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United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-258410

September 28, 1994

The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

At your request, we are providing you with information on the Environmental Protection Agency's (EPA) rulemaking for enhanced inspection and maintenance (I&M) programs under the Clean Air Act,¹ which we discussed before your Committee on October 29, 1993. As agreed with your office, we examined the current status of the rule's implementation and EPA's rationale for a change between the proposed and final rule that deleted the option of allowing states a 2-1/2-year period to demonstrate that their test-and-repair programs can be equally effective in reducing motor vehicle emissions as programs in which tests are performed independently of the repairs. In summary, we found that:

- The adoption of enhanced I&M programs has progressed more slowly than required by the act. Had the act's schedule been followed, EPA would have approved or disapproved all state implementation plan (SIP) revisions for enhanced I&M programs by May 15, 1994. However, as of August 24, 1994, only 1 of 23 states charged with conducting enhanced I&M programs had received EPA approval of its enhanced I&M SIP. EPA has

¹Inspection/Maintenance Program Requirements; Final Rule, 40 C.F.R. Part 51, Federal Register, 52950-53014 (Nov. 5, 1992).

proposed conditional approval² for 5 states and was reviewing recent SIP submissions for 2 others; however, 15 states have not yet submitted complete SIP revisions, and over half of these states told us that it will be November 1994 or later before they can do so.

- EPA deleted the provisional equivalency option from its final I&M rule that would have given states the opportunity to demonstrate that enhanced test-and-repair programs could be equally effective in reducing emissions as test-only programs.³ EPA cited, among other things, statements from selected state program administrators that they knew of no solution to the problem of test-and-repair ineffectiveness.⁴ EPA concluded that allowing states to pursue this option would delay the implementation of effective I&M programs, be inordinately expensive to attempt, and create more confusion and hardship than promptly transitioning to test-only networks.

BACKGROUND

The Clean Air Act requires that states with areas classified as serious, severe, or extreme ozone nonattainment areas, as well as certain areas with carbon monoxide problems, implement enhanced I&M programs in selected urban areas as part of their strategy to reach

²Section 110(k)(4) of the Clean Air Act allows EPA to grant conditional approval if a state commits to adding specific enforceable measures to its SIP within a specified time frame, not to exceed 1 year.

³EPA's July 13, 1992, proposed rule included a provision known as provisional equivalency that would have allowed states a 2-1/2-year period to demonstrate that their test-and-repair programs can be as effective as programs in which tests are performed independently of the repair function.

⁴Test-and-repair programs, according to EPA, have an inherent conflict of interest in that inspectors may pass a noncomplying vehicle if the motorist is a regular customer or if prior emissions-control repairs were done at the site.

attainment.⁵ I&M programs are intended to reduce vehicle emissions by requiring better maintenance of in-use vehicles. According to EPA, enhanced I&M programs in the most polluted cities around the country could cut overall vehicle emissions by about one-third.

To ensure timely attainment of these goals, the act required EPA to issue final I&M guidance by November 15, 1991, after which state and local agencies were to prepare SIP revisions by November 15, 1992, in accordance with EPA's guidance. EPA proposed nonbinding I&M guidance in April 1991 that was the subject of some controversy and never finalized. Instead, the agency issued binding rules on November 5, 1992, that attempted to extend the SIP deadline for states by 1 year (to Nov. 15, 1993). A court ruled in April 1994 that EPA's attempt to postpone the deadline for SIP revisions was illegal in that it had improperly delayed SIP submissions beyond the statutory deadline. However, in order not to penalize the states for EPA's delay in issuing regulations, the court ruled that the agency's action could be sustained as necessary and appropriate under the circumstances. Thus, the remedy decreed by the court was to establish September 15, 1994, as the deadline for final EPA approval or disapproval of all enhanced I&M SIPs that the agency had received, with the statutory sanction clock running from that date. States that have enhanced I&M SIPs disapproved or that did not submit complete SIPs by EPA's revised submission deadline of November 15, 1993, in the court's view would also be subject to sanctions, with the sanction clock running from the date that EPA finds the SIP deficient. The final enhanced I&M rule requires that states inspect 30 percent of their vehicle fleet in test-only facilities beginning January 1, 1995; full test-only operations would begin January 1, 1996.

