; 7512a), but the Administrator may approve such a program if a State chooses to adopt the program as a means of compliance with such section.

(b) **LIMITATION ON PLAN DISAPPROVAL.** The Administrator shall not disapprove or apply an automatic discount to a State implementation plan revision under section 182 or 187 of the Clean Air Act (42 U.S.C. 7511a; 7512a) on the basis of a policy, regulation, or guidance providing for a discount of emissions credits because the inspection and maintenance program in such plan revision is decentralized or a test-and-repair program.

(c) **EMISSIONS REDUCTION CREDITS.**

(1) **STATE PLAN REVISION; APPROVAL.** Within 120 days of the date of the enactment of this subsection, a State may submit an implementation plan revision proposing an interim inspection and maintenance program under section 182 or 187 of the Clean Air Act (42 U.S.C. 7511a; 7512a). The Administrator shall approve the program based on the full amount of credits proposed by the State for each element of the program if the proposed credits reflect good faith estimates by the State and the revision is otherwise in compliance with such Act. If, within such 120-day period, the State submits to the Administrator proposed revisions to the implementation plan, has all of the statutory authority necessary to implement the revisions, and has proposed a regulation to make the revisions, the Administrator may approve the revisions without regard to whether or not such regulation has been issued as a final regulation by the State.

(2) **EXPIRATION OF INTERIM APPROVAL.** The interim approval shall expire on the earlier of (A) the last day of the 18 month period beginning on the date of the interim approval or (B) the date of final approval. The interim approval may not be extended.

(3) **FINAL APPROVAL.** The Administrator shall grant final approval of the revision based on the credits proposed by the State during or after the period of interim approval if data collected on the operation of the State program demonstrates that the credits are appropriate and the revision is otherwise in compliance with the Clean Air Act.

(4) **BASIS OF APPROVAL; NO AUTOMATIC DISCOUNT.** Any determination with respect to interim or full approval shall be based on the elements of the program and shall not apply any automatic discount because the program is decentralized or a test-and-repair program.

CONFERENCE REPORT
National Highway System Designation Act of 1995

MORATORIUM ON CERTAIN EMISSIONS TESTING REQUIREMENTS

Conference substitute

Under sections 182 and 187 of the Clean Air Act, the Environmental Protection Agency (EPA) has developed regulations for enhanced inspection and maintenance programs that require emissions testing for vehicles already in use. The EPA rules are based on a testing technology called I/M240 that is not practical in the decentralized system of emissions testing that has been relied on in the past. Although the Clean Air Act Amendments of 1990 required EPA to develop an "enhanced" program that would increase emissions reductions, it was not intended that EPA impose a centralized system.

The 1990 Amendments include some specific elements for these enhanced programs. Beyond these requirements, which do not include centralized testing stations or a particular testing technology, States were to be given broad latitude to design programs meeting a general performance standard. Accordingly, the Conference report prevents the Administrator from requiring States to use the test-only I/M240 in enhanced programs.

Another element of EPA's inspection and maintenance regulations authorized States to develop decentralized programs carried out by service stations, dealerships and other facilities that offered both emissions testing at facilities that also perform repair work (to bring vehicles failing an emissions test into compliance). However the EPA program applied an automatic discount factor of 50 percent to the States that used such decentralized programs. The Conference report overturns this element of EPA's regulation. As the Clean Air Act provides, EPA is to base credits for a State program on available information about actual effectiveness of each aspect of the program as proposed and is not to apply an automatic discount factor because a program is decentralized or allows emissions tests and facilities that also perform repairs.

States have developed many new options to improve programs that reduce emissions from vehicles in the existing fleet. In many cases, States have concluded that some of these options achieve greater emissions reductions than EPA models and guidance now provide. The Conference report allows States to design inspection and maintenance programs based on their own estimates of the emissions reduction credits that are appropriate for each element. EPA is to approve State programs based on the emissions reduction credits as estimated by a State, if the State estimates reflect a good faith expectation of performance. The EPA approval is only for an interim period of 18 months. Approval based on the State's proposed emission reduction credit can be made permanent, if information from the interim program demonstrates that the credits are appropriate.

States may submit interim programs for consideration for a period of 120 days after enactment of this legislation. The Administrator may approve a State proposal, even if the State regulations have not been finalized during this period provided that the State has all of the statutory authority necessary to carry out the program and the program has been proposed as a regulation by the State.