STATES' ADOPTION OF I&M PROGRAMS IS SLOW

As of August 24, 1994, only 1 of the 23 states charged with conducting enhanced I&M programs had received EPA

⁵In addition, section 184 requires an enhanced I&M program in any metropolitan statistical area with a population of 100,000 or more located in the ozone transport region, consisting of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the District of Columbia.

approval of its enhanced I&M SIP (EPA approved Texas' SIP on Aug. 22, 1994). EPA has proposed conditional approval for five states (Colorado, Maine, New Hampshire, Pennsylvania, and Wisconsin) and was reviewing recent SIP submissions from two other states (Connecticut's SIP met EPA's completeness criteria, and Nevada's SIP was being reviewed for completeness). However, 15 states had not yet submitted complete SIP revisions, and 10 of these states told us that it will be November 1994 or later before they submit an enhanced I&M SIP for EPA's review.⁶

EPA has notified these states that they will be subject to mandatory sanctions, according to the I&M Section Chief in EPA's Office of Mobile Sources, unless they submit complete SIPs within 18 months of the agency's notification. According to state representatives, almost all states expect to submit a completed SIP before the date that sanctions would be imposed. (Enc. I provides updated information on the enhanced I&M plans for each state.)

Some Progress Made, but
Much Work Remains

Although state submission and EPA approval of I&M SIPs have not progressed as envisioned, progress is being made. For example, even though its SIP has not received final approval, Maine began an enhanced I&M program on July 1, 1994. Similarly, other states are not waiting for official approval of their SIPs to begin working with potential contractors that might operate test-only facilities. For example, Connecticut and Maryland have not received final or conditional approval from EPA to begin their programs; however, state air agency officials told us that Connecticut expects to begin test-only operations on January 1, 1995, and Maryland has 17 test-only facilities under construction.

According to EPA's I&M Section Chief, none of the states are designing I&M programs that are exactly the same as

⁶Of the 15 states that have not submitted complete SIP revisions, 11 have not submitted an enhanced I&M SIP for EPA's review and 4 had their submissions returned as incomplete.

EPA's model program,⁷ which can lengthen the agency's evaluation of states' plans. For example, California has an agreement with EPA whereby the state and EPA will evaluate alternatives to the IM-240 test,⁸ as well as evaluate the potential for reducing the number of vehicles that must be inspected at test-only facilities. Alternatives being studied in the California demonstration project include various accelerated simulation mode (ASM) tests,⁹ as well as the effectiveness of an enhanced RG-240¹⁰ test for assessing the adequacy of vehicle repairs. Additionally, this project will assess the emissions-reduction effectiveness of these tests in combination with other actions, such as using remote sensing devices,¹¹ and whether these combined actions may reduce the number of vehicles that must be tested at test-only facilities. According to the March 1994 agreement, California is

⁷EPA's model program establishes the performance standard that all other programs are measured against. Among other things, the model program assumes annual, centralized, tailpipe emissions testing for all 1968 and newer vehicles; 1986 and newer vehicles are tested using high-tech, computer-controlled emissions analyzers, combined with purge, pressure, and other tests.

⁸IM-240 is a high-tech, computer-controlled emissions analyzer that measures tailpipe emissions under a 240-second simulated driving cycle while the vehicle is driven on a treadmill-like device, called a dynamometer, that simulates vehicle load, including acceleration and deceleration.

⁹ASM tests also measure tailpipe emissions while the vehicle is driven on a dynamometer, but vehicle load is constant and the tests do not simulate acceleration and deceleration in the driving cycle.

¹⁰RG-240 is repair grade tailpipe test equipment, similar to IM-240, that also simulates a 240-second driving cycle but, according to EPA, costs less and does not offer the variability in driving conditions that the IM-240 offers.