In proposing interim credits, States are required to make good faith estimates regarding the

performance of their enhanced inspection and maintenance program. It is expected that States will experiment with various network types and control equipment for which it may be difficult to estimate emission reductions. Therefore, to satisfy good faith estimates it is only necessary that the proposed credits have a basis in fact. Good faith estimates of a State's inspection and maintenance program are estimates produced by a State which are based on any of the following: the performance of any previous automobile emissions inspection and maintenance programs; the results of a remote sensing or other roadside testing techniques; fleet and VMT profiles; demographic studies; or other evidence which has relevance to the effectiveness or emissions reducing capabilities of an emissions inspection and maintenance program.

The data collection effort contemplated during and after the 18 month interim period should be a joint effort between the individual States and the United States Environmental Protection Agency.

It is expected that proposed credits and the emission reductions demonstrated through program data may not match exactly. EPA should use this data to adjust credits on a program basis as demonstrated by the program data.

The Conference agreement makes changes to the requirements and assumptions under section 182 with respect to inspection and maintenance. Section 184 of the Clean Air Act by reference to section 182 of the Clean Air Act requires that each area within the ozone transport region with a population of 100,000 implement an inspection and maintenance program. By changing the underlying requirements of section 182 of the Clean Air Act, it is anticipated that the requirements for inspection and maintenance under section 184 of the Clean Air Act will be changed accordingly.

The Conference agreement does not address all the issues that are important to each State. Therefore, it is anticipated that Congress may address this and other related issues at a later date.

PROCESS FOR INTERIM APPROVAL OF I/M PLANS

This document describes EPA's guidance for submission and interim approval of I/M plans under the National Highway System Designation Act of 1995 (hereafter referred to as the Highway Act)

Interim Plan Submission

- States that want to implement test-and-repair programs or hybrid programs for credit must submit a state implementation plan (SIP) to EPA no later than March 27, 1996
- To be approvable, these SIPs must meet all requirements of the Subpart S (Part 51, 40 CFR; i.e., the I/M rule, as amended) except:
 - Section 51.353(b), which created the discount for test-and-repair programs, is no longer in effect (note that the other requirements of §51.353 are still in effect)
 - Proposed rules may be submitted and approved instead of final rules
 - A discussion of the basis for credits claimed in the plan should be included
 - A discussion of the data collection protocol to be used to evaluate the program
- States should submit revisions to 15% and attainment plans, as needed, to adjust credit claims based on good faith estimates in the I/M plan.
- EPA will:
 - Send a letter to the state with an assessment of the I/M plan and its approvability
 - Parallel process the I/M SIP to allow the state time to complete hearings and make any additional submissions needed to make the plan fully approvable
 - Use the I/M checklist for determining approvability of the plan, except the credits will be judged based upon a determination of "good faith estimates" (see below)
 - Complete the rulemaking process as soon as possible after receipt of the plan; EPA will try to complete final rulemaking by July of 1996
- Mandatory start date of the I/M program:
 - The final interim approval action on the I/M plan will start the 18-month evaluation period specified in the Highway Act
 - EPA rules require an I/M start date of January 1996, which passes prior to the end of the 120 day submission period allowed under the Highway Act. EPA believes that Congress intended for the interim approval scheme to be a practical alternative for states to pursue. Legal precedents exist that indicate when a mandatory start date passes, the requirement becomes that programs start *as soon as possible*.
 - EPA believes that at least 6 months of program operation are needed to evaluate performance; to obtain this, programs must start no later than 12 months after interim approval
 - Therefore, EPA believes that it can fully approve interim programs that start *as soon as possible* after EPA takes final rulemaking action, but no later than 12 months after; the SIP must include a schedule with milestones
 - In approving interim plans, EPA will include boilerplate language indicating that if a state fails to start the program on schedule, the interim approval will convert to a disapproval after a finding letter is sent to the state

Good Faith Estimates of Emission Reductions

- The Highway Act specifies that EPA grant interim approval if "good faith estimates" of credits are made. The Conference report states that proposed credits must have "a basis in fact." Previous I/M program performance, remote sensing programs, or other evidence relevant to the effectiveness of I/M qualify as bases for good faith estimates.
- EPA believes that Congress did not intend for EPA to approve interim programs that do not include improved design features that specifically address the problem of improper testing
- EPA also believes that Congress did not intend that the "basis in fact" required to make "good faith estimates" necessarily involves strict quantification of program effectiveness up front; the 18-month interim approval is intended to address that question
- Thus, EPA suggests that good faith estimates could be based on innovative program designs where no data, per se, exists but where a state can make a reasonable argument that the level of enforcement and oversight, and the innovative features included in the program to prevent or eliminate improper testing will together achieve the claimed reductions
- Examples of innovative program designs include the following (note that EPA does not suggest or guarantee that these measures will result in success but they have been suggested as ways to improve performance):
 - Target high emitting vehicles for test-only testing based on past tampering or emission failures, high remote sensing readings, and similar criteria
 - Co-locate contractor operated test lanes at test-and-repair facilities
 - Allow only businesses other than *engine* repair shops to perform testing
 - Include contracted test-only stations, and allow motorists to choose test-only tests
 - Monitor inspection operations with video cameras
 - Establish stringent licensing requirements for test-and-repair stations, including repair certification and stiff penalties and revocation provisions for rule violations
- EPA will work with states to discuss other ideas for innovative program designs that can be shown to have a basis in fact.

Data Collection and Program Evaluation

- The Highway Act specifies that EPA shall grant final approval to the program only if data collected during the interim period shows that the credits are appropriate and the program is otherwise in compliance with the Clean Air Act
- EPA will issue additional, detailed guidance on data collection and analysis after consultation with states and other experts
- EPA believes that a continuous sample collection technique should provide sufficient data to determine program effectiveness:
 - To evaluate the program, a sample of cars that have not been tested under the new program (the baseline) should be compared to a sample of cars that have been tested (and repaired, if failed) under the new program
 - These two cohorts should consist of a model-year stratified, random sample of vehicles that are tested under controlled conditions using a transient mass emission

test (IM240 or better).

- The sample sizes will need to be large enough to achieve statistical significance, especially among older vehicles that tend to be higher emitters; the more data the better to make a fair assessment; a sample size of 1-2% should be sufficient.
- Samples may be taken in a variety of ways (a combination of these methods may yield the best results):
 - Portable IM240 equipment may be used in roadside pullovers to obtain both samples; care must be taken in this approach to switch geographic locations regularly, select cars randomly, and to eliminate the refusal factor.
 - Portable IM240 equipment may be taken to test-and-repair stations to obtain the before-test sample on cars that show up on their own for testing; this method may make it difficult to obtain samples on older cars
 - A call-in program, like California's, may be used. In this approach, the registration data base is randomly sampled, and vehicles are selected to be tested. Motorists are contacted and required to bring the vehicle to a referee facility or a test station for testing at an appointed time. This approach minimizes the sample size and resources needed for data collection.
- Sampling needs to start at the same time the program starts in order to establish the baseline for fleetwide emission rates; EPA believes that at least 6 months of program operation is needed to collect sufficient data for program evaluation
- Note that the ongoing data collection requirements for enhanced I/M programs in the 1992 I/M rule still apply
- Alternative data collection strategies or pilot demonstration projects may be proposed by states for consideration
- States should submit an analysis based on the data from the two samples described above as well as the regular test data collected during the program
- EPA may conduct audits of programs claiming interim credit prior to the end of the 18 month evaluation period

Final Approval of Plans

- Eighteen months after EPA approves interim plans, the interim approvals expire; the Highway Act precludes EPA from extending the interim approval period
- EPA will make a determination at that time, based on the program evaluation data collected, of whether the program is achieving the emission reductions claimed in the I/M, 15%, and attainment plans.
 - If the reductions fall short of those claimed, revisions to the plan or plans may be necessary to insure that:
 - The program meets at least the low enhanced I/M performance standard by 1999
 - Reasonable further progress targets and attainment of the standard will be achieved
 - Modifications to the I/M program would be required if the program does not meet the low enhanced performance standard

- Since EPA cannot extend the interim approval period, modifications can only be credited if they have already been demonstrated to be effective
- If the program is achieving more credit than claimed in the SIP, then additional credit shall be granted and EPA will grant final approval of the I/M plan.
- States must submit final regulations for final approval of the I/M plan