¹¹Remote sensing devices typically use an infrared beam to measure vehicle emissions in actual traffic conditions. Unlike the IM-240, RG-240, and ASM tests, remote sensing devices measure only carbon monoxide (CO) and hydrocarbon tailpipe emissions and do not measure nitrogen oxide tailpipe emissions.

supposed to complete the study by December 31, 1994, and use the results to design the state's subsequent SIP submission to EPA. California's current plans are to implement a hybrid I&M program. Hybrid I&M programs use both test-only and test-and-repair facilities to conduct inspections. For example, depending on the results of the study, California may implement a hybrid program that requires certain categories of vehicles--such as older passenger cars and light duty trucks--to be inspected at test-only sites. According to the I&M Section Chief, hybrid programs usually allow newer vehicles to be inspected--at the owner's option--at either facility, while older vehicles must be tested at test-only sites because they require greater maintenance.

Some other states are also proposing to implement hybrid programs. For example, Georgia's initial SIP--which has since been withdrawn--called for the state to implement a centralized, contractor-operated, test-only network employing IM-240 equipment. According to a state air agency official, the state now plans to implement a hybrid program, consisting of 200 to 300 test-and-repair stations using RG-240 testing equipment and about 25 test-only facilities using IM-240 equipment. Under Georgia's current plan, only test-and-repair facilities would be in operation in 1995; test-only facilities would begin operations in January 1996.

For states choosing to implement EPA's model program, the agency has developed the test equipment specifications, quality control procedures, and associated emissions-reductions benefits. However, states choosing to implement hybrid programs that use test procedures other than the performance standard model have to develop and demonstrate their own test equipment specifications, quality control procedures, and emissions-reduction benefits. EPA's I&M Section Chief believes these SIPs may be more time-consuming to review and approve. For example, to obtain EPA approval of the RG-240 tailpipe test, a state will have to develop its own RG-240 test specifications and quality control procedures and demonstrate the associated emissions-reduction benefits of the RG-240 test to EPA. These factors are important in reaching agreement with EPA on network design, vehicle coverage, and other I&M program features. In addition to California and Georgia, New Jersey and Virginia were also considering hybrid I&M programs, although each state's program differed from the others.

Reasons for I&M Delays

According to EPA's I&M Section Chief, there are two key reasons for the delays in implementing the enhanced I&M programs in the 23 affected states:

- First, EPA was nearly 1 year late in issuing final enhanced I&M rules, in part as a result of the agency's decision not to finalize its controversial April 1991 proposed I&M guidance. Instead, the agency decided to issue binding regulations, which took another 19 months. Also, the agency was sued by the Natural Resources Defense Council for missing the November 15, 1991, statutory mandate, and the court subsequently ordered EPA to take final action on I&M by November 6, 1992. The final I&M rule was issued on November 5, 1992.
- Second, some groups have expressed considerable opposition to a test-only program, including the agency's preference for a centralized test-only network design employing IM-240 tailpipe testing equipment.

Agency officials explained that, subsequent to issuing the April 1991 draft guidance, EPA's Office of General Counsel advised the Office of Mobile Sources (OMS) that it should promulgate binding regulations through notice-and-comment rulemaking in order to satisfy the act's mandate that states comply in all respects with enhanced I&M directives. In response, OMS officials said that they abandoned their efforts to issue nonbinding guidance and began the more lengthy process of issuing a regulation. Although much of OMS' work was transferable, this mid-course change contributed significantly to EPA's delay in issuing the final rule.

Opposition to EPA's model program also translated into a lawsuit concerning the agency's enhanced I&M rule. Among other things, opponents challenged the agency's support for applying a 50-percent tailpipe emissions credit reduction to test-and-repair programs and asserted that the agency arbitrarily disregarded the virtues of various alternatives to the IM-240 tailpipe emissions test equipment. However, in May 1994 the court ruled that EPA's actions in establishing a performance standard based on a model program employing IM-240 equipment in centralized test-only facilities were reasonable and well within the agency's statutory authority.

EPA'S RATIONALE FOR DELETING THE
PROVISIONAL EQUIVALENCY OPTION

EPA had proposed to include in its enhanced I&M rule an option allowing states, through an evaluation program, to demonstrate that their test-and-repair programs could achieve emissions reductions equivalent to those achieved by test-only programs. This option was known as "provisional equivalency" because EPA was temporarily and conditionally allowing states the opportunity to continue their test-and-repair programs while collecting data in support of their belief that test-and-repair programs can be equally effective as test-only programs. The states choosing to attempt this option also were required to submit a backup plan, including all necessary legislative authority, to switch to a test-only system if the program evaluation showed that the performance standard was not being met.

In its proposed I&M rule, EPA stated that, on the basis of over 15 years' experience with improper testing, inadequate oversight, and poor quality controls, the agency knew of no way to make test-and-repair programs as effective as test-only programs. Nonetheless, because EPA believed that test-and-repair proponents deserved an opportunity to present their views, the agency proposed the provisional equivalency option.

During the public comment period, EPA received over 300 written comments on its proposed I&M rule; some were for and others were against test-and-repair programs. Over two-thirds of the commenters expressed an opinion on I&M network design; most responded according to their apparent vested interest in the outcome of the rule. For example, private garages and service station owners and operators generally favored the opportunity to continue test-and-repair programs in their states, whereas existing centralized contractors believed that test-only networks would have lower costs and provide more objective testing.

Some commenters expressed concern about EPA's stated predisposition in the proposed rule's preamble that the agency knew of no way that test-and-repair programs can be made equally effective as test-only programs. Others said that EPA was, in essence, planning to prolong I&M programs doomed to inevitably fail. After considering all the comments, EPA eventually eliminated this option from its final enhanced I&M rule, citing, among other things, the statements from selected state program administrators that

they still knew of no solution to the problem of test-and-repair ineffectiveness. Test-and-repair programs, according to EPA, have an inherent conflict of interest in that inspectors may pass a noncomplying vehicle if the motorist is a regular customer or if prior emissions-control repairs were done at the site. The agency was also influenced by comments concerning the legality of provisional equivalency. For example, some commenters asserted that the statute requires an up-front demonstration of equivalency rather than allowing the option proposed by EPA. The agency concluded that pursuing the provisional equivalency option would delay the implementation of effective I&M programs, be inordinately expensive to attempt, and create more confusion and hardship than promptly transitioning to a test-only network. Consequently, the agency deleted this option from its final rule.¹²

For this review, we examined the Clean Air Act's I&M provisions; EPA's proposed and final I&M rules; the complete I&M docket and EPA's official response to comments; court cases pertaining to I&M issues; and relevant EPA, state, and other documents regarding the status of states' implementation activities. We discussed these issues with representatives of EPA's Office of Mobile Sources and each of the 23 states charged with conducting enhanced I&M programs. Our work was conducted from January to August 1994 in accordance with generally accepted government auditing standards.

Unless you publicly announce its contents earlier, we plan no further distribution of this correspondence until 30 days after the date of this correspondence. At that time, we will send copies to the Administrator, EPA, and make copies available to others upon request.

¹²Although the provisional equivalency option was deleted, the agency's final rule retained an option in accordance with the statute allowing a state to make a case-by-case demonstration in its SIP that its test-and-repair program will be as effective as a test-only program.

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This work was performed under the direction of William F. McGee, Assistant Director, who can be reached at (919) 829-3500 if you or your staff have any questions.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Peter F. Guerrero', written over a horizontal line.

Peter F. Guerrero
Director, Environmental
Protection Issues

Enclosure

STATUS OF SIP SUBMISSIONS FOR STATES REQUIRED
TO CONDUCT ENHANCED I&M PROGRAMS

State	Complete Enhanced I&M SIP submitted ^a	Planned submission date ^b	Current network ^b	Planned network ^b	Planned test equipment ^b
California	No	2/95 - 3/95	Test & repair	Hybrid	IM-240 and pilot study alternates
Colorado	Yes ^{c,d}	Not Applicable (NA) ^e	Test & repair	Test only	IM-240 and Colorado 94
Connecticut	Yes ^f	NA ^e	Test only	Test only	IM-240
Delaware	No	By 11/25/94	Test only	Test only	IM-240
District of Columbia	No ^g	By 9/30/94	Test only	Test only	IM-240
Georgia	No ^{c,h}	By 9/15/94	Hybrid ^h	Hybrid	IM-240 and RG-240
Illinois	No	Early 1995	Test only	Test only	IM-240
Indiana	No	By 1/1/95	Test only	Test only	IM-240
Louisiana	No ^g	11/94	None	Test only	IM-240
Maine	Yes ^{c,d}	NA ^e	None	Test only	IM-240
Maryland	No	By 9/15/94	Test only	Test only	IM-240
Massachusetts	No	By 1/1/95	Test & repair	Test only	IM-240
Nevada	Uncertain ⁱ	NA ⁱ	Test & repair	Test only	IM-240 and BAR-90
New Hampshire	Yes ^{c,d}	NA ^e	Test & repair	Test only	IM-240 and 2-Speed Idle
New Jersey	No	11/94	Hybrid	Hybrid	IM-240 and ASM5015
New York	No ^g	By 8/95	Test & repair	Test only	IM-240
Pennsylvania	Yes ^{c,d}	NA ^e	Test & repair	Test only	IM-240

State	Complete Enhanced I&M SIP submitted ^a	Planned submission date ^b	Current network ^b	Planned network ^b	Planned test equipment ^b
Rhode Island	No	10/94	Test & repair	Test only	IM-240
Texas	Yes ^{c,j}	NA ^e	Test & repair	Test only	IM-240
Vermont	No	After 11/94	None	Test Only	IM-240
Virginia	No ^g	Uncertain ^k	Test & repair	Uncertain ^k	Uncertain ^k
Washington	No	11/94	Test only	Test only	IM-240
Wisconsin	Yes ^{c,d}	NA ^e	Test only	Test only	IM-240

^aSection 110 of the Clean Air Act sets forth a two-step process for the Environmental Protection Agency's (EPA) action on state implementation plan (SIP) submissions. First, within 60 days of EPA's receipt of a SIP submission, but no later than 6 months after the date by which the state is required to submit the SIP, EPA is required to make a threshold "completeness" determination. This completeness determination allows EPA to (1) screen out those submittals that are so deficient or so incomplete that they do not warrant any further review and (2) return such submittals to the states without the need to go through cumbersome rulemaking. Second, once a SIP is determined to be complete, EPA reviews the adequacy of the SIP submittal; EPA's action to approve, disapprove, or partially approve a SIP is carried out through notice-and-comment rulemaking. EPA's completeness determinations are not carried out through such rulemaking actions.

^bInformation on state plans for submitting an enhanced I&M SIP, current network, planned network, and planned equipment was obtained through phone discussions with state air agency contacts and corroborated with EPA's I&M Section Chief on August 24, 1994.

^cSelected states were subject to an April 22, 1994, court order requiring EPA to propose SIP approval or disapproval no later than July 15, 1994, and to take final action no later than September 15, 1994.

^dEPA has proposed conditional approval on the basis of the state's commitment to adopt specific enforceable measures by a certain date, not to exceed 1 year from EPA's notification.

^eNot applicable (NA); state has submitted enhanced I&M SIP revision that EPA has determined is complete.

^fConnecticut's SIP was determined to be complete on August 3, 1994, and is currently undergoing EPA's adequacy review. (See note "a.")

ENCLOSURE I

ENCLOSURE I

⁹State submitted an enhanced I&M SIP, but EPA determined that the SIP was incomplete and returned it for revision. (See note "a.")

^hGeorgia submitted a SIP before the November 15, 1993, deadline, but withdrew its SIP in order to pursue a hybrid enhanced I&M program. Unlike the state's planned program, Georgia's previous hybrid program, according to EPA, did not restrict the vehicle model years that could go to test-and-repair sites.

ⁱNevada submitted an enhanced I&M SIP in August 1994 that was undergoing EPA's completeness review as of August 1994; it is uncertain whether the SIP will be adjudged complete or returned as incomplete. (See note "a.")

^jAs of August 24, 1994, Texas was the only state that had been granted full approval of its enhanced I&M SIP by EPA.

^kVirginia's June 26 enhanced I&M SIP was returned as incomplete by EPA on July 15, 1994. As of September 2, 1994, the state air agency contact had no estimate as to when the state would submit an enhanced I&M SIP. The type of I&M network the state planned to implement was also uncertain. (See note "a.")

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